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Confidential draft registration statement no. 2 submitted to the U.S. Securities and Exchange Commission on May 24, 2017. This draft registration statement has not been filed publicly with the U.S. Securities and Exchange Commission and all information contained herein remains strictly confidential.

Registration No. 333-

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form S-1

REGISTRATION STATEMENT
Under
THE SECURITIES ACT OF 1933

SI-BONE, INC.

(Exact Name of Registrant as Specified in its Charter)

Delaware	**3841**	**26-2216351**
(State or Other Jurisdiction of Incorporation or Organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

SI-BONE, Inc.
3055 Olin Avenue, Suite 2200
San Jose, California 95128
(408) 207-0700

(Address, including zip code and telephone number, including area code, of registrant's principal executive offices)

Laura A. Francis
Chief Financial Officer
SI-BONE, Inc.
3055 Olin Avenue, Suite 2200
San Jose, California 95128
(408) 207-0700

(Name, address, including zip code and telephone number, including area code, of agent for service)

Matthew B. Hemington **John T. McKenna** **Cooley LLP** **3175 Hanover Street** **Palo Alto, California 94304** **(650) 843-5000**	*Copies to:* **Michael A. Pisetsky** **General Counsel** **SI-BONE, Inc.** **3055 Olin Avenue, Suite 2200** **San Jose, California 95128** **(408) 207-0700**	**Michael Benjamin** **Peter J. Sluka** **Latham & Watkins LLP** **885 Third Avenue** **New York, New York 10022** **(212) 906-1200**

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this Registration Statement. If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box. ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☐	Accelerated filer ☐	Non-accelerated filer ☑ (Do not check if a smaller reporting company)	Smaller reporting company ☐

Emerging growth company ☑

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. ☑

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	**Proposed Maximum Aggregate Offering Price(1)(2)**	**Amount of Registration Fee**
Common Stock, $0.0001 par value	$	$

(1) Estimated pursuant to Rule 457(o) under the Securities Act of 1933, as amended.
(2) Includes the aggregate offering price of additional shares that the underwriters have the option to purchase.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to such Section 8(a), may determine.

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The information in this preliminary prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED , 2017

Shares

Common Stock

This is the initial public offering of shares of common stock of SI-BONE, Inc.

We are offering shares of our common stock. Prior to this offering, there has been no public market for our common stock. It is currently estimated that the initial public offering price per share will be between $ and $. We intend to apply to list our common stock on the Nasdaq Global Market under the symbol "SIBN."

We are an emerging growth company under the federal securities laws and will be subject to reduced public company reporting requirements. See "Prospectus Summary—Implications of Being an Emerging Growth Company."

Investing in our common stock involves a high degree of risk. See "Risk Factors" beginning on page 13.

	Per Share	Total
Initial public offering price	$	$
Underwriting discounts and commissions(1)	$	$
Proceeds, before expenses, to us	$	$

(1) See "Underwriting" for additional disclosure regarding underwriting discounts, commissions and estimated offering expenses.

To the extent that the underwriters sell more than shares of common stock, the underwriters have a 30-day option to purchase up to an additional shares from us at the initial public offering price, less the underwriting discounts and commissions.

The underwriters expect to deliver the shares against payment in New York, New York on , 2017.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

Morgan Stanley **BofA Merrill Lynch**

Canaccord Genuity **JMP Securities**

, 2017

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Neither we nor the underwriters have authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectuses prepared by or on behalf of us or to which we have referred you. We and the underwriters take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the shares offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus or in any applicable free writing prospectus is current only as of its date, regardless of its time of delivery or any sale of shares of our common stock. Our business, financial condition, results of operations, and prospects may have changed since that date.

Through and including , 2017 (25 days after commencement of this offering), all dealers that effect transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

TRADEMARKS

Unless the context indicates otherwise, as used in this prospectus, the terms "SI-BONE" and "iFuse Implant System" or "iFuse" and other iFuse-formative trademarks, as well as other trademarks or service marks of SI-BONE appearing in this prospectus, are the property of SI-BONE. This prospectus contains additional trade names, trademarks, and service marks of ours and of other companies. We do not intend our use or display of other companies' trade names, trademarks or service marks to imply a relationship with, or endorsement or sponsorship of us by, these other companies.

KEY METRICS FOR STUDIES

Statistical significance in the studies described in this prospectus is denoted by p-values for both pain and disability analysis. The p-value is the statistical probability that the results observed are due to chance alone (i.e., a p-value <0.0001 for reduction in pain means that there is a less than a 0.01% chance that the demonstrated reduction in pain for subjects surgically treated with iFuse in relation to the non-surgical management group was purely due to chance).

The performance for subjects surgically treated with iFuse is evaluated using a number of commonly used metrics, including the following:

- **Visual analog scale ("VAS")**: VAS measures a patient's pain intensity on a 0–100 scale, with zero representing no pain and 100 representing the worst pain imaginable. The VAS score is used to calculate changes in patient pain.
- **Oswestry Disability Index ("ODI")**: ODI measures a patient's disability on a scale of 0–100, where zero represents no disability and scores greater than 60 represent very severe disability.

INVESTORS OUTSIDE THE UNITED STATES

Neither we nor the underwriters have done anything that would permit this offering or possession or distribution of this prospectus or any free writing prospectus we may provide to you in connection with this offering in any jurisdiction where action for that purpose is required, other than in the United States. You are required to inform yourselves about and to observe any restrictions relating to this offering and the distribution of this prospectus and any such free writing prospectus outside of the United States.

PROSPECTUS SUMMARY

This summary highlights certain information contained elsewhere in this prospectus. This summary is not complete and does not contain all of the information you should consider in making your investment decision. You should read the entire prospectus carefully before making an investment in our common stock. You should carefully consider, among other things, our consolidated financial statements and the related notes and the sections titled "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere in this prospectus. Except as otherwise indicated herein or as the context otherwise requires, references in this prospectus to "SI-BONE," "the company," "we," "us," and "our" refer to SI-BONE, Inc.

Our Business

We are a medical device company that has pioneered a proprietary minimally invasive surgical implant system to fuse the sacroiliac joint for treatment of common types of sacroiliac joint disorders that cause lower back pain. We introduced our iFuse Implant System, or iFuse, in 2009 in the United States and in 2010 in certain countries in the European Union. Since 2009, more than 25,000 iFuse Procedures have been performed by over 1,300 surgeons, primarily in the United States. Based on our commercial experience and our market research, we believe iFuse is currently used in approximately 70% of minimally invasive surgical fusions of the sacroiliac joint in the United States. During 2015 and 2016, we generated revenue of $41.2 million and $42.1 million, respectively, and our net loss was $28.2 million and $20.6 million, respectively. For the three months ended March 31, 2016 and 2017, we generated revenue of $9.6 million and $11.4 million, respectively, and our net loss was $6.6 million and $6.6 million, respectively. We expect to continue to incur operating losses in the future.

The two sacroiliac joints connect the sacral bone at the base of the spine with the two iliac bones of the pelvis, and absorb and transmit shock between the legs and the upper body. Patients with sacroiliac joint dysfunction may experience pain that can be debilitating. We believe that the sacroiliac joint is the last major joint to be addressed by the orthopedic implant industry.

Our iFuse Implants are triangular, and three implants are typically used in each procedure. Our implants are made of titanium and are coated with a porous surface using a titanium plasma spray process. Each iFuse Implant is at least three times the strength of a typical eight millimeter surgical screw and the large porous surface area allows fixation of the bone to the implants.

iFuse is supported by published evidence of safety, clinical effectiveness, durability and reduction in opioid users. These benefits are supported by more than 50 peer reviewed papers, including three prospective multicenter studies, two of which were randomized controlled clinical trials.

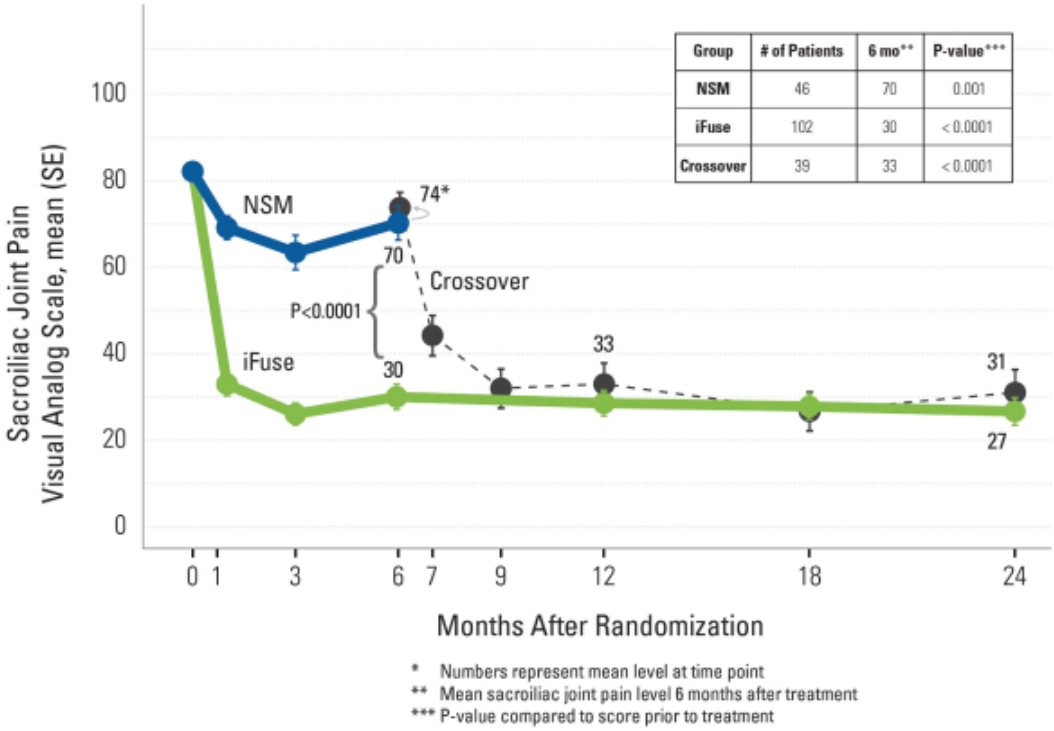
- INSITE was a randomized controlled study conducted in the United States. Positive 24-month follow-up results were published in August 2016 in the *International Journal of Spine Surgery* showing statistically significant and clinically important reduction in pain and disability. In April 2015, INSITE was awarded the "Best Overall Paper" out of approximately 450 submitted clinical study papers at the International Society for Advancement of Spine Surgery, or ISASS, conference.
- iMIA was a randomized controlled study conducted in Europe. Positive six-month follow-up results were published in *European Spine Journal* in May 2016, and the 12-month follow-up results were accepted in March 2017 for publication in *Pain Physician*, showing statistically significant and clinically profound reduction in pain and disability.
- SIFI was a single-arm study conducted in the United States. Positive 24-month follow-up results were published in the *International Journal of Spine Surgery* in April 2016, showing substantial and sustained reduction in pain and disability.

A pooled analysis of these three prospective studies was published in March 2017 in *SPINE*, showing consistent and durable reduction in pain and disability, and improvement in quality of life.

- A controlled study that followed patients for up to six years was published in April 2017 in *Neurosurgery*, showing that at their last follow up visit more than 80% of patients who received non-surgical management were using opioids, while only 7% of patients treated with iFuse were using opioids.

The INSITE clinical trial included 148 subjects treated at 19 centers in the United States, with subjects randomized in a two to one ratio to either immediate sacroiliac joint fusion with iFuse or non-surgical management. The study design allowed subjects in the non-surgical management group to cross over and have surgery after six months. By 24 months after the start of the clinical trial, 89% of the non-surgical management group subjects still participating in the trial had elected to cross over to have the iFuse Procedure. The study's results can be summarized as follows:

- **Reduction in Pain**. There was a statistically significant and clinically important pain reduction in subjects treated with iFuse as compared to those treated with non-surgical management. As shown in the graph below, subjects surgically treated with iFuse had mean 52, 54 and 55-point reductions in sacroiliac joint pain at 6, 12 and 24 months, respectively, as measured on VAS. By contrast, subjects in the non-surgical management group had only a mean 12-point reduction ($p<0.0001$) at six months. In addition, the non-surgical management group subjects who elected after six months to cross over to have the iFuse Procedure had pain reduction similar to that seen in subjects originally assigned to sacroiliac joint fusion with iFuse. At 24 months, the proportion of subjects with a reduction in VAS sacroiliac joint pain of 20 or more points was 83% in the iFuse group and 10% in the non-surgical management group.



- **Reduction in Disability**. There was a statistically significant reduction in disability with iFuse as compared to non-surgical management. Subjects surgically treated with iFuse had a mean 27-point reduction in disability at six months on ODI, while subjects in the non-surgical management group had only a mean 5-point reduction ($p<0.0001$). ODI reductions were sustained at month 24 (28-point reduction). In addition, at 24 months, the proportion of subjects with an ODI improvement of at least 15 points was 68.2% and 7.5% in the iFuse and non-surgical management groups, respectively ($p<0.0001$).

Patients from this study will be followed for up to five years in a separate long-term study.

A published study following patients for up to six years showed that pain relief was maintained for patients treated with iFuse, while patients treated with non-surgical management showed worsening pain over that period. Moreover, the cumulative four-year revision rate with iFuse, an important clinical outcome, is approximately 3.6%, or one-third of the reported revision rate of lumbar, or lower back, fusion.

Market

Over 30 million Americans experience lower back pain at any given time, according to *The New England Journal of Medicine.* Published clinical studies have shown that 15% to 30% of all lower back pain is associated with the sacroiliac joint. Our experience in both clinical trials and commercial settings indicates that iFuse could be beneficial to at least 30% of patients who visit trained healthcare providers and are screened for exclusion and inclusion criteria. Based on our market experience and internal estimates, we believe that 10% of Americans that experience lower back pain related to the sacroiliac joint are potential candidates for the iFuse Procedure. Accordingly, we estimate that the potential market for iFuse in the United States would be 465,000 patients annually.

Studies have also shown that the disability from disease of the sacroiliac joint is comparable to the disability associated with a number of other serious orthopedic conditions (for example, knee and hip arthritis, narrowing of the spinal canal, or spinal stenosis, and degenerative disc disease), all of which have surgical solutions where an implant is used and a significant market exists. For example, there are a large number of lumbar fusions to treat lower back pain in the United States.

Limitations of Prior Treatment and Our iFuse Solution

Patients with sacroiliac joint dysfunction frequently experience significant pain simply from sitting, standing, or rolling over in bed. The pain can be exacerbated with activity—when a patient walks or runs, for example, the shock from each step is transmitted up the leg to the iliac bones of the pelvis. This results in small movements of the sacroiliac joints and pressure transferred across the joints. The initial goal in fusion of the sacroiliac joint is to immediately stabilize the joint because the movement of the damaged or arthritic joint is believed to cause the pain. After the joint has been stabilized, the goal is to permanently fuse the joint.

Surgical fusion of the sacroiliac joint with an open surgical technique was first reported in 1908; further reports were described in the 1920s. The open procedure uses plates and screws, is extremely invasive, and involves greater blood loss and longer recovery time when compared to the iFuse minimally invasive procedure.

Open surgery for elective sacroiliac joint fusion has become less common in the United States since we introduced iFuse. The table below highlights some of the key differences between the iFuse Procedure and open surgery.

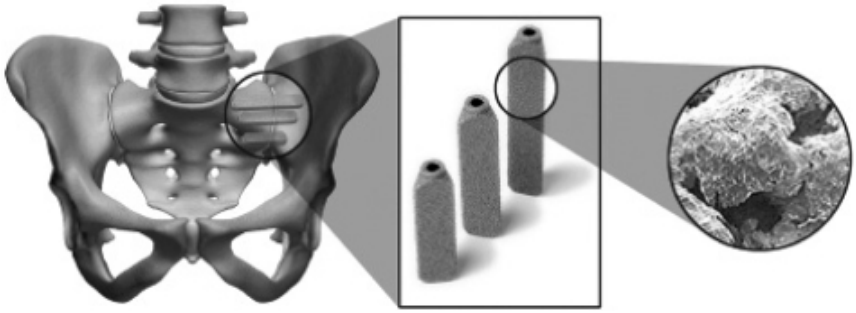
	Fusion with Open Surgery	iFuse Procedure
Size of incision	6 to 12 inches	1 to 2 inches
Average hospital stay	5.1 nights	1.3 nights
Average blood loss	800 ml	33 ml

Due to its invasiveness, pain, long recovery time, and infrequent use, the open fusion procedure was rarely taught in medical school or residency programs. Prior to our launch of iFuse, most spine surgeons had never performed a sacroiliac joint fusion. As a result, when patients presented with lower back pain, spine surgeons often did not include a sacroiliac joint evaluation in their diagnostic work-up.

It is often difficult to identify the source of lower back pain. As a result, some surgical procedures performed on the spine have a sub-optimal success rate. For example, published studies of lumbar fusion have shown success rates of only approximately 60%. We believe low success rates of lumbar fusion are likely related to failure to diagnose the sacroiliac joint as the correct cause of pain in some cases.

In addition to training surgeons to perform the iFuse Procedure, we have made considerable investments in teaching healthcare professionals to accurately diagnose sacroiliac joint disorders. We provide instruction and training on how to perform provocative maneuvers in a physician's office that can reveal the sacroiliac joint as the source of pain. If provocative tests are positive, surgeons confirm the diagnosis by injecting a small amount of local anesthetic into the joint under fluoroscopic guidance. If the local anesthetic produces immediate pain reduction, it confirms that the sacroiliac joint is the source of the pain. In addition to the differentiated characteristics of our iFuse Procedure and iFuse Implants, we believe that more accurate diagnosis is part of the reason for the high success rate of iFuse.

The iFuse Procedure is performed under general anesthesia and involves an incision approximately one to two inches in length. The surgeon uses a custom instrument set we provide to prepare a triangular channel across the sacroiliac joint for each implant. An iFuse Implant is then pressed into a triangular channel, which is slightly smaller than the implant, creating what is known as an interference fit. The triangular shape of our iFuse Implants, as shown below, prevents them from rotating. Our iFuse Implants have more than 30 times the rotation resistance of screws based on a study we sponsored. iFuse Implants cross the sacroiliac joint and provide stability, which is why we believe pain diminishes soon after the iFuse Procedure. We have issued patents on implants with cross-sections of different shapes, including the triangular shape we use for iFuse. We also have issued patents for the method of placing those implants for applications across the sacroiliac joint, as well as other parts of the spine and pelvis.



By contrast, open fusion of the sacroiliac joint, as well as the minimally invasive solutions offered by other companies, typically use screws and/or plates for fixation. When placed across the sacroiliac joint, standard orthopedic screws, with no features to encourage biologic fixation, have an exhibited propensity to rotate and loosen over time. Because of the triangular shape, porous coating, strength, and other differentiating factors of our iFuse Implants, we believe that our published clinical data does not apply to other minimally invasive solutions, for which little published evidence of safety, clinical effectiveness, durability, or economic utility currently exists. We are unaware of any data to show that our competitors' sacroiliac joint screws, with features allowing biologic fixation, have a lower rate of loosening than standard orthopedic screws. In addition, placement of plates for open fusion procedures typically requires larger incisions and more invasive dissection, which results in longer recovery times and increased morbidity.

Surgical revision is an important outcome for patients. A recent single site retrospective study published in the *International Journal of Spine Surgery* showed a cumulative revision rate of more than 30% at four years for screw-based treatment of sacroiliac joint pain (based on 38 cases) and a revision rate of less than 6% for iFuse (based on 274 cases). Based on an extensive review of the published medical literature before that study, private payors Health Care Service Corporation, or HCSC, Geisinger and SelectHealth Medical Technology Assessment Committees, or SelectHealth, determined that coverage of minimally invasive (MIS) sacroiliac joint fusion specific to iFuse was appropriate as the literature related to other MIS sacroiliac joint fusion systems was inadequate to determine safety and effectiveness. Use of all other technologies is considered experimental/investigational or unproven and therefore not covered.

Next Generation Implant

Our next generation iFuse implant, the iFuse-3D, was cleared for marketing by the U.S. Food and Drug Administration in March 2017 and the European Union in May 2017. This implant is produced with 3D printing and is designed to promote in-growth, through-growth and on-growth by bone. This product has shown positive bone growth in animal studies as evidenced in two peer reviewed studies accepted in March 2017 for publication in the *International Journal of Spine Surgery*. We are planning a gradual roll out of this product.

Coverage and Reimbursement in the United States

Prior to our launch of iFuse, Medicare and most private insurance companies reimbursed surgeons for sacroiliac joint fusions using either an established Category I Current Procedure Terminology, or CPT, code or an unlisted code. A Category I CPT code is typically assigned to procedures that are consistent with contemporary medical practice and are widely performed. Procedures with a longstanding Category I CPT code are usually reimbursed.

However, effective July 1, 2013, the American Medical Association's, or AMA's, CPT Editorial Panel created a new Category III CPT code for fusion of the sacroiliac joint using a minimally invasive or percutaneous approach. Category III CPT codes are used for new and emerging technologies and are reimbursed sporadically. This new code functionally redefined coding for sacroiliac joint fusions because it meant that minimally invasive or percutaneous fusion procedures should not be billed using the general Category I CPT code for sacroiliac fusion surgery. The coding change was accompanied by the establishment of a Medicare hospital outpatient prospective payment rate for the new code.

Following the creation of the new Category III CPT code, a number of papers demonstrating the clinical success of the iFuse Procedure were published. These studies, along with the support of several professional societies and surgeons, resulted in the AMA CPT Editorial Panel establishing a new Category I CPT code specifically for sacroiliac joint fusion surgery using a minimally invasive or percutaneous approach. This new Category I CPT code became effective on January 1, 2015.

Subsequently, in March 2015, our INSITE prospective, randomized controlled multi-center clinical trial was published. In June 2015, the largest spine society in the world, the North American Spine Society, or NASS, published a positive coverage recommendation, based on the clinical evidence, advocating to insurance companies and Medicare Administrative Contractors, or MACs, that sacroiliac joint fusion using a minimally invasive surgical approach should be routinely reimbursed. In March 2015, the International Society for Advancement of Spine Surgery, or ISASS, also published a similar positive advocacy document intended to encourage insurance companies in the United States to reimburse for the procedure.

Coverage decisions for this code are made independently by each of the private insurance companies and the eight MACs, and the process of obtaining coverage is laborious. As of June 30, 2016, because of the iFuse clinical evidence, all eight MACs were covering the procedure. As of March 31, 2017, eight of the largest 50 private payors were covering the iFuse Procedure regularly, while the vast majority of private payors were evaluating their coverage policies. In addition, because of the iFuse clinical evidence, the private payors HCSC, Geisinger and SelectHealth, have issued positive coverage policies for iFuse while specifically excluding coverage for any competitive products. Beginning in the fourth quarter of 2016, the increasing coverage, combined with our sales and marketing efforts, has led to an increase in the number of procedures and we believe will lead to a return to revenue growth.

Our Strategy

Our objective is to maintain and enhance our leadership position in providing clinically-proven products and training for minimally invasive sacroiliac joint fusion and provide relief for as many patients as possible. To accomplish this objective, we intend to:

- Continue to educate physicians, payors, and patients globally about the growing body of compelling evidence supporting the safety, clinical effectiveness, durability and reduction in opioid use associated with the iFuse Procedure;
- Increase reimbursement coverage based on our evidence of safety, clinical effectiveness, durability and reduction in opioid use;
- Continue to invest in iFuse awareness, surgeon training, new products, and additional clinical and economic studies;
- Educate and train the healthcare community on the prevalence, anatomy, diagnosis, and treatment options, including minimally invasive surgical fusion of the sacroiliac joint;
- Expand our direct field organization in the United States and select European countries to drive adoption of our iFuse products;
- Maintain our technological leadership by investing in the creation of new or improved products for sacroiliac joint surgery, and obtain domestic and international regulatory clearance or approvals to market them in the United States and additional countries; and
- Continue to grow and defend our existing intellectual property portfolio.

Company History

SI-BONE was founded in 2008 by the main inventor of iFuse and member of our board of directors, orthopedist Mark A. Reiley, M.D., our President, Chief Executive Officer and Chairman, Jeffrey W. Dunn, and orthopedic surgeon Leonard Rudolf, M.D. Dr. Reiley previously invented balloon kyphoplasty and founded Kyphon Inc., which was sold to Medtronic plc in 2007. He also invented the INBONE total ankle replacement system, which was sold to Wright Medical Technology, Inc. in 2008.

As of March 31, 2017, we had 183 employees, including a direct field sales organization of 73 in the United States and 12 in Europe. In the United States, we sell primarily through our direct field organization, and we have

a small number of third-party distributors. As of March 31, 2017, throughout the world we had 29 issued patents, of which 23 were in the United States, and 28 pending patents, of which 16 were in the United States. These patents and applications cover various aspects of the iFuse Procedure, implants, and instruments.

Risks Associated With Our Business

Our business is subject to numerous risks, as more fully described in "Risk Factors," which immediately follow this prospectus summary. These risks include, among others:

- We have incurred significant operating losses since inception, we expect to continue to incur operating losses in the future, and we may not be able to achieve or sustain future profitability.
- If hospitals, surgeons, and other healthcare providers are unable to obtain adequate coverage and reimbursement from third-party payors for procedures performed using our products, adoption of our products may be delayed, and it is unlikely that they will gain widespread acceptance.
- We may not be able to convince physicians that iFuse is an attractive alternative to our competitors' products and that our procedure is an attractive alternative to existing surgical and non-surgical treatments of the sacroiliac joint.
- Surgeons and payors may not find our clinical evidence to be compelling, which could limit our sales and revenue, and on-going and future research may prove our products to be less safe and effective than initially anticipated.
- Pricing pressure from our competitors, changes in third-party coverage and reimbursement, healthcare provider consolidation, payor consolidation and the proliferation of "physician owned distributorships" may impact our ability to sell our product at prices necessary to support our current business strategies.
- We operate in a very competitive business environment and if we are unable to compete successfully against our existing or potential competitors, our sales and operating results may be negatively affected and we may not grow.
- We currently manufacture and sell products used in a single procedure, which could negatively affect our operations and financial condition.
- If we are unable to maintain and expand our network of direct sales representatives and third-party distributors, we may not be able to generate anticipated sales.
- We have a limited operating history and may face difficulties encountered by early stage companies in new and rapidly evolving markets.
- Our sales volumes and our operating results may fluctuate over the course of the year.
- If our business strategy proves to be flawed, or if we do not successfully implement our business strategy, our business and results of operations will be adversely affected.
- We will need to generate significant sales to become profitable.
- Our future capital needs are uncertain and we may need to raise additional funds in the future, and such funds may not be available on acceptable terms or at all.
- We, our suppliers, and our third-party manufacturers are subject to extensive governmental regulation both in the United States and abroad and failure to comply with applicable requirements could cause our business to suffer.
- We and our sales representatives must comply with U.S. federal and state fraud and abuse laws, including anti-kickback and false claims and equivalent foreign rules.

Implications of Being an Emerging Growth Company

We qualify as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. An emerging growth company may take advantage of relief from certain reporting requirements and other burdens that are otherwise applicable generally to public companies. These provisions include:

- reduced obligations with respect to financial data, including presenting only two years of audited financial statements and only two years of selected financial data;
- an exception from compliance with the auditor attestation requirements of Section 404 of the Sarbanes- Oxley Act of 2002, or the Sarbanes-Oxley Act;
- reduced disclosure about our executive compensation arrangements in our periodic reports, proxy statements and registration statements; and
- exemptions from the requirements of holding non-binding advisory votes on executive compensation or golden parachute arrangements.

We may take advantage of these provisions for up to five years or such earlier time that we no longer qualify as an emerging growth company. We would cease to be an emerging growth company if we have more than $1.1 billion in annual revenue, have more than $700 million in market value of our capital stock held by non-affiliates or issue more than $1.0 billion of non-convertible debt over a three-year period. We may choose to take advantage of some but not all of these reduced reporting burdens.

In addition, under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

Corporate Information

We were incorporated in March 2008 in Delaware. Our principal executive offices are located at 3055 Olin Avenue, Suite 2200, San Jose, California 95128, and our telephone number is (408) 207-0700. Our website address is www.si-bone.com. The information on, or that can be accessed through, our website is not part of this prospectus. We have included our website address as an inactive textual reference only.

THE OFFERING

Shares of common stock offered by us	shares
Shares of common stock to be outstanding after this offering	shares (shares if the underwriters exercise their option to purchase additional shares in full)
Option to purchase additional shares	We have granted to the underwriters the option, exercisable for 30 days, to purchase up to additional shares of our common stock.
Use of proceeds	We estimate that the net proceeds from this offering of shares of our common stock will be approximately $ million, or $ million if the underwriters exercise their option to purchase additional shares in full, after deducting underwriting discounts and commissions and estimated offering expenses payable by us, assuming an initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus. We expect to use approximately $ million of the net proceeds for sales and marketing activities to support ongoing commercialization of iFuse Implant System and the remainder, if any, for working capital and general corporate purposes, including research and development and clinical studies. We may also use a portion of our net proceeds to acquire or invest in complementary products, technologies, or businesses; however, we currently have no agreements or commitments to complete any such transactions. See the section titled "Use of Proceeds."
Risk factors	See the section titled "Risk Factors" and the other information included in this prospectus for a discussion of factors you should consider carefully before deciding to invest in our common stock.
Proposed Nasdaq Global Market symbol	"SIBN"

The number of shares of common stock to be outstanding after this offering is based on 280,020,764 shares of common stock outstanding as of March 31, 2017, and excludes:

- 55,294,071 shares of common stock issuable upon the exercise of options outstanding as of March 31, 2017, with a weighted-average exercise price of $0.23 per share;
- shares of common stock issuable upon the net exercise of warrants outstanding as of March 31, 2017, with an exercise price of $0.51 per share, immediately prior to the closing of this offering, assuming an initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus;
- 4,141,369 shares of common stock, as converted, issuable upon the exercise of warrants outstanding as of March 31, 2017, with a weighted-average exercise price of $0.48 per share;

- 1,712,363 additional shares of our common stock reserved for future issuance under our 2008 Stock Plan, which shares will cease to be available for issuance at the time our 2017 Equity Incentive Plan becomes effective upon the execution of the underwriting agreement for this offering;
- 42,502,151 shares of our common stock reserved for future issuance under our 2017 Equity Incentive Plan, as well as any increases in the number of shares of common stock reserved for future issuance under this plan, which will become effective upon the execution of the underwriting agreement for this offering; and
- 9,444,922 shares of our common stock reserved for future issuance under our 2017 Employee Stock Purchase Plan, as well as any increases in the number of shares of common stock reserved for future issuance under this plan, which will become effective upon the execution of the underwriting agreement for this offering.

Unless otherwise indicated, all information in this prospectus assumes:

- The filing of our amended and restated certificate of incorporation and the effectiveness of our amended and restated bylaws upon the closing of this offering;
- The conversion of all our outstanding preferred stock as of March 31, 2017, into an aggregate of 217,201,525 shares of our common stock immediately prior to the closing of this offering;
- The reclassification of all outstanding shares of our Series 1 common stock and Series 2 common stock into a single class of common stock named “common stock,” which shall have the same voting powers, preferences, rights and qualifications, limitations, and restrictions as the current Series 2 common stock, immediately prior to the closing of this offering;
- No exercise of outstanding options and warrants; and
- No exercise by the underwriters of their option to purchase up to additional shares of our common stock.

SUMMARY CONSOLIDATED FINANCIAL DATA

The following selected consolidated financial data should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements and related notes included within this prospectus. The consolidated statements of operations data for the years ended December 31, 2015 and 2016, are derived from our audited consolidated financial statements and related notes included elsewhere in this prospectus. The consolidated statements of operations data for the three months ended March 31, 2016 and 2017, and the consolidated balance sheet data at March 31, 2017, are derived from our unaudited consolidated financial statements and related notes included elsewhere in this prospectus. Our historical results are not necessarily indicative of the results to be expected in the future and our results for the three months ended March 31, 2017 are not necessarily indicative of the results that may be expected for the full fiscal year.

	Year Ended December 31,		Three Months Ended March 31,	
	2015	2016	2016	2017
			(unaudited)	
	(in thousands, except per share data)			
Consolidated Statements of Operations Data:				
Revenue	$ 41,173	$ 42,101	$ 9,589	$ 11,426
Cost of goods sold	5,398	5,165	1,153	1,434
Gross profit	35,775	36,936	8,436	9,992
Operating expenses:				
Sales and marketing	39,799	35,215	8,854	10,273
Research and development	8,606	6,380	1,625	1,419
General and administrative	13,793	12,906	4,439	3,855
Total operating expenses	62,198	54,501	14,918	15,547
Loss from operations	(26,423)	(17,565)	(6,482)	(5,555)
Interest and other income (expense), net:				
Interest income	22	71	11	33
Interest expense	(1,686)	(3,308)	(817)	(945)
Other income (expense), net	(67)	213	647	(122)
Net loss	(28,154)	(20,589)	(6,641)	(6,589)
Other comprehensive income:				
Changes in foreign currency translation	247	67	(178)	5
Comprehensive loss	$ (27,907)	$ (20,522)	$ (6,819)	$ (6,584)
Net loss per common share, basic and diluted[1]	$ (0.51)	$ (0.35)	$ (0.11)	$ (0.11)
Weighted-average common shares used to compute basic and diluted net loss per common share[1]	55,292,845	59,659,307	58,782,930	61,735,139
Pro forma net loss per common share basic and diluted (unaudited)[1]		$		$
Pro forma weighted-average number of common shares used to compute basic and diluted net loss per share (unaudited)[1]				

(1) See Note 14 to our consolidated financial statements included elsewhere in this prospectus for the method used to calculate net loss per common share, basic and diluted, and pro forma net loss per common share, basic and diluted.

	As of March 31, 2017		
	Actual	Pro Forma(1)	Pro Forma As Adjusted(2)(3)
		(in thousands)	
Consolidated Balance Sheet Data:			
Cash and cash equivalents	$ 28,732		
Working capital	23,899		
Total assets	40,980		
Convertible preferred stock warrant liability	681		
Total borrowings	29,389		
Total liabilities	36,838		
Convertible preferred stock	118,548		
Total stockholders' (deficit) equity	(114,406)		

(1) The pro forma column reflects (i) the conversion of all outstanding shares of our preferred stock into an aggregate of 217,201,525 shares of common stock and (ii) the issuance of shares of common stock upon the net exercise of outstanding warrants with an exercise price of $0.51 per share, immediately prior to the closing of this offering, assuming an initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus.

(2) The pro forma as adjusted column further reflects the sale of shares of common stock in this offering, assuming an initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

(3) A $1.00 increase (decrease) in the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) each of pro forma as adjusted cash and cash equivalents, working capital, total assets, and total stockholders' equity by $ million, assuming the number of shares we are offering, as set forth on the cover page of this prospectus, remains the same, after deducting underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. An increase (decrease) of 1,000,000 in the number of shares offered by us would increase (decrease) each of pro forma as adjusted cash and cash equivalents, working capital, total assets, and total stockholders' equity by $ million, assuming the initial public offering price per share remains the same, after deducting underwriting discounts and commissions. The pro forma as adjusted information is illustrative only, and we will adjust this information based on the actual initial public offering price, number of shares offered, and other terms of this offering determined at pricing.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks described below, as well as the other information in this prospectus, including our consolidated financial statements and the related notes and "Management's Discussion and Analysis of Financial Condition and Results of Operations," before deciding whether to invest in our common stock. The occurrence of any of the events or developments described below could materially and adversely affect our business, financial condition, results of operations, and growth prospects. In such an event, the market price of our common stock could decline, and you may lose all or part of your investment. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also impair our business operations.

Risks Related to Our Business and Our Industry

We have incurred significant operating losses since inception, we expect to continue to incur operating losses in the future, and we may not be able to achieve or sustain future profitability.

We have incurred net losses since our inception in 2008. For the three months ended March 31, 2016 and 2017, we had net losses of $6.6 million and $6.6 million, respectively. As of March 31, 2017, we had an accumulated deficit of $123.3 million. To date, we have financed operations primarily through private placements of equity securities, certain debt-related financing arrangements and from sales of our products. We have devoted substantially all of our resources to research and development of our products, sales and marketing activities, investments in training and educating surgeons and other healthcare providers and clinical and regulatory matters for our products. There can be no assurances that we will be able to generate sufficient revenue from our existing products or from any of our product candidates in development, and to transition to profitability and generate consistent positive cash flows. Following this offering, we expect that our operating expenses will continue to increase as we continue to build our commercial infrastructure, develop, enhance, and commercialize our existing and new products and incur additional operational and reporting costs associated with being a public company. As a result, we expect to continue to incur operating losses for the foreseeable future and may never achieve profitability. Furthermore, even if we do achieve profitability, we may not be able to sustain or increase profitability on an ongoing basis. If we do not achieve profitability, it will be more difficult for us to finance our business and accomplish our strategic objectives.

If hospitals, surgeons, and other healthcare providers are unable to obtain adequate coverage and reimbursement from third-party payors for procedures performed using our products, adoption of our products may be delayed, and it is unlikely that they will gain widespread acceptance.

Maintaining and growing sales of our products depends on the availability of adequate coverage and reimbursement from third-party payors, including government programs such as Medicare and Medicaid, private insurance plans, and managed care programs. Hospitals, surgeons, and other healthcare providers that purchase or use medical devices generally rely on third-party payors to pay for all or part of the costs and fees associated with the procedures performed with these devices.

Adequate coverage and reimbursement for procedures performed with our products is central to the acceptance of our current and future products. We may be unable to sell our products on a profitable basis if third-party payors deny coverage, continue to deny coverage or reduce their current levels of payment, or if our costs of production increase faster than increases in reimbursement levels. For example, our sales decreased significantly after minimally invasive sacroiliac joint fusion was assigned to a Category III Current Procedure Terminology, or CPT, code effective July 1, 2013. Many private payors refer to coverage decisions and payment amounts determined by the Centers for Medicare and Medicaid Services, or CMS, which administers the Medicare program, as guidelines for setting their coverage and reimbursement policies. Future action by CMS or third-party payors may further diminish payments to physicians, outpatient centers, and/or hospitals. In addition, prior to July 1, 2013, the national average Medicare physician fee schedule payment to surgeons for CPT codes commonly used to submit claims for reimbursement for the iFuse Procedure was approximately $1,000. Effective

January 1, 2016, the national average Medicare payment for the new Category I CPT code of $577 increased to $718, and the national average payment effective January 1, 2017, is $715. The national average Medicare payment to hospital outpatient departments increased from $10,540 to $14,700 effective January 1, 2017. It is unclear whether this reimbursement amount will negatively affect procedure volumes. For some governmental programs, such as Medicaid, coverage and reimbursement differ from state to state, and some state Medicaid programs may not pay an adequate amount for the procedures performed with our products, if any payment is made at all. As the portion of the U.S. population over the age of 65 and eligible for Medicare continues to grow, we may be more vulnerable to coverage and reimbursement limitations. Private payors that do not follow the Medicare guidelines may adopt different coverage and reimbursement policies for procedures performed with our products. Furthermore, the healthcare industry in the United States has experienced a trend toward cost containment as government and private insurers seek to control healthcare costs by imposing lower payment rates and negotiating reduced contract rates with service providers. Therefore, we cannot be certain that the procedures performed with our products will be reimbursed at an appropriate level or at all.

To the extent we sell our products internationally, market acceptance may depend, in part, upon the availability of coverage and reimbursement within prevailing healthcare payment systems. Reimbursement and healthcare payment systems in international markets vary significantly by country, and include both government-sponsored healthcare and private insurance. We may not obtain international coverage and reimbursement approvals in a timely manner, if at all. Our failure to receive such approvals would negatively impact market acceptance of our products in the international markets in which those approvals are sought.

We may not be able to convince physicians that iFuse is an attractive alternative to our competitors' products and that our procedure is an attractive alternative to existing surgical and non-surgical treatments of the sacroiliac joint.

Surgeons play the primary role in determining the course of treatment in consultation with their patients and, ultimately, the product that will be used to treat a patient. In order for us to sell our iFuse solution successfully, we must convince surgeons through education and training that treatment with iFuse is beneficial, safe, and cost effective for patients as compared to our competitors' products. If we are not successful in convincing surgeons of the merits of iFuse, they may not use our product, and we will be unable to increase our sales and achieve or grow profitability.

Historically, most spine surgeons did not include sacroiliac joint pain in their diagnostic work-up because they did not have an adequate surgical procedure to perform for patients diagnosed with the condition. As a result, some patients with lower back pain resulting from sacroiliac joint dysfunction are misdiagnosed. We believe that educating surgeons and other healthcare professionals about the clinical merits and patient benefits of iFuse is an important element of our growth. If we fail to effectively educate surgeons and other medical professionals, they may not include a sacroiliac joint evaluation as part of their diagnosis and, as a result, those patients may continue to receive unnecessary or only non-surgical treatment.

Surgeons may also hesitate to change their medical treatment practices for other reasons, including the following:

- lack of experience with minimally invasive procedures;
- perceived liability risks generally associated with the use of new products and procedures;
- costs associated with the purchase of new products; and
- time commitment that may be required for training.

Furthermore, we believe surgeons will not widely use iFuse unless they determine, based on experience, clinical data, and published peer-reviewed publications, that surgical intervention provides benefits or is an attractive alternative to non-surgical treatments of sacroiliac joint dysfunction. In addition, we believe support of

our products relies heavily on long-term data showing the benefits of using our products. If we are unable to provide that data, surgeons may not use our products. In such circumstances, we may not achieve expected sales and may be unable to achieve profitability.

Surgeons and payors may not find our clinical evidence to be compelling, which could limit our sales and revenue, and on-going and future research may prove our products to be less safe and effective than initially anticipated.

The products we currently market in the United States have either received premarket clearance under Section 510(k) of the U.S. Federal Food, Drug, and Cosmetic Act, or FDCA, or are exempt from premarket review. Those marketed in the European Union have been the subject of a CE Certificate of Conformity. The 510(k) clearance process of the U.S. Food and Drug Administration, or FDA, requires us to document that our product is "substantially equivalent" to another 510(k)-cleared products. The 510(k) process is shorter and typically requires the submission of less supporting documentation than other FDA approval processes, such as a premarket approval, or PMA, and does not usually require pre-clinical or clinical studies. Additionally, to date, we have not been required to complete clinical studies in connection with the sale of our products outside the United States. As a result, while there are a number of published studies relating to iFuse and minimally invasive sacroiliac joint surgery that support the safety and effectiveness of our product and the benefits it offers, our clinical studies may lack the size and scope of randomized controlled clinical trials required to support approval of a PMA. For these reasons, surgeons may be slow to adopt our products, third-party payors may be slow to provide coverage, and we may be subject to greater regulatory and product liability risks. Further, future patient studies or clinical experience may indicate that treatment with our products does not improve patient outcomes. Such results would slow the adoption of our products by surgeons, significantly reduce our ability to achieve expected sales, and could prevent us from achieving profitability. Moreover, if future results and experience indicate that our products cause unexpected or serious complications or other unforeseen negative effects, we could be subject to mandatory product recalls, suspension, or withdrawal of FDA clearance, and suspension, variation, or withdrawal of our CE Certificates of Conformity, significant legal liability or harm to our business reputation, which could have a material adverse effect on our results or operations and financial condition.

Pricing pressure from our competitors, changes in third-party coverage and reimbursement, healthcare provider consolidation, payor consolidation and the proliferation of "physician owned distributorships" may impact our ability to sell our product at prices necessary to support our current business strategies.

If competitive forces drive down the prices we are able to charge for our product, our profit margins will shrink, which will adversely affect our ability to invest in and grow our business. The sacroiliac joint fusion market has attracted numerous new companies and technologies. As a result of this increased competition, we believe there will be continuing increased pricing pressure with respect to our products.

Even to the extent our product and procedures using our product are currently covered and reimbursed by third-party private and public payors, adverse changes in coverage and reimbursement policies that affect our products, discounts, and number of implants used may also drive our prices down and harm our ability to market and sell our products.

We are unable to predict what changes will be made to the reimbursement methodologies used by third- party payors. We cannot be certain that under current and future payment systems, in which healthcare providers may be reimbursed a set amount based on the type of procedure performed, such as those utilized by Medicare and in many privately managed care systems, the cost of our products will be justified and incorporated into the overall cost of the procedure. In addition, to the extent there is a shift from inpatient setting to outpatient settings, we may experience pricing pressure and a reduction in the number of iFuse Procedures performed.

Consolidation in the healthcare industry, including both third-party payors and healthcare providers, could lead to demands for price concessions or to the exclusion of some suppliers from certain of our markets, which

could have an adverse effect on our business, results of operations, or financial condition. Because healthcare costs have risen significantly over the past several years, numerous initiatives and reforms initiated by legislators, regulators, and third-party payors to curb these costs have resulted in a consolidation trend in the healthcare industry to aggregate purchasing power. As the healthcare industry consolidates, competition to provide products and services to industry participants has become and will continue to become more intense. This in turn has resulted and will likely continue to result in greater pricing pressures and the exclusion of certain suppliers from important market segments as group purchasing organizations, independent delivery networks, and large single accounts continue to use their market power to consolidate purchasing decisions for hospitals. We expect that market demand, government regulation, third-party coverage, and reimbursement policies and societal pressures will continue to change the worldwide healthcare industry, resulting in further business consolidations and alliances among our customers, which may reduce competition, exert further downward pressure on the prices of our products, and adversely impact our business, results of operations, or financial condition. As we continue to expand into international markets, we will face similar risks relating to adverse changes in coverage and reimbursement procedures and policies in those markets.

Physician-owned distributorships, or PODs, are medical device distributors that are owned, directly or indirectly, by physicians. These physicians profit from selling or arranging the sale of medical devices for use in procedures they perform on their own patients at hospitals that purchase the devices from the POD. We currently do not engage with PODs. The proliferation of physician-owned distributorships could result in increased pricing pressure on our products or harm our ability to sell our products to physicians who own or are affiliated with those distributorships.

We operate in a very competitive business environment, and if we are unable to compete successfully against our existing or potential competitors, our sales and operating results may be negatively affected and we may not grow.

Our currently marketed products are, and any future products we commercialize will likely be, subject to intense competition. The number of competitors that we are aware of marketing sacroiliac joint fusion products in the United States has grown from zero to 18 since 2008. Many of our current and potential competitors are major medical device companies that have substantially greater financial, technical, and marketing resources than we do, and they may succeed in developing products that would render our products obsolete or noncompetitive. In addition, many of these competitors have significantly longer operating history and more established reputations than we do. Our field is intensely competitive, subject to rapid change and highly sensitive to the introduction of new products or other market activities of industry participants. Our ability to compete successfully will depend on our ability to develop proprietary products that reach the market in a timely manner, receive adequate coverage and reimbursement from third-party payors, and are safer, less invasive, and more effective than alternatives available for similar purposes as demonstrated in peer-reviewed clinical publications. Because of the size of the potential market, we anticipate that other companies will dedicate significant resources to developing competing products.

We believe that our primary competitors currently are Medtronic plc, Globus Medical, Inc., X-Spine Systems, Inc. (which is also distributed by Zimmer under a different trade name), and Zyga Technology, Inc. At any time, these or other industry participants may develop alternative treatments, products or procedures for the treatment of the sacroiliac joint that compete directly or indirectly with our products. They may also develop and patent processes or products earlier than we can or obtain domestic and international regulatory clearances or approvals and CE Certificates of Conformity for competing products in the European Economic Area, or EEA, more rapidly than we can, which could impair our ability to develop and commercialize similar processes or products. If alternative treatments are, or are perceived to be, superior to our products, sales of our products and our results of operations could be negatively affected.

Some of our larger competitors are either publicly traded or divisions or subsidiaries of publicly traded companies. These competitors may enjoy several competitive advantages over us, including:

- greater financial, human, and other resources for product research and development, sales and marketing and legal matters;
- significantly greater name recognition;
- established relationships with surgeons, hospitals, and other healthcare providers;
- large and established sales and marketing and distribution networks;
- greater experience in obtaining and maintaining domestic and international regulatory clearances or approvals, or CE Certificates of Conformity for products and product enhancements;
- more expansive portfolios of intellectual property rights; and
- greater ability to cross-sell their products or to incentivize hospitals or surgeons to use their products.

New participants have increasingly entered the medical device industry. Many of these new competitors specialize in a specific product or focus on a particular market segment, making it more difficult for us to increase our overall market position. The frequent introduction by competitors of products that are or claim to be superior to our products or that are alternatives to our existing or planned products may make it difficult to differentiate the benefits of our products over competing products. In addition, the entry of multiple new products and competitors may lead some of our competitors to employ pricing strategies that could adversely affect the pricing of our products and pricing in the market generally.

As a result, without the timely introduction of new products and enhancements, our products may become obsolete over time. If we are unable to develop innovative new products, maintain competitive pricing, and offer products that surgeons and other physicians perceive to be as reliable as those of our competitors, our sales or margins could decrease, thereby harming our business.

We currently manufacture and sell only one family of products, which could negatively affect our operations and financial condition.

We do not sell any product other than iFuse and related tools and instruments. Therefore, we are solely dependent on widespread market adoption of iFuse and we will continue to be dependent on the success of this single product for the foreseeable future. There can be no assurance that iFuse will gain a substantial degree of market acceptance among surgeons, patients or healthcare providers. Our failure to successfully increase sales of iFuse or any other event impeding our ability to sell iFuse, would result in a material adverse effect on our results of operations, financial condition and continuing operations.

If we are unable to maintain and expand our network of direct sales representatives and third-party distributors, we may not be able to generate anticipated sales.

As of March 31, 2017, our U.S. sales force consisted of 48 sales representatives directly employed by us and 13 third-party distributors. As of March 31, 2017, our international sales force consisted of 12 sales representatives and 28 exclusive third-party distributors, which together have had sales in 27 countries through March 31, 2017. Our operating results are directly dependent upon the sales and marketing efforts of both our direct sales force and of our third-party distributors.

As we launch new products and increase our marketing efforts with respect to existing products, we will need to expand the reach of our marketing and sales networks. Our future success will depend largely on our ability to continue to hire, train, retain and motivate skilled direct sales representatives and third-party distributors with significant technical knowledge in various areas, such as spine health and treatment. New hires

require training and take time to achieve full productivity. If we fail to train new hires adequately, or if we experience high turnover in our sales force in the future, we cannot be certain that new hires will become as productive as may be necessary to maintain or increase our sales. Our intention is for our direct sales representatives and third-party distributors to develop long-lasting relationships with the surgeons they serve. If our direct sales representatives or third-party distributors fail to adequately promote, market and sell our products or decide to leave or cease to do business with us, our sales could significantly decrease.

We face significant challenges and risks in managing our geographically dispersed distribution network and retaining the individuals who make up that network. Some of our international third-party distributors account for a significant portion of our international sales volume, and if any such third-party distributor were to cease to distribute our products, our sales could be adversely affected. In such a situation, we may need to seek alternative third-party distributors or increase our reliance on our direct sales representatives, which may not prevent our sales from being adversely affected. If a direct sales representative or third-party distributor were to depart and be retained by one of our competitors, we may be unable to prevent them from helping competitors solicit business from our existing customers, which could further adversely affect our sales. Because of the intense competition for their services, we may be unable to recruit or retain additional qualified third-party distributors or to hire additional direct sales representatives to work with us. Furthermore, we may not be able to enter into agreements with them on favorable or commercially reasonable terms, if at all. Failure to hire or retain qualified direct sales representatives or third-party distributors would prevent us from expanding our business and generating sales.

In addition, distribution arrangements are complex and time-consuming to negotiate and document, especially outside the United States. We may not be able to negotiate distribution arrangements on a timely basis, on acceptable terms, or at all. If we are unable to do so, we may have to curtail the development of our products, delay their potential commercialization or reduce the scope of any sales or marketing activities, or increase our expenditures and undertake development or commercialization activities at our own expense. If we elect to increase our expenditures to fund development or commercialization activities on our own, we may need to obtain additional capital, which may not be available to us on acceptable terms or at all. If we do not have sufficient funds, we may not be able to further develop our products or bring them to market and generate revenue.

If we are unable to expand our sales and marketing capabilities domestically and internationally, we may not be able to effectively commercialize our products, which would adversely affect our business, results of operations, and financial condition.

We have a limited operating history and may face difficulties encountered by early stage companies in new and rapidly evolving markets.

We were formed in 2008. Accordingly, we have a limited operating history upon which to base an evaluation of our business and prospects. In assessing our prospects, you must consider the risks and difficulties frequently encountered by early stage companies in new and rapidly evolving markets, particularly companies engaged in the development and sales of medical devices. These risks include our inability to:

- increase coverage by third-party, private, and government payors;
- establish and increase awareness of our brand and strengthen customer loyalty;
- obtain domestic and international regulatory clearances or approvals, and CE Certificates of Conformity;
- conformity to commercialize new products and enhance our existing products;
- manage rapidly changing and expanding operations;
- grow our direct sales force and increase the number of our third-party distributors to expand sales of our products in the United States and in targeted international markets;

- implement and successfully execute our business and marketing strategy;
- respond effectively to competitive pressures and developments;
- continue to develop and enhance our products and product candidates;
- expand our presence and commence operations in international markets;
- perform clinical research and trials on our existing products and current and future product candidates; and
- attract and retain qualified personnel.

We can also be negatively affected by general economic conditions. Because of our limited operating history, we may not have insight into trends that could emerge and negatively affect our business. As a result of these or other risks, our business strategy might not be successful.

Our sales volumes and our operating results may fluctuate over the course of the year.

We have experienced and continue to experience meaningful variability in our sales and gross profit from quarter to quarter, as well as within each quarter, as a result of a number of factors, including, among other things:

- payor coverage and reimbursement;
- the number of products sold in the quarter;
- the demand for, and pricing of, our products and the products of our competitors;
- the timing of or failure to obtain domestic and international regulatory clearances, approvals, or CE Certificates of Conformity to commercialize new products and enhance our existing products;
- costs, benefits, and timing of new product introductions;
- increased competition;
- the availability and cost of components and materials;
- the number of selling days in the quarter;
- fluctuation in foreign currency exchange rates; and
- impairment and other special charges.

If our business strategy proves to be flawed or if we do not successfully implement our business strategy, our business and results of operations will be adversely affected.

Our business strategy was based on assumptions about the market that might prove wrong. We believe that various demographics and industry-specific trends will help drive growth in the market and our business, but these demographics and trends have been and will continue to be uncertain. Actual demand for our products could differ materially from projected demand if our assumptions regarding these factors prove to be incorrect or do not materialize, or if alternative treatments to those offered by our products gain widespread acceptance.

To implement our business strategy we need to, among other things, develop and introduce new products, find new applications for and improve our existing products, obtain new domestic and international regulatory clearances or approvals and CE Certificates of Conformity and domestic and international regulatory clearance or approval for new products and applications, and educate surgeons or payors about the clinical benefits and cost effectiveness of our products. We may not be able to successfully implement our business strategy. Also, our strategy of focusing exclusively on the sacroiliac joint market may limit our ability to grow. In addition, in order

to increase our sales, we will need to commercialize additional products and expand our direct and third-party distributor sales forces in existing and new regions, all of which could result in our becoming subject to additional or different foreign and domestic regulatory requirements, with which we may not be able to comply. Moreover, we may decide to alter or discontinue aspects of our business strategy and may adopt different strategies due to business or competitive factors not currently foreseen, such as new medical technologies that would make our products obsolete. Any failure to implement our business strategy may adversely affect our business, results of operations, and financial condition.

Our business could suffer if we lose the services of key members of our senior management, key advisors or personnel.

We are dependent upon the continued services of key members of our senior management and a limited number of key advisors and personnel. In particular, we are highly dependent on the skills and leadership of our President, Chief Executive Officer and Chairman, Jeffrey W. Dunn. The loss of members of our senior management team, key advisors or personnel, or our inability to attract or retain other qualified personnel or advisors, could have a material adverse effect on our business, results of operations, and financial condition. In addition, several of the members of our executive management team are not subject to non-competition agreements that restrict their ability to compete with us. Accordingly, the adverse effect resulting from the loss of certain executives could be compounded by our inability to prevent them from competing with us.

Although it will be subject to lock-up agreements and other restrictions on trading, a portion of the equity of our management team will not contain other contractual transfer restrictions at the time of this offering and may become tradable after the expiration of the 180-day lock-up agreement with the underwriters. This liquidity may represent material wealth to such individuals and impact retention and focus of existing key members of management.

Our products and product candidates may have undesirable side effects which may require them to be taken off the market, require them to include safety warnings or otherwise limit their sales.

Unforeseen adverse events related to our products or product candidates could arise either during clinical development or, if cleared, approved, or subject to CE Certificate of Conformity, after the product has been marketed. In clinical research, the most common adverse event related to our implant was leg pain resulting from misplacement. The most common adverse event for our implant procedure has been minor wound infections. Additional adverse effects from iFuse or any of our other products or product candidates could arise either during clinical development or, if approved, cleared, or subject to CE Certificate of Conformity, after the product has been marketed.

If we or others later identify adverse events caused by our products:

- sales of the product may decrease significantly and we may not achieve the anticipated market share;
- regulatory authorities or our Notified Body may require changes to the labeling of our product. This may include the addition of labeling statements, specific warnings, and contraindications and issuing field alerts to physicians and patients;
- we may be required to change instructions regarding the way the product is implanted or conduct additional clinical trials;
- we may be subject to limitations on how we may promote the product;
- regulatory authorities may require us to take our approved product off the market (temporarily or permanently) or to conduct other field safety corrective actions;
- we may be required to modify our product;

- we may be subject to litigation fines or product liability claims; and
- our reputation may suffer.

Any of these events could prevent us from achieving or maintaining market acceptance of the affected product or could substantially increase commercialization costs and expenses, which in turn could delay or prevent us from generating significant revenue from the sale of our products.

Various factors outside our direct control may adversely affect manufacturing, sterilization, and distribution of our products.

The manufacture, sterilization, and distribution of our products is challenging. Changes that our suppliers may make outside the purview of our direct control can have an impact on our processes, quality of our products, and the successful delivery of products to our customers. Mistakes and mishandling are not uncommon and can affect supply and delivery. Some of these risks include:

- failure to complete sterilization on time or in compliance with the required regulatory standards;
- transportation and import and export risk;
- delays in analytical results or failure of analytical techniques that we will depend on for quality control and release of products;
- natural disasters, labor disputes, financial distress, raw material availability, issues with facilities and equipment, or other forms of disruption to business operations affecting our manufacturers or suppliers; and
- latent defects that may become apparent after products have been released and that may result in a recall of such products.

If any of these risks were to materialize, our ability to provide our products to customers on a timely basis would be adversely impacted.

We are dependent on a limited number of third-party suppliers, some of them single-source and some of them in single locations, for most of our products and components, and the loss of any of these suppliers, or their inability to provide us with an adequate supply of materials in a timely and cost effective manner, could materially adversely affect our business.

We rely on third-party suppliers to supply substantially all of our products. For us to be successful, our suppliers must be able to provide us with products and components in substantial quantities, in compliance with regulatory requirements, in accordance with agreed upon specifications, at acceptable prices, and on a timely basis. We do not have long-term supply contracts for some of our suppliers, and in some cases, even where we do have agreements in place, we purchase important parts of the iFuse Implant System from a single supplier. Therefore, we cannot assure you that we will be able to obtain sufficient quantities of product in the future.

In addition, our anticipated growth could strain the ability of our suppliers to deliver an increasingly large supply of products, materials, and components. Suppliers often experience difficulties in scaling up production, including financial issues, or problems with production yields and quality control and assurance. For example, from time to time, we have experienced certain delays and may experience delays from our suppliers in the future.

We generally use a small number of suppliers for our instruments and rely on one supplier, Orchid Bio-Coat, a division of Orchid Orthopedic Solutions LLC, for our iFuse Implants. Our dependence on such a limited number of suppliers exposes us to risks, including, among other things:

- third-party contract manufacturers or suppliers may fail to comply with regulatory requirements or make errors in manufacturing that could negatively affect the safety or effectiveness of our products or cause delays in shipments of our products;

- we or our third-party manufacturers and suppliers may not be able to respond to unanticipated changes in customer orders, and if orders do not match forecasts, we or our suppliers may have excess or inadequate inventory of materials and components;
- we or our third-party manufacturers and suppliers may be subject to price fluctuations due to a lack of long-term supply arrangements for key components;
- we or our third-party manufacturers and suppliers may lose access to critical services and components, resulting in an interruption in the manufacture, assembly and shipment of our systems;
- we may experience delays in delivery by our third-party manufacturers and suppliers due to changes in demand from us or their other customers;
- fluctuations in demand for products that our third-party manufacturers and suppliers manufacture for others may affect their ability or willingness to deliver components to us in a timely manner;
- our third-party manufacturers and suppliers may wish to discontinue supplying components or services to us for risk management reasons;
- we may not be able to find new or alternative components or reconfigure our system and manufacturing processes in a timely manner if the necessary components become unavailable; and
- our third-party manufacturers and suppliers may encounter financial hardships unrelated to our demand, which could inhibit their ability to fulfill our orders and meet our requirements.

If any one or more of these risks materialize, it could significantly increase our costs and impact our ability to meet demand for our products. If we are unable to satisfy commercial demand for our system in a timely manner, our ability to generate revenue would be impaired, market acceptance of our products could be adversely affected, and customers may instead purchase or use our competitors' products. Additionally, we could be forced to seek alternative sources of supply.

In addition, most of our supply and manufacturing agreements do not have minimum manufacturing or purchase obligations. As such, we have no obligation to buy any given quantity of products, and our suppliers have no obligation to sell us or to manufacture for us any given quantity of components or products. As a result, our ability to purchase adequate quantities of components or our products may be limited and we may not be able to convince suppliers to make components and products available to us. Our suppliers may also encounter problems that limit their ability to supply components or manufacture products for us, including financial difficulties, damage to their manufacturing equipment or facilities, or product discontinuations. As a result, there is a risk that certain components could be discontinued and no longer available to us. We may be required to make significant "last time" purchases of component inventory that is being discontinued by the supplier to ensure supply continuity. If we fail to obtain sufficient quantities of high quality components to meet demand for our products in a timely manner or on terms acceptable to us, we would have to seek alternative sources of supply. Securing a replacement third-party manufacturer or supplier could be difficult. The introduction of new or alternative manufacturers or suppliers also may require design changes to our iFuse that are subject to domestic and international regulatory clearances or approvals and the review of our Notified Body.

Because of the nature of our internal quality control requirements, regulatory requirements, and the custom and proprietary nature of the parts, we may not be able to quickly engage additional or replacement suppliers for many of our critical components. We may also be required to assess any potential new manufacturer's compliance with all applicable regulations and guidelines, which could further impede our ability to manufacture our products in a timely manner. As a result, we could incur increased production costs, experience delays in deliveries of our products, suffer damage to our reputation, and experience an adverse effect on our business and financial results. Failure of any of our third-party suppliers to meet our product demand level would limit our ability to meet our sales commitments to our customers and could have a material adverse effect on our business.

We may also have difficulty obtaining similar components from other suppliers that are acceptable to the FDA our Notified Body the competent authorities or countries of the countries of the EEA, or other foreign regulatory authorities, and the failure of our suppliers to comply with strictly enforced regulatory requirements could expose us to delays in obtaining clearances or approvals, regulatory action including warning letters, product recalls, termination of distribution, product seizures, civil, administrative, or criminal penalties and the suspension, variation, or withdrawal of our CE Certificates of Conformity. We could incur delays while we locate and engage qualified alternative suppliers, and we may be unable to engage alternative suppliers on favorable terms or at all. Any such disruption or increased expenses could harm our commercialization efforts and adversely affect our ability to generate sales.

In addition, each of our third-party suppliers operates at a facility in a single location and substantially all of our inventory of component supplies and finished goods is held at these locations. We, and our suppliers, take precautions to safeguard facilities, including acquiring insurance, employing back-up generators, adopting health and safety protocols, and utilizing off-site storage of computer data. However, vandalism, terrorism, or a natural or other disaster, such as an earthquake, fire, or flood, could damage or destroy equipment or our inventory of component supplies or finished products, cause substantial delays in our operations, result in the loss of key information, and cause us to incur additional expenses. Our insurance may not cover our losses in any particular case. In addition, regardless of the level of insurance coverage, damage to our or our suppliers' facilities could harm our business, financial condition, and operating results.

As our sales grow, we may encounter problems or delays in the assembly of our products or fail to meet certain regulatory requirements which could result in an adverse effect on our business and financial results.

To become profitable, we must assemble our products in adequate quantities in compliance with regulatory requirements and at an acceptable cost. Increasing our capacity to assemble and test our products will require us to improve internal efficiencies. We may encounter a number of difficulties in increasing our assembly and testing capacity, including:

- managing production yields;
- maintaining quality control and assurance;
- providing component and service availability;
- maintaining adequate control policies and procedures;
- hiring and retaining qualified personnel; and
- complying with state, federal, and foreign regulations.

If we are unable to satisfy commercial demand for our iFuse solution due to our inability to assemble and test, our ability to generate revenue would be impaired, market acceptance of our products could be adversely affected and customers may instead purchase or use our competitors' products.

If we do not enhance our product offerings through our research and development efforts, we may be unable to compete effectively.

In order to increase our market share in the sacroiliac joint fusion market, we must enhance and broaden our product offerings in response to changing customer demands and competitive pressures and technologies. We might not be able to successfully develop, obtain domestic and international regulatory clearances or approvals, or CE Certificates of Conformity for, or market new products, and our future products might not be accepted by the surgeons or the third-party payors who reimburse for many of the procedures performed with our products. The success of any new product offering or enhancement to an existing product will depend on numerous factors, including our ability to:

- properly identify and anticipate surgeon and patient needs;

- develop and introduce new products or product enhancements in a timely manner;
- adequately protect our intellectual property and avoid infringing upon the intellectual property rights of third parties;
- demonstrate the safety and effectiveness of new products; and
- obtain the necessary domestic and international regulatory clearances or approvals and CE Certificates of Conformity for new products or product enhancements.

If we do not develop and obtain domestic and international regulatory clearances or approvals and CE Certificates of Conformity for new products or product enhancements in time to meet market demand, or if there is insufficient demand for these products or enhancements, our results of operations will suffer. Our research and development efforts may require a substantial investment of time and resources before we are adequately able to determine the commercial viability of a new product, technology, material, or other innovation. In addition, even if we are able to successfully develop enhancements or new generations of our products, these enhancements or new generations of products may not produce sales in excess of the costs of development and they may be quickly rendered obsolete by changing customer preferences or the introduction by our competitors of products embodying new technologies or features.

We are required to maintain adequate levels of inventory, the failure of which could consume our resources and reduce our cash flows.

As a result of the need to maintain adequate levels of inventory, we are subject to the risk of inventory obsolescence. Many of our products come in sets, which feature components in a variety of sizes so that the implant or device may be customized to the patient's needs. In order to market our products effectively, we often maintain and provide surgeons and hospitals with back-up products and products of different sizes. For each surgery, fewer than all of the components of the set are used, and therefore certain portions of the set may become obsolete before they can be used. In the event that a substantial portion of our inventory becomes obsolete, it could have a material adverse effect on our earnings and cash flows due to the resulting costs associated with the inventory impairment charges and costs required to replace such inventory.

The size and future growth in the market for iFuse has not been established with precision and may be smaller than we estimate, possibly materially. In addition, our estimates of cost savings to the economy and healthcare system as a result of the iFuse Procedure are based on our internal estimates and market research and could also be smaller than we estimate, possibly materially. If our estimates and projections overestimate the size of this market or cost savings, our sales growth may be adversely affected.

We are not aware of an independent third-party study that reliably reports the potential market size for iFuse or cost savings as a result of the iFuse Procedure. Therefore, our estimates of the size and future growth in the market for our iFuse products, including cost savings to the economy overall, including patients and employers, and to the healthcare system and the number of people currently suffering from lower back pain who may benefit from and be amenable to our iFuse Procedure, is based on a number of internal and third-party studies, surveys, reports, and estimates. While we believe these factors have historically provided and may continue to provide us with effective tools in estimating the total market for our iFuse products and procedures and health cost savings, these estimates may not be correct and the conditions supporting our estimates may change at any time, thereby reducing the predictive accuracy of these underlying factors. For example, the surveys we have conducted are based on a small number of respondents and are not statistically significant and may have other limitations. The actual incidence of lower back pain, and the actual demand for our products or competitive products, could differ materially from our projections if our assumptions and estimates are incorrect. As a result, our estimates of the size and future growth in the market for our iFuse products may prove to be incorrect. In addition, actual health cost savings to the healthcare system as a result of the iFuse Procedure may materially differ from those presented in this prospectus. If the actual number of people with lower back pain who would benefit from our

iFuse products and the size and future growth in the market for iFuse products and related costs savings to the healthcare system is smaller than we have estimated, it may impair our projected sales growth and have an adverse impact on our business.

Our results of operations could suffer if we are unable to manage our planned international expansion effectively.

Expansion into international markets is an element of our business strategy and involves risk. The sale and shipment of our products across international borders, as well as the purchase of components and products from international sources, subject us to extensive U.S. and foreign governmental trade, import, and export and customs regulations and laws. Compliance with these regulations and laws is costly and exposes us to penalties for non-compliance. Other laws and regulations that can significantly affect us include various anti-bribery laws, including the U.S. Foreign Corrupt Practices Act, or FCPA and the United Kingdom Bribery Act, or UKBA, anti- boycott laws, anti-money laundering laws, and regulations relating to economic sanctions imposed by the United States, including the Office of Foreign Asset Control of the U.S. Treasury. Any failure to comply with applicable legal and regulatory obligations in the United States or abroad could adversely affect us in a variety of ways that include, but are not limited to, significant criminal, civil and administrative penalties, including imprisonment of individuals, fines and penalties, denial of export privileges, seizure of shipments and restrictions on certain business activities. Also, the failure to comply with applicable legal and regulatory obligations could result in the disruption of our distribution and sales activities.

In addition, some of the countries in which we sell or plan to sell our products are, to some degree, subject to various risks, including:

- exposure to different legal and regulatory standards;
- lack of stringent protection of intellectual property;
- obstacles to obtaining domestic and foreign export, import, and other governmental approvals, permits, and licenses and compliance with foreign laws;
- potentially adverse tax consequences and the complexities of foreign value-added tax systems;
- adverse changes in tariffs and trade restrictions;
- limitations on the repatriation of earnings;
- difficulties in staffing and managing foreign operations;
- transportation delays and difficulties of managing international distribution channels;
- longer collection periods and difficulties in collecting receivables from foreign entities;
- increased financing costs;
- currency risks; and
- political, social, and economic instability and increased security concerns.

These risks may limit or disrupt our expansion, restrict the movement of funds or result in the deprivation of contractual rights or the taking of property by nationalization or expropriation without fair compensation.

Our goal of a successful international expansion depends, in part, on our ability to develop and implement policies and strategies that are effective in anticipating and managing these and other risks in the countries in which we plan to do business. Failure to manage these and other risks may have a material adverse effect on our operations in any particular country and on our business as a whole.

In the future our products may become obsolete, which would negatively affect operations and financial condition.

The medical device industry is characterized by rapid and significant change. There can be no assurance that other companies will not succeed in developing or marketing devices, and products that are more effective than our iFuse system or that would render the iFuse system obsolete or noncompetitive. Additionally, new surgical procedures, medications and other therapies could be developed that replace or reduce the importance of our product. Accordingly, our success will depend in part on our ability to respond quickly to medical and changes through the development and introduction of new products. Product development involves a high degree of risk and there can be no assurance that our new product development efforts will result in any commercially successful products.

If we experience significant disruptions in our information technology systems, our business, results of operations, and financial condition could be adversely affected.

The efficient operation of our business depends on our information technology systems. We rely on our information technology systems to effectively manage:

- sales and marketing, accounting, and financial functions;
- inventory management;
- engineering and product development tasks; and
- our research and development data.

Our information technology systems are vulnerable to damage or interruption from:

- earthquakes, fires, floods, and other natural disasters;
- terrorist attacks and attacks by computer viruses or hackers;
- power losses; and
- computer systems, or Internet, telecommunications, or data network failures.

The failure of our information technology systems to perform as we anticipate or our failure to effectively implement new systems could disrupt our entire operation and could result in decreased sales, increased overhead costs, excess inventory and product shortages, and legal liability issues, all of which could have a material adverse effect on our reputation, business, results of operations, and financial condition.

In addition, we accept payments for many of our sales through credit card transactions, which are handled through a third-party payment processor. As a result, we are subject to a number of risks related to credit card payments. As a result of these transactions, we pay interchange and other fees, which may increase over time and could require us to either increase the prices we charge for our products or experience an increase in our costs and expenses. In addition, as part of the payment processing process, we transmit our customers' credit card information to our third-party payment processor. We may in the future become subject to lawsuits or other proceedings for purportedly fraudulent transactions arising out of the actual or alleged theft of our customers' credit card information if the security of our third-party credit card payment processor is breached. We and our third-party credit card payment processor are also subject to payment card association operating rules, certification requirements and rules governing electronic funds transfers, which could change or be reinterpreted to make it difficult or impossible for us to comply. If we or our third-party credit card payment processor fail to comply with these rules or requirements, we may be subject to fines and higher transaction fees and lose our ability to accept credit card payments from our customers, and there may be an adverse impact on our business.

We may seek to grow our business through acquisitions of or investments in new or complementary businesses, products or technologies, and the failure to manage acquisitions or investments, or the failure to integrate them with our existing business, could have a material adverse effect on us.

From time to time, we expect to consider opportunities to acquire or make investments in other technologies, products, and businesses that may enhance our capabilities, complement our current products, or expand the breadth of our markets or customer base. Potential and completed acquisitions and strategic investments involve numerous risks, including:

- problems assimilating the purchased technologies, products, or business operations;
- issues maintaining uniform standards, procedures, controls, and policies;
- unanticipated costs and liabilities associated with acquisitions;
- diversion of management's attention from our core business;
- adverse effects on existing business relationships with suppliers and customers;
- risks associated with entering new markets in which we have limited or no experience;
- potential loss of key employees of acquired businesses; and
- increased legal and accounting compliance costs.

We have no current commitments with respect to any acquisition or investment. We do not know if we will be able to identify acquisitions we deem suitable, whether we will be able to successfully complete any such acquisitions on favorable terms or at all, or whether we will be able to successfully integrate any acquired business, product, or technology into our business or retain any key personnel, suppliers, or distributors. Our ability to successfully grow through acquisitions depends upon our ability to identify, negotiate, complete, and integrate suitable target businesses and to obtain any necessary financing. These efforts could be expensive and time-consuming, and may disrupt our ongoing business and prevent management from focusing on our operations. If we are unable to successfully integrate any acquired businesses, products, or technologies effectively, our business, results of operations, and financial condition will be materially adversely affected.

We may enter into collaborations, in-licensing arrangements, joint ventures, strategic alliances, or partnerships with third-parties that may not result in the development of commercially viable products or the generation of significant future revenue.

In the ordinary course of our business, we may enter into collaborations, in-licensing arrangements, joint ventures, strategic alliances, partnerships, or other arrangements to develop products and to pursue new markets. We have not entered into any collaboration arrangements to date. Proposing, negotiating, and implementing collaborations, in-licensing arrangements, joint ventures, strategic alliances, or partnerships may be a lengthy and complex process. Other companies, including those with substantially greater financial, marketing, sales, technology, or other business resources, may compete with us for these opportunities or arrangements. We may not identify, secure, or complete any such transactions or arrangements in a timely manner, on a cost-effective basis, on acceptable terms or at all. We have limited institutional knowledge and experience with respect to these business development activities, and we may also not realize the anticipated benefits of any such transaction or arrangement. In particular, these collaborations may not result in the development of products that achieve commercial success or result in significant revenue and could be terminated prior to developing any products.

Additionally, we may not be in a position to exercise sole decision making authority regarding the transaction or arrangement, which could create the potential risk of creating impasses on decisions, and our future collaborators may have economic or business interests or goals that are, or that may become, inconsistent with our business interests or goals. It is possible that conflicts may arise with our collaborators, such as conflicts concerning the achievement of performance milestones, or the interpretation of significant terms under any

agreement, such as those related to financial obligations or the ownership or control of intellectual property developed during the collaboration. If any conflicts arise with any future collaborators, they may act in their self- interest, which may be adverse to our best interest, and they may breach their obligations to us. In addition, we may have limited control over the amount and timing of resources that any future collaborators devote to our or their future products.

Disputes between us and our collaborators may result in litigation or arbitration which would increase our expenses and divert the attention of our management. Further, these transactions and arrangements will be contractual in nature and will generally be terminable under the terms of the applicable agreements and, in such event, we may not continue to have rights to the products relating to such transaction or arrangement or may need to purchase such rights at a premium. If we enter into in-bound intellectual property license agreements, we may not be able to fully protect the licensed intellectual property rights or maintain those licenses. Future licensors could retain the right to prosecute and defend the intellectual property rights licensed to us, in which case we would depend on the ability of our licensors to obtain, maintain and enforce intellectual property protection for the licensed intellectual property. These licensors may determine not to pursue litigation against other companies or may pursue such litigation less aggressively than we would. Further, entering into such license agreements could impose various diligence, commercialization, royalty, or other obligations on us. Future licensors may allege that we have breached our license agreement with them, and accordingly seek to terminate our license, which could adversely affect our competitive business position and harm our business prospects.

Risks Related to Our Financial Results and Need for Financing

We have incurred significant losses since our inception. We expect to incur losses over the next several years and may never achieve or maintain profitability.

Our recurring losses from operations and negative cash flows raise substantial doubt about our ability to continue as a going concern. As a result, an explanatory paragraph was included in the report on our financial statements as of, and for the year ended, December 31, 2016, describing the existence of substantial doubt about our ability to continue as a going concern. We will need to generate significant sales to achieve profitability and we might not be able to do so. Our expected future capital requirements may depend on many factors including expanding our surgeon base, the expansion of our salesforce, and the timing and extent of spending on the development of our technology to increase our product offerings. We may seek funds through borrowings or through additional rounds of financing, including private or public equity or debt offerings. Any future debt financing or additional equity that we raise may contain terms that are not favorable to us or our stockholders. Furthermore, we cannot be certain that additional funding will be available on acceptable terms, if at all. If we are unable to raise additional capital or generate sufficient cash from operations to adequately fund our operations, we will need to curtail planned activities to reduce costs, which will likely harm our ability to execute on our business plan and continue operations.

Our future capital needs are uncertain and we may need to raise additional funds in the future, and such funds may not be available on acceptable terms or at all.

We believe that our current cash and cash equivalents, including the proceeds from this offering together with the cash to be generated from expected product sales, will be sufficient to meet our projected operating requirements for the next 12 months. However, continued expansion of our business will be expensive and we may seek additional funds from public and private stock offerings, borrowings under our existing or future credit facilities or other sources. Our capital requirements will depend on many factors, including:

- the revenues generated by sales of our products;
- the costs associated with expanding our sales and marketing efforts;
- the expenses we incur in manufacturing and selling our products;

- the costs of developing and commercializing new products or technologies;
- the cost of obtaining and maintaining domestic and international regulatory clearances or approvals, or CE Certificates of Conformity for our products and products in development;
- the number and timing of acquisitions and other strategic transactions;
- the costs associated with our planned international expansion;
- the costs associated with increased capital expenditures, including instrument sets to support surgeries; and
- unanticipated general and administrative expenses.

As a result of these factors, we may seek to raise additional capital, and such capital may not be available on favorable terms, or at all. Furthermore, if we issue equity or convertible debt securities to raise additional capital, our existing stockholders may experience dilution, and the holders of new equity or convertible debt securities may have rights, preferences and privileges senior to those of our existing stockholders. If we cannot raise capital on acceptable terms, we may not be able to develop or enhance our products, execute our business plan, take advantage of future opportunities, or respond to competitive pressures, changes in our supplier relationships, or unanticipated customer requirements. Any of these events could adversely affect our ability to achieve our development and commercialization goals, which could have a material adverse effect on our business, results of operations, and financial condition.

Our recurring losses from operations and negative cash flows raise substantial doubt about our ability to continue as a going concern. As a result, our independent registered public accounting firm included an explanatory paragraph in its report on our financial statements as of, and for the year ended, December 31, 2016, describing the existence of substantial doubt about our ability to continue as a going concern. We believe that the successful completion of this offering will eliminate this doubt and enable us to continue as a going concern; however, if we are unable to raise sufficient capital in this offering, we may need to obtain alternative financing or significantly modify our operational plans for us to continue as a going concern. Our expected future capital requirements may depend on many factors including expanding our surgeon base, the expansion of our salesforce, and the timing and extent of spending on the development of our technology to increase our product offerings. We may need additional funding to fund our operations but additional funds may not be available to us on acceptable terms on a timely basis, if at all. We may seek funds through borrowings or through additional rounds of financing, including private or public equity or debt offerings. If we raise additional funds by issuing equity securities, our stockholders may experience dilution. Any future debt financing into which we enter may impose upon us additional covenants that restrict our operations, including limitations on our ability to incur liens or additional debt, pay dividends, repurchase our common stock, make certain investments and engage in certain merger, consolidation or asset sale transactions. Any debt financing or additional equity that we raise may contain terms that are not favorable to us or our stockholders. Furthermore, we cannot be certain that additional funding will be available on acceptable terms, if at all. If we are unable to raise additional capital or generate sufficient cash from operations to adequately fund our operations, we will need to curtail planned activities to reduce costs, which will likely harm our ability to execute on our business plan.

Our quarterly operating results may fluctuate significantly.

Our operating results are difficult to predict and may be subject to quarterly fluctuations. Our sales and results of operations will be affected by numerous factors, including those set forth in “Risk Factors” as well as:

- our ability to drive increased sales of our products;
- our ability to establish and maintain an effective and dedicated sales force;
- pricing pressure applicable to our products, including adverse third-party coverage and reimbursement outcomes;

- results of clinical research and trials on our existing products and products in development;
- the mix of our products sold because profit margins differ amongst our products;
- timing of new product offerings, acquisitions, licenses or other significant events by us or our competitors;
- the ability of our suppliers to timely provide us with an adequate supply of materials and components;
- the evolving product offerings of our competitors;
- factors that may affect the sale of our products, including seasonality and budgets of our customers;
- domestic and international regulatory clearances or approvals, or CE Certificates of Conformity, and legislative changes affecting the products we may offer or those of our competitors;
- interruption in the manufacturing or distribution of our products;
- the effect of competing technological, industry and market developments;
- changes in our ability to obtain domestic and international regulatory clearances or approvals, or CE Certificates of Conformity for our products;
- our ability to expand the geographic reach of our sales and marketing efforts; and
- the costs of maintaining adequate insurance coverage, including product liability insurance.

Some of the products we may seek to develop and introduce in the future will require FDA clearance or approval before commercialization in the United States, and commercialization of such products outside of the United States would likely require additional regulatory approvals, or Certificates of Conformity and import licenses. As a result, it will be difficult for us to forecast demand for these products with any degree of certainty. In addition, we will be increasing our operating expenses as we expand our commercial capabilities. Accordingly, we may experience significant, unanticipated quarterly losses. If our quarterly or annual operating results fall below the expectations of investors or securities analysts, the price of our common stock could decline substantially. Furthermore, any quarterly or annual fluctuations in our operating results may, in turn, cause the price of our common stock to fluctuate substantially. Quarterly comparisons of our financial results may not always be meaningful and should not be relied upon as an indication of our future performance.

We may not be able to access the capital we need under our current credit facilities on a timely basis or at all.

As of the date of this prospectus, we had total borrowings of $30.2 million, which is the maximum currently available to us under the term loan component of our credit facility with Oxford Finance LLC, or Oxford, and Silicon Valley Bank, or SVB. We have an additional line of credit for the lesser of $4.0 million or 80% of the amount of certain customer accounts receivable that we can draw from the same institutions. There can be no assurance that we will have access to the capital we will need for our business.

Prolonged negative economic conditions in domestic and global markets may adversely affect us, our suppliers, counterparties, and consumers, which could harm our financial position.

Global credit and financial markets have experienced extreme disruptions in the past decade, including severely diminished liquidity and availability of credit, declines in consumer confidence, declines in economic growth, increases in unemployment rates and uncertainty about economic stability. Credit and financial markets and confidence in economic conditions might deteriorate again. Our general business strategy may be adversely affected by such an economic downturn and volatile business environment and unpredictable and unstable market conditions. In addition, there is a risk that one or more of our current service providers, suppliers and other partners may not continue to operate, which could directly affect our ability to attain our operating goals on schedule and on budget. Any lender that is obligated to provide funding to us under any existing or future credit

agreement with us may not be able to provide funding in a timely manner, or at all, when we require it. The cost of, or lack of, available credit or equity financing could impact our ability to develop sufficient liquidity to maintain or grow our company, which in turn may adversely affect our business, results of operations, or financial condition. We also manage cash and cash equivalents through a single financial institution in the United States. There may be a risk of loss on investments based on the volatility of the underlying instruments that will prevent us from recovering the full principal of our investments. These negative changes in domestic and global economic conditions or additional disruptions of either or both of the financial and credit markets may also affect third-party payors and may have a material adverse effect on our stock price, business, results of operations, financial condition, and liquidity.

Our existing credit facilities contain restrictive covenants that may limit our operating flexibility.

Our existing credit facilities with Oxford and SVB contain certain restrictive covenants that limit our ability to transfer or dispose of assets, merge with other companies or consummate certain changes of control, acquire other companies, pay dividends, incur additional indebtedness and liens, transfer assets above a certain level to our subsidiaries, experience changes in management, and enter into new businesses. We therefore may not be able to engage in any of the foregoing transactions unless we obtain the consent of the lender or terminate the credit facility. There is no guarantee that we will be able to generate sufficient cash flow or sales to meet the financial covenants or pay the principal and interest on any such debt. Furthermore, there is no guarantee that future working capital, borrowings, or equity financing will be available to repay or refinance any such debt.

Risks Related to Our Legal and Regulatory Environment

We, our suppliers, and our third-party manufacturers are subject to extensive governmental regulation both in the United States and abroad and failure to comply with applicable requirements could cause our business to suffer.

The medical device industry is regulated extensively by governmental authorities, principally the FDA and corresponding state and foreign regulatory agencies. The FDA and other U.S. and foreign governmental agencies regulate, among other things, with respect to medical devices:

- design, development, and manufacturing;
- testing, labeling, content, and language of instructions for use and storage;
- clinical trials;
- product safety;
- marketing, sales, and distribution;
- premarket clearance and approval;
- conformity assessment procedures;
- record keeping procedures;
- advertising and promotion;
- compliance with good manufacturing practices requirements;
- recalls and field safety corrective actions;
- post-market surveillance, including reporting of deaths or serious injuries and malfunctions that, if they were to recur, could lead to death or serious injury;
- post-market approval studies; and
- product import and export.

The regulations to which we are subject are complex and have tended to become more stringent over time. Regulatory changes could result in restrictions on our ability to carry on or expand our operations, difficulties achieving new product clearances, higher than anticipated costs or lower than anticipated sales.

Before we can market or sell a new regulated product or make a significant modification to an existing product in the United States, with very limited exception, we must obtain either clearance under Section 510(k) of the FDCA for Class II devices or approval of a premarket approval, or PMA, application from the FDA for a Class III device. In the 510(k) clearance process, the FDA must determine that a proposed device is "substantially equivalent" to a device legally on the market, known as a "predicate" device, with respect to intended use, technology, and safety and effectiveness, in order to clear the proposed device for marketing. Clinical data is sometimes required to support substantial equivalence. The PMA pathway requires an applicant to demonstrate the safety and effectiveness of the device based, in part, on extensive data, including, but not limited to, technical, preclinical, clinical trial, manufacturing, and labeling data. The PMA process is typically required for devices that are deemed to pose the greatest risk, such as life-sustaining, life-supporting, or implantable devices. Products that are approved through a PMA application generally need FDA approval before they can be modified. Similarly, some modifications made to products cleared through a 510(k) may require a new 510(k). Both the 510(k) and PMA processes can be expensive and lengthy and require the payment of significant fees, unless exempt. The FDA's 510(k) clearance process usually takes from three to 12 months, but may last longer. The process of obtaining a PMA is much more costly and uncertain than the 510(k) clearance process and generally takes from one to three years, or even longer, from the time the application is submitted to the FDA until an approval is obtained. The process of obtaining domestic and international regulatory clearances or approvals to market a medical device can be costly and time-consuming, and we may not be able to obtain these clearances or approvals on a timely basis, if at all.

In the United States, our currently commercialized products have either received premarket clearance under Section 510(k) of the FDCA or are exempt from premarket review. If the FDA requires us to go through a lengthier, more rigorous examination for future products or modifications to existing products than we had expected, our product introductions or modifications could be delayed or canceled, which could cause our sales to decline. In addition, the FDA may determine that future products will require the more costly, lengthy, and uncertain PMA process. Although we do not currently market any devices under PMA, the FDA may demand that we obtain a PMA prior to marketing certain of our future products. In addition, if the FDA disagrees with our determination that a product we currently market is subject to an exemption from premarket review, the FDA may require us to submit a 510(k) or PMA in order to continue marketing the product. Further, even with respect to those future products where a PMA is not required, we cannot assure you that we will be able to obtain the 510(k) clearances with respect to those products.

The FDA can delay, limit or deny clearance or approval of a device for many reasons, including:

- we may not be able to demonstrate to the FDA's satisfaction that our products are safe and effective for their intended users;
- the data from our pre-clinical studies and clinical trials may be insufficient to support clearance or approval, where required; and
- the manufacturing process or facilities we use may not meet applicable requirements.

In addition, the FDA may change its clearance and approval policies, adopt additional regulations or revise existing regulations, or take other actions which may prevent or delay clearance or approval of our products under development or impact our ability to modify our currently approved or cleared products on a timely basis.

Any delay in, or failure to receive or maintain, clearance or approval for our products under development could prevent us from generating revenue from these products or achieving profitability.

In addition, even after we have obtained the proper regulatory clearance or approval to market a product, the FDA has the power to require us to conduct postmarketing studies. These studies can be very expensive and

time-consuming to conduct. Failure to comply with those studies in a timely manner could result in the revocation of the 510(k) clearance for a product that is subject to such a 522 Order and the recall or withdrawal of the product, which could prevent us from generating sales from that product in the United States.

In the EEA, our medical devices must comply with the Essential Requirements set forth in Annex I to the EU Medical Devices Directive (Council Directive 93/42/EEC), or Essential Requirements. Compliance with these requirements is a prerequisite to be able to affix the CE mark to our medical devices, without which they cannot be marketed or sold in the EEA. To demonstrate compliance with the Essential Requirements we must undergo a conformity assessment procedure, which varies according to the type of medical device and its classification. Except for low risk medical devices (Class I), where the manufacturer can issue an EC Declaration of Conformity based on a self-assessment of the conformity of its products with the Essential Requirements, a conformity assessment procedure requires the intervention of a third party organization designated by the competent authorities of a EEA country to conduct conformity assessments, known as a Notified Body. The Notified Body would typically audit and examine the medical device's Technical File, the quality system for the manufacture, design and conduct a final inspection of our medical devices before issuing a CE Certificate of Conformity demonstrating compliance with the Essential Requirements or the QSR of the Medical Devices Directive.

Additionally, as part of the conformity assessment process, medical device manufacturers must carry out a clinical evaluation of their medical devices to verify that they comply with the relevant Essential Requirements covering safety and performance. A clinical evaluation includes an assessment of whether a medical device's performance is in accordance with its intended use and that the known and foreseeable risks linked to the use of the device under normal conditions are minimized and acceptable when weighed against the benefits of its intended purpose. The clinical evaluation conducted by the manufacturer must also address any clinical claims, the adequacy of the device labeling and information (particularly claims, contraindications, precautions/ warnings) and the suitability of related Instructions for Use. This assessment must be based on clinical data, which can be obtained from (i) clinical studies conducted on the devices being assessed; (ii) scientific literature from similar devices whose equivalence with the assessed device can be demonstrated; or (iii) both clinical studies and scientific literature. With respect to implantable devices, or devices classified as Class III in the EU, the manufacturer must conduct clinical studies to obtain the required clinical data, unless the relying on existing clinical data from similar devices can be justified. As part of the conformity assessment procedure, depending on the type of devices, the Notified Body will review the manufacturer's clinical evaluation for the medical device. The conduct of clinical studies to obtain clinical data that might be required as part of the described clinical evaluation process can be expensive and time-consuming.

The FDA and other regulatory authorities have broad enforcement powers. Regulatory enforcement or inquiries, or other increased scrutiny on us, could dissuade some surgeons from using our products and adversely affect our reputation and the perceived safety and effectiveness of our products.

Failure to comply with applicable regulations could jeopardize our ability to sell our products and result in enforcement actions such as:

- warning letters;
- fines;
- injunctions;
- civil penalties;
- termination of distribution;
- recalls or seizures of products;
- delays in the introduction of products into the market;

- total or partial suspension of production;
- facility closures;
- refusal of the FDA or our Notified Body or other regulator to grant future clearances or approvals or to issue CE Certificates of Conformity;
- withdrawals or suspensions of current clearances or approvals and CE Certificates of Conformity, resulting in prohibitions on sales of our products; and/or
- in the most serious cases, criminal penalties.

Adverse action by an applicable regulatory agency, our Notified Body or the FDA could result in inability to produce our products in a cost-effective and timely manner, or at all, decreased sales, higher prices, lower margins, additional unplanned costs or actions, damage to our reputation, and could have material adverse effect on our reputation, business, results of operations, and financial condition.

We and our distributor sales representatives must comply with U.S. federal and state fraud and abuse laws, including anti-kickback and false claims and equivalent foreign rules.

Healthcare providers, specialty distributors, physicians, and third-party payors play a primary role in the distribution, recommendation, ordering, and purchasing of any implant or other medical device for which we have or obtain marketing clearance or approval. Through our arrangements with customers and third-party payors, we are exposed to the risk that our employees, independent contractors, principal investigators, consultants, vendors, or third-party distributors may engage in fraudulent or other illegal activity. Misconduct by these parties could include, among other infractions or violations, intentional, reckless and/or negligent conduct or unauthorized activity that violates FDA regulations, manufacturing standards, federal and state healthcare fraud and abuse laws and regulations, laws that require the true, complete, and accurate reporting of financial information or data, other commercial or regulatory laws or requirements, and equivalent foreign rules. We have a Compliance program, Code of Conduct, and associated policies and procedures, but it is not always possible to identify and deter misconduct by our employees and other third parties, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations, and government authorities may conclude that our business practices do not comply with applicable fraud and abuse or other healthcare laws and regulations or guidance despite our good faith efforts to comply.

There are numerous U.S. federal and state laws pertaining to healthcare fraud and abuse, including anti- kickback and false claims laws. Our relationships and our distributors' relationships with surgeons, other healthcare professionals, and hospitals are subject to scrutiny under these laws.

Healthcare fraud and abuse laws and related regulations are complex, and even minor irregularities can potentially give rise to claims that a statute or prohibition has been violated. The laws that may affect our ability to operate include:

- the federal Anti-Kickback Statute, which prohibits, among other things, knowingly and willfully soliciting, receiving, offering or paying remuneration, directly or indirectly, in cash or in kind, to induce or reward either the referral of an individual for, or the purchase, order or recommendation of, items or services for which payment may be made, in whole or in part, under federal healthcare programs, such as the Medicare and Medicaid programs;
- the federal civil False Claims Act, which prohibits, among other things, individuals or entities from knowingly presenting, or causing to be presented, false or fraudulent claims for payment of government funds; knowingly making, using, or causing to be made or used, a false record or statement to get a false claim paid or to avoid, decrease, or conceal an obligation to pay money to the federal

government. A claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal Civil False Claims Act. There are also criminal penalties for making or presenting a false or fictitious or fraudulent claim to the federal government;

- the federal Health Insurance Portability and Accountability Act of 1996, which imposes criminal and civil liability for, among other actions, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program including private third-party payors, or knowingly and willfully falsifying, concealing, or covering up a material fact or making a materially false, fictitious, or fraudulent statement or representation, or making or using any false writing or document knowing the same to contain any materially false, fictitious, or fraudulent statement or entry in connection with the delivery of or payment for healthcare benefits, items, or services;
- the federal Physician Payment Sunshine Act, which requires manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid, or the Children's Health Insurance Program to report annually with certain exceptions to the Centers for Medicare & Medicaid Services, or CMS, information related to payments or other "transfers of value" made to physicians and teaching hospitals, and requires applicable manufacturers and group purchasing organizations to report annually to CMS ownership and investment interests held by physicians and their immediate family members and payments or other "transfers of value" to such physician owners; and
- analogous state and foreign law equivalents of each of the above federal laws, such as anti-kickback and false claims laws which may apply to items or services reimbursed by any third-party payor, including commercial insurers; state laws that require device companies to comply with the industry's voluntary compliance guidelines and the applicable compliance guidance promulgated by the federal government or otherwise restrict payments that may be made to healthcare providers and other potential referral sources; state beneficiary inducement laws, and state laws that require device manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures, many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts.

If we or our employees are found to have violated any of the above laws we may be subjected to administrative, civil and criminal penalties, including imprisonment, exclusion from participation in federal healthcare programs, such as Medicare and Medicaid, and significant fines, monetary damages and damage to our reputation. Additional information about these laws is provided in "Business—Regulation."

We have entered into consulting agreements and royalty agreements with surgeons, including some who are customers. We also engage in co-marketing arrangements with certain surgeons who use our products. In addition, a small number of our current customer surgeons own less than 1.0% of our stock, which they either purchased in an arm's length transaction on terms identical to those offered to others, or received from us as fair market value consideration for consulting services performed. While all of these transactions were structured with the intention of complying with all applicable laws, including the federal Anti-Kickback Statute, state anti-kickback laws and other applicable laws, to the extent applicable, it is possible that regulatory agencies may view these transactions as prohibited arrangements that must be restructured, or discontinued, or for which we could be subject to significant penalties. We would be materially and adversely affected if regulatory agencies interpret our financial relationships with surgeons who order our products to be in violation of applicable laws and we were unable to comply with such laws, which could subject us to, among other things, monetary penalties for non-compliance, the cost of which could be substantial.

In certain cases, federal and state authorities pursue actions for false claims on the basis that manufacturers and distributors are promoting unapproved, or "off-label" uses of their products. Pursuant to FDA regulations, we can only market our products for cleared or approved uses. Although surgeons are permitted to use medical devices for indications other than those cleared or approved by the FDA, we are prohibited from promoting

products for “off-label” uses. We market our products and provide promotional materials and training programs to surgeons regarding the use of our products. If it is determined that our marketing, promotional materials or training programs constitute promotion of unapproved uses, we could be subject to significant fines in addition to regulatory enforcement actions, including the issuance of a warning letter, injunction, seizure, criminal penalty, and damage to our reputation.

Federal and state authorities also pursue actions for false claims based upon improper billing and coding advice or recommendations, as well as decisions related to the medical necessity of procedures, including the site-of-service where procedures are performed. Actions under the federal False Claims Act may also be brought by whistleblowers under its *qui tam* provisions. For example, a patient of one surgeon using our product brought an action alleging that the surgeon had violated the False Claims Act in connection with his claim for reimbursement for the patient’s procedure, and that we had suggested such false statements and claims to that surgeon and other surgeons across the country. We have denied all liability and the case is currently being litigated. The judge presiding over the case has limited the action the patient may pursue to claims submitted by only that surgeon for reimbursement from the Vermont Medicaid program.

To enforce compliance with the federal laws, the U.S. Department of Justice, has increased its scrutiny of interactions between healthcare companies and healthcare providers, which has led to a number of investigations, prosecutions, convictions and settlements in the healthcare industry. Dealing with investigations can be time- and resource-consuming and can divert management’s attention from the business. Additionally, if a healthcare company settles an investigation with the Department of Justice or other law enforcement agencies, it may need to agree to additional onerous compliance and reporting requirements as part of a consent decree or corporate integrity agreement. Any such investigation or settlement could increase our costs or otherwise have an adverse effect on our business. Even if we are not determined to have violated these laws, government investigations into these issues typically require the expenditure of significant resources and generate negative publicity, which could harm our financial condition and divert resources and the attention of our management from operating our business.

The scope and enforcement of these laws is uncertain and subject to rapid change in the current environment of healthcare reform, especially in light of the lack of applicable precedent and regulations. The shifting compliance environment and the need to build and maintain robust and expandable systems to comply with different compliance and/or reporting requirements in multiple jurisdictions increase the possibility that we may run afoul of one or more of the requirements or that federal or state regulatory authorities might challenge our current or future activities under these laws. Additionally, we cannot predict the impact of any changes in these laws, whether or not retroactive.

We are subject to risks associated with our non-U.S. operations.

The FCPA prohibits companies and their intermediaries from making improper payments to foreign officials for the purpose of obtaining or retaining business. Other anti-corruption or anti-bribery laws, such as the United Kingdom Anti-Bribery Act, or UKBA, prohibit companies and their intermediaries from making improper payments to anyone for the purpose of obtaining or retaining business. The FCPA also imposes accounting standards and requirements on publicly traded U.S. corporations and their foreign affiliates, which are intended to prevent the diversion of corporate funds to the payment of bribes and other improper payments, and to prevent the establishment of slush funds from which such improper payments can be made. Because of the predominance of government-sponsored healthcare systems around the world, many of our customer relationships outside of the United States are with governmental entities and are therefore subject to such anti- bribery laws. Our internal control policies and procedures may not always protect us from reckless or criminal acts committed by our employees or agents. Violations of these laws, or allegations of such violations, could disrupt our operations, involve significant management distraction and result in a material adverse effect on our business, results of operations, and financial condition. We also could suffer severe penalties, including criminal and civil penalties, disgorgement and other remedial measures, including further changes or enhancements to our procedures, policies and controls, as well as potential personnel changes and disciplinary actions.

Furthermore, we are subject to anti-boycott laws, anti-money laundering laws, and the export controls and economic embargo rules and regulations of the United States, including, but not limited to, the Export Administration Regulations and trade sanctions against embargoed countries, which are administered by the Office of Foreign Assets Control within the Department of the Treasury, as well as the laws and regulations administered by the Department of Commerce. These regulations limit our ability to market, sell, distribute or otherwise transfer our products or technology to prohibited countries or persons. A determination that we have failed to comply, whether knowingly or inadvertently, may result in substantial penalties, including fines and enforcement actions and civil and/or criminal sanctions, the disgorgement of profits and the imposition of a court-appointed monitor, as well as the denial of export privileges, and may have an adverse effect on our reputation.

Even if our products are approved by regulatory authorities or CE marked, if we, our contractors, or our suppliers fail to comply with ongoing FDA or other foreign regulatory requirements, or if we experience unanticipated problems with our products, these products could be subject to restrictions or withdrawal from the market.

Any product for which we obtain regulatory clearance or approval, or a CE Certificate of Conformity, and the manufacturing processes, reporting requirements, post-approval clinical data, and promotional activities for such product, will be subject to continued regulatory review, oversight and periodic inspections by the FDA, our Notified Body and other domestic and foreign regulatory bodies. In particular, we and our suppliers are required to comply with FDA's Quality System Regulations, or QSR, and International Standards Organization, regulations for the manufacture of our products and other regulations which cover the methods and documentation of the design, testing, production, control, quality assurance, labeling, packaging, storage, and shipping of any product for which we obtain regulatory clearance or approval, or a CE Certificate of Conformity.

The failure by us or one of our suppliers to comply with applicable statutes and regulations, or the failure to timely and adequately respond to any adverse inspectional observations or product safety issues, could result in, among other things, any of the following enforcement actions:

- untitled letters, warning letters, fines, injunctions, consent, and civil penalties;
- unanticipated expenditures to address or defend such actions;
- customer notifications for repair, replacement, refunds;
- recall, detention, or seizure of our products;
- operating restrictions or partial suspension or total shutdown of production;
- refusing or delaying our requests for 510(k) clearance or premarket approval and conformity assessments of new products or modified products;
- limitations on the intended uses for which the product may be marketed;
- operating restrictions;
- withdrawing 510(k) clearances or PMA approvals that have already been granted;
- suspension or withdrawal of CE Certificates of Conformity;
- refusal to grant export approval for our products; or
- criminal prosecution.

In addition, we may be required to conduct costly post-market testing and surveillance to monitor the safety or effectiveness of our products, and we must comply with medical device reporting requirements, including the reporting of adverse events and malfunctions related to our products. Later discovery of previously unknown problems with our products, including unanticipated adverse events or adverse events of unanticipated severity or

frequency, manufacturing problems, or failure to comply with regulatory requirements such as QSR, may result in changes to labeling, restrictions on such products or manufacturing processes, withdrawal of the products from the market, voluntary or mandatory recalls, a requirement to repair, replace, or refund the cost of any medical device we manufacture or distribute, fines, suspension, variation, or withdrawal of regulatory approvals or CE Certificates of Conformity, product seizures, injunctions, or the imposition of civil, administrative, or criminal penalties which would adversely affect our business, operating results, and prospects.

If the FDA determines that our promotional materials, labeling, training or other marketing or educational activities constitute promotion of an unapproved use, it could request that we cease or modify our training or promotional materials or subject us to regulatory enforcement actions. It is also possible that other federal, state or foreign enforcement authorities might take action if they consider our training or other promotional materials to constitute promotion of an unapproved use, which could result in significant fines or penalties under other statutory authorities, such as laws prohibiting false or fraudulent claims for payment of government funds.

If any of these actions were to occur it would harm our reputation and cause our product sales and profitability to suffer and may prevent us from generating revenue. Furthermore, our key component suppliers may not currently be or may not continue to be in compliance with all applicable regulatory requirements, which could result in our failure to produce our products on a timely basis and in the required quantities, if at all.

The FDA inspected our facilities in May 2014. As a result, we received a Notice of Inspectional Observations, or Form 483, with three observations that have since been addressed with a corrective and preventative action, or CAPA, plan. We responded to the Agency in writing and the matter was closed as of October 2014 through the issuance of an Establishment Inspection Report. To date, the FDA has not taken any further action with respect to the May 2014 inspection or its findings. The FDA inspected our facilities again in December 2016 and no findings were noted.

Our employees, independent contractors, consultants, manufacturers, and third-party distributors may engage in misconduct or other improper activities, relating to regulatory standards and requirements.

We are exposed to the risk that our employees, independent contractors, consultants, manufacturers, and third-party distributors may engage in fraudulent conduct or other illegal activity. Misconduct by these parties could include intentional, reckless and/or negligent conduct or disclosure of unauthorized activities to us that violates FDA regulations, including those laws requiring the reporting of true, complete and accurate information to the FDA, manufacturing standards, federal and state healthcare laws and regulations, and laws that require the true, complete and accurate reporting of financial information or data. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Misconduct by these parties could also involve the improper use of individually identifiable information, including, without limitation, information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. We have a Compliance program, Code of Conduct and associated policies and procedures, but it is not always possible to identify and deter misconduct, and the precautions we take to detect and prevent this activity may not be effective in controlling unknown or unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, including the imposition of significant civil, criminal and administrative penalties, including, without limitation, damages, fines, disgorgement of profits, imprisonment, exclusion from participation in government healthcare programs, such as Medicare and Medicaid, and the curtailment or restructuring of our operations.

We may be subject to enforcement action, including fines, penalties or injunctions, if we are determined to be engaging in the off-label promotion of our products.

Our promotional materials and training methods must comply with FDA and other applicable laws and regulations, including the prohibition of the promotion of off-label use. Physicians may use our products off- label, as the FDA does not restrict or regulate a physician's choice of treatment within the practice of medicine. In the United States, the full indication for the iFuse Implant System is: "The iFuse Implant System is intended for sacroiliac joint fusion for conditions including sacroiliac joint dysfunction that is a direct result of sacroiliac joint disruption and degenerative sacroiliitis. This includes conditions whose symptoms began during pregnancy or in the peripartum period and have persisted postpartum for more than six months. Clinical studies have demonstrated that treatment with the iFuse Implant System improved pain, patient function, and quality of life at 12-months post-implantation." We believe that the specific surgical procedures for which our products are marketed fall within the scope of the surgical applications that have been cleared by the FDA. However, if the FDA determines that our promotional materials or training constitutes promotion of an off-label use, it could request that we modify our training or promotional materials, require us to stop promoting our products for those specific procedures until we obtain FDA clearance or approval for them, or subject us to regulatory or enforcement actions, including the issuance of an untitled letter, a warning letter, injunction, seizure, civil fines, and criminal penalties. It is also possible that other federal, state or foreign enforcement authorities might take action if they consider our promotional or training materials to constitute promotion of an unapproved use, which could result in significant fines or penalties under other statutory authorities, such as laws prohibiting false or fraudulent claims for payment of government fund. In that event, our reputation could be damaged and adoption of the products would be impaired. Although our policy is to refrain from statements that could be considered off-label promotion of our products, the FDA or another regulatory agency could disagree and conclude that we have engaged in off-label promotion. In addition, the off-label use of our products may increase the risk of injury to patients, and, in turn, the risk of product liability claims. Product liability claims are expensive to defend and could divert our management's attention, result in substantial damage awards against us and harm our reputation.

A recall of our products, either voluntarily or at the direction of the FDA or another governmental authority, including foreign governmental authorities, or the discovery of serious safety issues or malfunctions with our products, can result in voluntary corrective actions or agency enforcement actions, which could have a significant adverse impact on us.

The FDA and similar foreign governmental authorities have the authority to require the recall of commercialized products in the event of material deficiencies or defects in design or manufacture or in the event that a product poses an unacceptable risk to health. Manufacturers may, under their own initiative, recall a product if any material deficiency in a device is found.

In the case of the FDA, the authority to require a recall must be based on an FDA finding that there is an unreasonable risk of substantial public harm. In addition, foreign governmental bodies have the authority to require the recall of our products in the event of material deficiencies or defects in design or manufacture. A government-mandated or voluntary recall by us or one of our third-party distributors could occur as a result of an unacceptable risk to health, component failures, manufacturing errors, design or labeling defects, or other deficiencies and issues. Recalls of any of our products would divert managerial and financial resources and have an adverse effect on our reputation, results of operations, and financial condition, which could impair our ability to produce our products in a cost-effective and timely manner in order to meet our customers' demands. We may also be required to bear other costs or take other actions that may have a negative impact on our future sales and our ability to generate profits.

The FDA requires that certain classifications of recalls be reported to FDA within 10 working days after the recall is initiated. Companies are required to maintain certain records of recalls, even if they are not reportable to the FDA. We may initiate voluntary recalls involving our products in the future that we determine do not require notification of the FDA. If the FDA disagrees with our determinations, they could require us to report those

actions as recalls. A future recall announcement could harm our reputation with customers and negatively affect our sales. In addition, the FDA could take enforcement action for failing to report the recalls when they were conducted.

Further, under the FDA's medical device reporting, regulations, we are required to report to the FDA any information that our product may have caused or contributed to a death or serious injury or in which our product malfunctioned and, if the malfunction were to recur, would likely cause or contribute to death or serious injury. If we fail to report these events to the FDA within the required timeframes, or at all, FDA could take enforcement action against us. Any such adverse event involving our products or repeated product malfunctions may result in a voluntary or involuntary corrective actions, such as recalls or customer notifications, or agency action, such as inspection or enforcement action. Any corrective action, whether voluntary or involuntary, as well as defending ourselves in a lawsuit could divert managerial and financial resources, impair our ability to manufacture our products in a cost-effective and timely manner, and have an adverse effect on our reputation, results of operations, and financial condition.

In the EEA, we must comply with the EU Medical Device Vigilance System. Under this system, incidents must be reported to the relevant authorities of the Member States of the EEA, and manufacturers are required to take Field Safety Corrective Actions, or FSCAs, to reduce a risk of death or serious deterioration in the state of health associated with the use of a medical device that is already placed on the market. An incident is defined as any malfunction or deterioration in the characteristics and/or performance of a device, as well as any inadequacy in the labeling or the instructions for use which, directly or indirectly, might lead to or might have led to the death of a patient or user or of other persons or to a serious deterioration in their state of health. An FSCA may include the recall, modification, exchange, destruction or retrofitting of the device FSCAs must be communicated by the manufacturer or its legal representative to its customers and/or to the end users of the device through Field Safety Notices.

Any adverse event involving our products, whether in the United States or abroad, could result in future voluntary corrective actions, such as recalls or customer notifications, or agency action, such as inspection, mandatory recall or other enforcement action. Any corrective action, whether voluntary or involuntary, as well as defending ourselves in a lawsuit, will require the dedication of our time and capital, distract management from operating our business, and may harm our reputation and financial results.

Modifications to our products may require new 510(k) clearances or premarket approvals and new conformity assessment by our Notified Body, or may require us to cease marketing or recall the modified products until clearances, approvals, or CE Certificates of Conformity are obtained.

Any modification to a 510(k)-cleared device that could significantly affect its safety or effectiveness, or that would constitute a major change in its intended use, design, or manufacture, requires a new 510(k) clearance or, possibly, a PMA. The FDA requires every manufacturer make and document this determination in the first instance. A manufacturer may determine that a modification could not significantly affect safety or effectiveness and does not represent a major change in its intended use, so that no new 510(k) clearance is necessary. FDA may review any manufacturer's decision and may not agree with our decisions regarding whether new clearances or approvals are necessary. The FDA may also on its own initiative determine that a new clearance or approval is required. We have made modifications to our products in the past and may make additional modifications in the future that we believe do not or will not require additional clearances or approvals. If the FDA disagrees and requires new clearances or approvals for the modifications, we may be required to recall and to stop marketing our products as modified until clearance or approvals can be obtained, which could require us to redesign our products and harm our operating results. In these circumstances, we may be subject to significant enforcement actions.

We have modified some of our 510(k) cleared products, and have determined based on our review of the applicable FDA guidance that in certain instances new 510(k) clearances or PMAs are not required. If the FDA

disagrees with our determination and requires us to submit new 510(k) clearances or PMAs for modifications to our previously cleared products for which we have concluded that new clearances or approvals are unnecessary, we may be required to cease marketing or to recall the modified product until we obtain clearance or approval, and we may be subject to significant enforcement action, regulatory fines, or penalties.

If a manufacturer determines that a modification to an FDA-cleared device could significantly affect its safety or effectiveness, or would constitute a major change in its intended use, then the manufacturer must file for a new 510(k) clearance or possibly a premarket approval application. Where we determine that modifications to our products require a new 510(k) clearance or premarket approval application, we may not be able to obtain those additional clearances or approvals for the modifications or additional indications in a timely manner, or at all. FDA's ongoing review of the 510(k) program may make it more difficult for us to make modifications to our previously cleared products, either by imposing more strict requirements on when a new 510(k) for a modification to a previously cleared product must be submitted, or applying more onerous review criteria to such submissions.

In the EEA, we must inform the Notified Body that carried out the conformity assessment of the medical devices we market or sell in the EEA of any planned substantial changes to our quality system or changes to our devices which could affect compliance with the essential requirements or the devices' intended use. The Notified Body will then assess the changes and verify whether they affect the products' conformity. There can be no assurances that the assessment will be favorable and that the Notified Body will attest our compliance with the essential requirements, which will prevent us from selling our products in the EEA.

Obtaining regulatory clearances or approvals and CE Certificates of Conformity can be a time consuming process, and delays in obtaining required future regulatory clearances or approvals, and CE Certificates of Conformity would adversely affect our ability to introduce new or enhanced products in a timely manner, which in turn would harm our future growth.

There is no guarantee that the FDA will grant 510(k) clearance or premarket approval of our future products or that our Notified Body will issue the required CE Certificate of Conformity, and failure to obtain necessary clearances or approvals for our future products would adversely affect our ability to grow our business.

We are in the process of developing our regulatory strategies for obtaining clearance or approval for future products. Some of them may require 510(k) clearance by the FDA or a new CE Certificate of Conformity. Other future products may require premarket approval. In addition some of our new products may require clinical trials to support regulatory approval and we may not successfully complete these clinical trials. The FDA may not approve or clear these products or our Notified Body may not issue CE Certificate of Conformity for the indications that are necessary or desirable for successful commercialization. Indeed, the FDA may refuse our requests for 510(k) clearance or premarket approval of new products, new intended uses, or modifications to existing products. Failure to receive clearance or approval for our new products would have an adverse effect on our ability to expand our business.

We may fail to obtain or maintain foreign regulatory approvals to market our products in other countries.

We currently market our products internationally and intend to expand our international marketing. International jurisdictions require separate regulatory approvals and compliance with numerous and varying regulatory requirements. For example, we intend to continue to seek domestic and international regulatory clearance to market our primary products Asia, Latin America, and the Middle East and other key markets. The approval procedures vary among countries and may involve requirements for substantial additional testing, and the time required to obtain approval may differ from country to country and from that required to obtain FDA clearance or approval or to obtain CE Certificates of Conformity.

Clearance or approval by the FDA or obtaining a CE Certificate of Conformity does not ensure approval or certification by regulatory authorities in other countries or jurisdictions, and approval or certification by one foreign regulatory authority does not ensure approval or certification by regulatory authorities in other foreign countries or by the FDA, and the CE marking of our products in the EEA. The foreign regulatory approval or certification process may include all of the risks associated with obtaining FDA clearance or approval, or a CE Certificate of Conformity for a medical device in the EEA in addition to other risks. In addition, the time required to obtain foreign approval may differ from that required to obtain FDA clearance or approval, or a CE Certificate of Conformity in the EEA and we may not obtain foreign regulatory approvals on a timely basis, if at all. We may not be able to file for regulatory approvals or certifications and may not receive necessary approvals to commercialize our products in any market. If we fail to receive necessary approvals or certifications to commercialize our products in foreign jurisdictions on a timely basis, or at all, our business, results of operations, and financial condition could be adversely affected.

Clinical trials necessary to support a 510(k) or PMA application or a conformity assessment procedure will be expensive and may require the enrollment of large numbers of patients, and suitable patients may be difficult to identify and recruit. Delays or failures in our clinical trials will prevent us from commercializing any modified or new products and will adversely affect our business, operating results and prospects.

Initiating and completing clinical trials necessary to support a PMA application for our future products and additional safety and effectiveness data beyond that typically required for a 510(k) clearance for iFuse, as well as other possible future product candidates, and to support a conformity assessment procedure would be time consuming and expensive and the outcome uncertain. Moreover, the results of early clinical trials are not necessarily predictive of future results, and any product we advance into clinical trials may not have favorable results in later clinical trials.

Conducting successful clinical studies may require the enrollment of large numbers of patients, and suitable patients may be difficult to identify and recruit. Patient enrollment in clinical trials and completion of patient participation and follow-up depends on many factors, including the size of the patient population, the nature of the trial protocol, the attractiveness of, or the discomforts and risks associated with, the treatments received by enrolled subjects, the availability of appropriate clinical trial investigators, support staff, and proximity of patients to clinical sites and able to comply with the inclusion and exclusion criteria for participation in the clinical trial and patient compliance. Development of sufficient and appropriate clinical protocols to demonstrate safety and effectiveness are required and we may not adequately develop such protocols to support clearance and approval. Further, the FDA or our Notified Body may require us to submit data on a greater number of patients than we originally anticipated and/or for a longer follow-up period or change the data collection requirements or data analysis applicable to our clinical trials. Delays in patient enrollment or failure of patients to continue to participate in a clinical trial may cause an increase in costs and delays in the approval and attempted commercialization of our products or result in the failure of the clinical trial. In addition, despite considerable time and expense invested in our clinical trials, the FDA or our Notified Body may not consider our data adequate to demonstrate safety and effectiveness. Such increased costs and delays or failures could adversely affect our business, operating results and prospects.

Our facility and our clinical investigational sites operate under procedures that govern the conduct and management of FDA-regulated clinical studies under 21 CFR Parts 50 and 812, and Good Clinical Practices. The FDA may conduct Bioresearch Monitoring inspections of us and/or our clinical sites to assess compliance with 21 CFR Parts 50 and 812, our procedures, and the clinical protocol. If the FDA were to find that we or our clinical investigators are not operating in compliance with applicable regulations, we could be subject to the above FDA enforcement action, as well as refusal to accept all or part of our data in support of our 510(k) or PMA, or we may need to conduct additional studies.

The results of our clinical trials may not support our product candidate claims or may result in the discovery of adverse side effects.

Even if our clinical trials are completed as planned, we cannot be certain that their results will support our product candidate claims or that the FDA, foreign authorities, or our Notified Body will agree with our conclusions regarding them. Success in pre-clinical studies and early clinical trials does not ensure that later clinical trials will be successful, and we cannot be sure that the later trials will replicate the results of prior trials and pre-clinical studies. The clinical trial process may fail to demonstrate that our product candidates are safe and effective for the proposed indicated uses, which could cause us to abandon a product candidate and may delay development of others. Any delay or termination of our clinical trials will delay the filing of our product submissions and, ultimately, our ability to commercialize our product candidates and generate revenue. It is also possible that patients enrolled in clinical trials will experience adverse side effects that are not currently part of the product candidate's profile.

U.S. legislative or FDA or foreign regulatory reforms may make it more difficult and costly for us to obtain regulatory clearances or approvals, or CE Certificates of Conformity for our product candidates and to manufacture, market, and distribute our products after approval is obtained.

From time to time, Congress introduces legislation that could significantly change the statutory provisions governing the regulatory approval, manufacture, and marketing of regulated products or the reimbursement thereof. In addition, FDA regulations and guidance are often revised or reinterpreted by the FDA in ways that may significantly affect our business and our products. Any new regulations or revisions or reinterpretations of existing regulations may impose additional costs or lengthen review times of future products. In addition, FDA regulations and guidance are often revised or reinterpreted by the agency in ways that may significantly affect our business and our products. It is impossible to predict whether legislative changes will be enacted or FDA regulations, guidance, or interpretations changed, and what the impact of such changes, if any, may be.

For example, FDA regulations and guidance are often revised or reinterpreted by the FDA in ways that may significantly affect our business and our products. For example, in 2011, the FDA initiated a review of the premarket clearance process in response to internal and external concerns regarding the 510(k) program, announcing 25 action items designed to make the process more rigorous and transparent. In addition, as part of the Food and Drug Administration Safety and Innovation Act of 2012, Congress enacted several reforms entitled the Medical Device Regulatory Improvements and additional miscellaneous provisions that will further affect medical device regulation both pre- and post-approval. In December 2016, the 21st Century Cures Act was enacted, with a number of provisions impacting medical device regulation. The FDA has implemented, and continues to implement, these reforms, which could impose additional regulatory requirements upon us and delay our ability to obtain new 510(k) clearances, increase the costs of compliance or restrict our ability to maintain our current clearances. Any change in the laws or regulations that govern the clearance and approval processes relating to our current and future products could make it more difficult and costly to obtain clearance or approval for new products, or to produce, market, and distribute existing products. Significant delays in receiving clearance or approval, or the failure to receive clearance or approval for our new products would have an adverse effect on our ability to expand our business.

Another example can be found in the EEA. On September 26, 2012, the European Commission adopted a package of legislative proposals designed to replace the existing regulatory framework for medical devices in the EEA. These proposals are intended to strengthen the medical devices rules in the EEA. On April 5, 2017, the final text of the Medical Devices Regulation (MDR) and In Vitro Diagnostic Medical Devices Regulation (IVDR) were adopted by the Parliament and the Council. These regulations, which will substantially impact medical devices manufacturers, will be applicable from May 2020 for the MDR and May 2022 for the IVDR. Examples of the changes which will be introduced by these regulations include the following:

- Additional scrutiny during the conformity assessment procedure for high risk medical devices;
- Strengthening of the clinical data requirements related to medical devices;

- Strengthening of the designation and monitoring processes governing notified bodies;
- The obligation for manufacturers and authorized representative to have a person responsible for regulatory compliance continuously at their disposal;
- Authorized representatives would be held legally responsible and liable for defective products placed on the EU market;
- Increased traceability of medical devices following the introduction of a Unique Device Identification (UDI) system;
- New rules governing the reprocessing of medical devices; and
- Increased transparency with the establishment of EUDAMED III as information from several databases concerning economic operators, CE Certificates of Conformity, conformity assessment, clinical investigations, the UDI system, adverse event reporting and market surveillance would be available to the public.

The sales of our products depend in part on the availability of coverage and reimbursement from third-party payors such as government health administration authorities, private health insurers, health maintenance organizations and other healthcare-related organizations. Recent political, economic and regulatory influences are subjecting the healthcare industry to fundamental changes that can impact coverage and reimbursement from third-party payors. For example, Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2011, among other things, reduced and/or limited Medicare reimbursement to certain providers. Legislative changes to the Patient Protection and Affordable Care Act remain possible and appear likely in the 115th United States Congress and under the Trump Administration. We expect that the Patient Protection and Affordable Care Act, as currently enacted or as it may be amended in the future, and other healthcare reform measures that may be adopted in the future, could have a material adverse effect on our industry generally and on our ability to maintain or increase sales of our existing products. Other federal laws established sequestration (i.e., automatic spending reductions), which further reduces Medicare's payments to providers by two percent through 2024. These reductions reduce reimbursement for our products, which could potentially negatively impact our revenue, and may reduce providers' revenues or profits, which could affect their ability to purchase new technologies. Both the federal and state governments in the United States and foreign governments continue to propose and pass new legislation and regulations designed to contain or reduce the cost of healthcare. Such legislation and regulations may result in decreased reimbursement for medical devices, which may further exacerbate industry-wide pressure to reduce the prices charged for medical devices. This could harm our ability to market our products and generate sales.

Our financial performance may be adversely affected by medical device tax provisions in the healthcare reform laws.

The Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2011, imposes, among other things, an annual excise tax on any entity that manufactures or imports medical devices offered for sale in the United States. Under these provisions, the Congressional Research Service predicts that the total cost to the medical device industry may be up to $20.0 billion over the next decade. A two-year moratorium currently applies to this tax through December 2017. After that time, the tax may be repealed or modified, or the moratorium may be lifted, in which case sales of our iFuse would be subject to this excise tax.

We may incur product liability losses, and insurance coverage may be inadequate or unavailable to cover these losses.

Our business exposes us to potential product liability claims that are inherent in the testing, design, manufacture and sale of medical devices for sacroiliac joint surgery procedures. Sacroiliac joint surgery involves

significant risk of serious complications, including bleeding, nerve injury, paralysis and even death. In addition, if longer-term patient results and experience indicates that our products or any component of a product cause tissue damage, motor impairment or other adverse effects, we could be subject to significant liability. Surgeons may misuse or ineffectively use our products, which may result in unsatisfactory patient outcomes or patient injury. We could become the subject of product liability lawsuits alleging that component failures, manufacturing flaws, design defects or inadequate disclosure of product-related risks or product-related information resulted in an unsafe condition or injury to patients. Product liability lawsuits and claims, safety alerts, or product recalls, regardless of their ultimate outcome, could have a material adverse effect on our business and reputation, our ability to attract and retain customers and our results of operations or financial condition. We are aware of two patient deaths taking place following an iFuse Procedure and a medical device report was filed for each case with the FDA. The first patient death occurred in 2012 when a patient suffered a ruptured inferior vena cava approximately one week after a procedure. The timing and the location of the rupture did not suggest that the injury resulted from the procedure. We learned of a second death that occurred in 2013 approximately six hours after the procedure. According to a report on the case, an autopsy revealed a perforated iliac artery close to the implant, possibly caused by a drill wire guide, but the exact source of the bleeding could not be identified. Furthermore, the patient's blood was found to contain toxic levels of an unprescribed pain killer (tramadol), which was found to be co-responsible for the death. To date, neither of these deaths has resulted in a claim or investigation that our iFuse Implant malfunctioned or had a defect.

Although we maintain third-party product liability insurance coverage, it is possible that claims against us may exceed the coverage limits of our insurance policies or cause us to record a self-insured loss. Even if any product liability loss is covered by an insurance policy, these policies typically have substantial retentions or deductibles that we are responsible for. Product liability claims in excess of applicable insurance coverage could have a material adverse effect on our business, results of operations, and financial condition.

In addition, any product liability claim brought against us, with or without merit, could result in an increase of our product liability insurance rates. Insurance coverage varies in cost and can be difficult to obtain, and we cannot guarantee that we will be able to obtain insurance coverage in the future on terms acceptable to us or at all.

We are subject to environmental laws and regulations that can impose significant costs and expose us to potential financial liabilities.

The manufacture of certain of our products, including our implants and products, and the handling of materials used in the product testing process, including in our cadaveric laboratory, involve the use of biological, hazardous and/or radioactive materials and wastes. Our business and facilities and those of our suppliers are subject to foreign, federal, state, and local laws and regulations relating to the protection of human health and the environment, including those governing the use, manufacture, storage, handling, and disposal of, and exposure to, such materials and wastes. In addition, under some environmental laws and regulations, we could be held responsible for costs relating to any contamination at our past or present facilities and at third-party waste disposal sites even if such contamination was not caused by us. A failure to comply with current or future environmental laws and regulations could result in severe fines or penalties. Any such expenses or liability could have a significant negative impact on our business, results of operations, and financial condition.

Risks Related to Our Intellectual Property and Potential Litigation

Our ability to protect our intellectual property and proprietary technology is uncertain.

We rely primarily on patent, copyright, trademark and trade secret laws, as well as confidentiality and non- disclosure agreements and other methods, to protect our proprietary technologies and know-how. As of March 31, 2017, we owned 23 issued U.S. patents and had 16 pending U.S. patent applications, and we owned six issued foreign patents and had 12 pending foreign patent applications. As of March 31, 2017, we also had

two pending U.S. trademark applications and 16 pending foreign trademark applications, as well as 96 trademark registrations, including 17 U.S. trademark registrations and 79 foreign trademark registrations.

We have applied for patent protection relating to certain existing and proposed products and processes. While we generally apply for patents in those countries where we intend to make, have made, use, or sell patented products, we may not accurately predict all of the countries where patent protection will ultimately be desirable. If we fail to timely file a patent application in any such country, we may be precluded from doing so at a later date. Furthermore, we cannot assure you that any of our patent applications will be approved. The rights granted to us under our patents, including prospective rights sought in our pending patent applications, may not be meaningful or provide us with any commercial advantage. In addition, those rights could be opposed, contested, or circumvented by our competitors or be declared invalid or unenforceable in judicial or administrative proceedings. The failure of our patents to adequately protect our technology might make it easier for our competitors to offer the same or similar products or technologies. Competitors may be able to design around our patents or develop products that provide outcomes which are comparable to ours without infringing on our intellectual property rights. Due to differences between foreign and U.S. patent laws, our patented intellectual property rights may not receive the same degree of protection in foreign countries as they would in the United States. Even if patents are granted outside the United States, effective enforcement in those countries may not be available. Since most of our issued patents are for the United States only, we lack a corresponding scope of patent protection in other countries. In countries where we do not have significant patent protection, we may not be able to stop a competitor from marketing products in such countries that are the same as or similar to our products.

We rely on our trademarks, trade names and brand names to distinguish our products from the products of our competitors, and have registered or applied to register many of these trademarks. We cannot assure you that our trademark applications will be approved. Third parties may also oppose our trademark applications, or otherwise challenge our use of the trademarks. In the event that our trademarks are successfully challenged, we could be forced to rebrand our products, which could result in loss of brand recognition, and could require us to devote resources to advertising and marketing new brands. Further, we cannot assure you that competitors will not infringe upon our trademarks, or that we will have adequate resources to enforce our trademarks.

We also rely on trade secrets, know-how and technology, which are not protected by patents, to maintain our competitive position. We try to protect this information by entering into confidentiality and intellectual property assignment agreements with parties that develop intellectual property for us and/or have access to it, such as our officers, employees, consultants and advisors. However, in the event of unauthorized use or disclosure or other breaches of such agreements, we may not be provided with meaningful protection for our trade secrets or other proprietary information. In addition, our trade secrets may otherwise become known or be independently discovered by competitors. To the extent that our commercial partners, collaborators, employees and consultants use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions. If any of our trade secrets, know-how or other technologies not protected by a patent were to be disclosed to or independently developed by a competitor, our business, financial condition, and results of operations could be materially adversely affected.

In the future, we may enter into licensing agreements to maintain our competitive position. If we enter into in-bound intellectual property license agreements, we may not be able to fully protect the licensed intellectual property rights or maintain those licenses. Future licensors could retain the right to prosecute and defend the intellectual property rights licensed to us, in which case we would depend on the ability of our licensors to obtain, maintain and enforce intellectual property protection for the licensed intellectual property. These licensors may determine not to pursue litigation against other companies or may pursue such litigation less aggressively than we would. Further, entering into such license agreements could impose various diligence, commercialization, royalty, or other obligations on us. Future licensors may allege that we have breached our license agreement with them, and accordingly seek damages or to terminate our license, which could adversely affect our competitive business position and harm our business prospects.

If a competitor infringes upon one of our patents, trademarks, or other intellectual property rights, enforcing those patents, trademarks and other rights may be difficult and time consuming. Even if successful, litigation to defend our patents and trademarks against challenges or to enforce our intellectual property rights could be expensive and time consuming and could divert management's attention from managing our business. Moreover, we may not have sufficient resources to defend our patents or trademarks against challenges or to enforce our intellectual property rights. In addition, if third parties infringe any intellectual property that is not material to the products that we make, have made, use or sell, it may be impractical for us to enforce this intellectual property against those third parties.

We may be subject to damages resulting from claims that we, our employees, or our third-party distributors have wrongfully used or disclosed alleged trade secrets of our competitors or are in breach of non-competition or non-solicitation agreements with our competitors.

Many of our employees were previously employed at other medical device companies, including our competitors or potential competitors, in some cases until recently. Some of our third-party distributors sell, or in the past have sold, products of our competitors. We may be subject to claims that we, our employees, or our third-party distributors have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of these former employers or competitors. In addition, we have been and may in the future be subject to claims that we caused an employee to breach the terms of his or her non-competition or non-solicitation agreement. Even if we are successful in defending against these claims, litigation could result in substantial costs, divert the attention of management from our core business and harm our reputation. If our defense to those claims fails, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. There can be no assurance that this type of litigation will not continue, and any future litigation or the threat thereof may adversely affect our ability to hire additional direct sales representatives. A loss of key personnel or their work product could hamper or prevent our ability to commercialize product candidates, which could have an adverse effect on our business, results of operations, and financial condition.

The medical device industry is characterized by patent litigation and we could become subject to litigation that could be costly, result in the diversion of management's time and efforts, require us to pay damages, and/or prevent us from developing or marketing our existing or future products.

Our commercial success will depend in part on not infringing the patents or violating the other proprietary rights of third parties. Significant litigation regarding patent rights exists in our industry. Our competitors in both the United States and abroad, many of which have substantially greater resources and have made substantial investments in competing technologies, may have applied for or obtained or may in the future apply for and obtain, patents that will prevent, limit or otherwise interfere with our ability to make and sell our products. We have conducted a limited review of patents issued to third parties. The large number of patents, the rapid rate of new patent issuances, the complexities of the technology involved, and the uncertainty of litigation increase the risk of business assets and management's attention being diverted to patent litigation. Any litigation or claim against us, even those without merit, may cause us to incur substantial costs, and could place a significant strain on our financial resources, divert the attention of management from our core business, and harm our reputation. Further, as the number of participants in the medical device industry grows, the possibility of intellectual property infringement claims against us increases. If we are found to infringe the intellectual property rights of third parties, we could be required to pay substantial damages, including treble, or triple, damages if an infringement is found to be willful, and/or royalties and could be prevented from selling our products unless we obtain a license or are able to redesign our products to avoid infringement. Any such license may not be available on reasonable terms, if at all, and there can be no assurance that we would be able to redesign our products in a way that would not infringe the intellectual property rights of others. If we fail to obtain any required licenses or make any necessary changes to our products or technologies, we may have to withdraw existing products from the market or may be unable to commercialize one or more of our products, all of which could have a material adverse effect on our business, results of operations, and financial condition. If passed into law, patent reform legislation currently pending in the U.S. Congress could significantly change the risks associated with bringing

or defending a patent infringement lawsuit. For example, fee shifting legislation could require a non-prevailing party to pay the attorney fees of the prevailing party in some circumstances.

In addition, we generally indemnify our customers and third-party distributors with respect to infringement by our products of the proprietary rights of third parties. Third parties may assert infringement claims against our customers or third-party distributors. These claims may require us to initiate or defend protracted and costly litigation on behalf of our customers or third-party distributors, regardless of the merits of these claims. If any of these claims succeed, we may be forced to pay damages on behalf of our customers or third-party distributors or may be required to obtain licenses to intellectual property owned by such third parties. If we cannot obtain all necessary licenses on commercially reasonable terms, our customers and third-party distributors may be forced to stop using or selling our products.

Risks Related to this Offering and Ownership of Our Common Stock

The price of our common stock may be volatile and the value of your investment could decline.

Prior to this offering, there has been no public market for our common stock, and medical device stocks have historically experienced volatility. The trading price of our common stock following this offering may fluctuate substantially. Following the closing of this offering, the market price of our common stock may be higher or lower than the price you pay in the offering, depending on many factors, some of which are beyond our control and may not be related to our operating performance. These fluctuations could cause you to lose all or part of your investment in our common stock. Factors that could cause fluctuations in the trading price of our common stock include the following:

- our ability to drive increased sales of our product;
- our ability to establish and maintain an effective and dedicated sales force;
- pricing pressure applicable to our products, including adverse third-party coverage and reimbursement outcomes;
- the ability of our suppliers to timely provide us with an adequate supply of materials and components;
- results of our clinical trials and that of our competitors' products;
- regulatory actions with respect to our products or our competitor's products;
- announcements of new offerings, products, services or technologies, commercial relationships, acquisitions, or other events by us or our competitors;
- price and volume fluctuations in the overall stock market from time to time;
- significant volatility in the market price and trading volume of healthcare companies, in general, and of companies in the medical device industry in particular;
- fluctuations in the trading volume of our shares or the size of our public float;
- negative publicity;
- actual or anticipated changes or fluctuations in our results of operations;
- whether our results of operations meet the expectations of securities analysts or investors or those expectations change;
- litigation involving us, our industry, or both;
- regulatory developments in the United States, foreign countries, or both;
- general economic conditions and trends;
- major catastrophic events;

- lock-up releases and sales of large blocks of our common stock;
- additions or departures of key employees or scientific personnel;
- factors that may affect the sale of our products, including seasonality and budgets of our customers;
- the costs of maintaining adequate insurance coverage, including product liability insurance; or
- an adverse impact on the company from any of the other risks cited in this prospectus.

In addition, if the market for healthcare stocks or the stock market, in general, experience a loss of investor confidence, the trading price of our common stock could decline for reasons unrelated to our business, results of operations, or financial condition. The trading price of our common stock might also decline in reaction to events that affect other companies in our industry even if these events do not directly affect us. In the past, following periods of volatility in the market price of a company's securities, securities class action litigation has often been brought against that company. If our stock price is volatile, we may become the target of securities litigation. Securities litigation could result in substantial costs and divert our management's attention and resources from our business. This could have a material adverse effect on our business, results of operations, and financial condition.

Sales of substantial amounts of our common stock in the public markets, including when the "lock-up" or "market standoff" period ends, or the perception that sales might occur, could reduce the price of our common stock and may dilute your voting power and your ownership interest in us.

Sales of a substantial number of shares of our common stock in the public market after this offering, or the perception that these sales could occur, could adversely affect the market price of our common stock, and may make it more difficult for you to sell your common stock at a time and price that you deem appropriate. Based on the total number of outstanding shares of our common stock as of March 31, 2017, upon the closing of this offering, we will have shares of common stock outstanding. All of the shares of common stock sold in this offering will be freely tradable without restrictions or further registration under the Securities Act of 1933, as amended, or the Securities Act, except for any shares held by our "affiliates" as defined in Rule 144 under the Securities Act.

Subject to certain exceptions, we, our directors and officers and the holders of substantially all of our capital stock, warrants and stock options have agreed not to offer, sell or agree to sell, directly or indirectly, any shares of common stock without the permission of Morgan Stanley & Co. LLC and Merrill Lynch, Pierce, Fenner & Smith Incorporated for a period of 180 days from the date of this prospectus. When the lock-up period expires, our security holders will be able to sell shares in the public market subject to any restrictions under the securities laws. In addition, Morgan Stanley and Merrill Lynch may, in their discretion, release all or some portion of the shares subject to lock-up agreements prior to the expiration of the lock-up period. See the section titled "Shares Eligible for Future Sale" for more information. Sales of a substantial number of such shares upon expiration, or the perception that such sales may occur, or early release of the lock-up, could cause our share price to fall, or make it more difficult for you to sell your common stock at a time and price that you deem appropriate.

Based on shares outstanding as of March 31, 2017, the holders of up to shares, or approximately %, of our common stock after this offering, will have rights, subject to some conditions, to require us to file registration statements covering the sale of their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. We also intend to register the offer and sale of all shares of common stock that we may issue under our equity compensation plans.

We may issue our shares of common stock or securities convertible into our common stock from time to time in connection with a financing, acquisition, investments or otherwise. Any such issuance could result in substantial dilution to our existing stockholders and cause the trading price of our common stock to decline.

Insiders will continue to have substantial control over us after this offering, which could limit your ability to influence the outcome of key transactions, including a change of control.

Our directors, executive officers, and each of our stockholders that own greater than 5% of our outstanding common stock, in the aggregate, will beneficially own approximately % of the outstanding shares of our common stock after this offering, based on the number of shares outstanding as of March 31, 2017. As a result, these stockholders will be able to influence or control matters requiring approval by our stockholders, including the election of directors and the approval of mergers, acquisitions or other extraordinary transactions. They may also have interests that differ from yours and may vote in a manner that is adverse to your interests. This concentration of ownership may have the effect of deterring, delaying, or preventing a change of control of our company, could deprive our stockholders of an opportunity to receive a premium for their common stock as part of a sale of our company and might ultimately affect the market price of our common stock.

There is no existing market for our common stock, and we cannot assure you that a market will develop for our common stock or what the market price of our common stock will be.

Prior to this offering, there has been no public market for our common stock. We cannot predict the extent to which investor interest in our company will lead to the development of an active trading market on the Nasdaq Global Market or otherwise or how liquid that market might become. If an active trading market does not develop, you may have difficulty selling any shares of our common stock that you purchase, and the value of such shares might be materially impaired.

In addition, we cannot predict the prices at which our common stock will trade. The initial public offering price for our common stock will be determined by negotiations between us and the representatives of the underwriters and may not be indicative of prices that will prevail in the open market following this offering. Consequently, you may not be able to sell shares of our common stock at prices equal to or greater than the price you paid in this offering.

We have broad discretion in the use of net proceeds that we receive in this offering, and if we do not use those proceeds effectively, your investment could be harmed.

The principal purposes of this offering are to create a public market for our common stock, obtain additional working capital and facilitate our future access to the public equity markets. We intend to use the net proceeds from this offering for general corporate purposes, including working capital, sales and marketing activities, research initiatives including enhancement of our solution, investment in technology and development and capital expenditures. We also may use a portion of the net proceeds from this offering to acquire or invest in technologies, solutions or businesses that complement our business, although we have no present commitments, and we have not allocated specific amounts of net proceeds, to complete any such transactions or plans. Accordingly, our management will have broad discretion in the application of the net proceeds to us from this offering. Investors in this offering will need to rely upon the judgment of our management regarding the application of the proceeds. If we do not use the net proceeds that we receive in this offering effectively, our business, results of operations, and financial condition could be harmed.

We may be unable to utilize our federal net operating loss carryforwards to reduce our income taxes.

As of December 31, 2016, we had net operating loss, or NOL, carryforwards of approximately $105.0 million and $83.7 million available to reduce future taxable income, if any, for U.S. federal income tax and state income tax purposes, respectively. If not utilized, our federal and state NOL carryforwards begin to expire in 2029 and 2017, respectively. These NOL carryforwards could expire unused and be unavailable to offset future income tax liabilities. In addition, under Section 382 of the Internal Revenue Code of 1986, as amended, or the Code, and corresponding provisions of state law, if a corporation undergoes an “ownership change,” which generally occurs if the percentage of the corporation’s stock owned by 5% stockholders increases

by more than 50% over a three-year period, the corporation's ability to use its pre-change NOL carryforwards and other pre-change tax attributes to offset its post-change income may be limited. We have determined that we have experienced Section 382 ownership changes in the past and $1.4 million of our NOL and tax credit carryforwards are subject to limitation. In addition, we may experience ownership changes in the future as a result of subsequent shifts in our stock ownership, including this offering, some of which may be outside of our control. If an ownership change occurs and our ability to use our historical NOL and tax credit carryforwards is materially limited, it would harm our future operating results by effectively increasing our future tax obligations.

The requirements of being a public company may strain our resources, divert our management's attention, and affect our ability to attract and retain qualified board members.

As a public company, we will be subject to the reporting requirements of the Securities Exchange Act of 1934, as amended, or the Exchange Act, and will be required to comply with the applicable requirements of the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, and the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, the listing requirements of the Nasdaq Global Market and other applicable securities rules and regulations. Compliance with these rules and regulations will increase our legal and financial compliance costs, make some activities more difficult, time-consuming, or costly and increase demand on our systems and resources. Among other things, the Exchange Act requires that we file annual, quarterly, and current reports with respect to our business and results of operations and maintain effective disclosure controls and procedures and internal controls over financial reporting. In order to maintain and, if required, improve our disclosure controls and procedures and internal controls over financial reporting to meet this standard, significant resources and management oversight may be required. As a result, management's attention may be diverted from other business concerns, which could harm our business and results of operations. Although we have already hired additional employees to comply with these requirements, we may need to hire even more employees in the future, which will increase our costs and expenses.

We also expect that being a public company and these new rules and regulations will make it more expensive for us to obtain director and officer liability insurance, and we may be required to accept reduced coverage or incur substantially higher costs to obtain coverage. These factors could also make it more difficult for us to attract and retain qualified members of our board of directors, particularly to serve on our audit committee and compensation committee, and qualified executive officers.

Failure to establish and maintain an effective system of internal controls could result in material misstatements of our financial statements or cause us to fail to meet our reporting obligations or fail to prevent fraud in which case, our stockholders could lose confidence in our financial reporting, which would harm our business and could negatively impact the price of our stock.

After the closing of this offering, we will be subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act and the rules and regulations of Nasdaq Global Market. The Sarbanes-Oxley Act requires, among other things, that we maintain effective disclosure controls and procedures and internal controls over financial reporting. Commencing with our year ending December 31, 2018, we must perform system and process evaluation and testing of our internal controls over financial reporting to allow management to report on the effectiveness of our internal controls over financial reporting in our Annual Report on Form 10-K for that year, as required by Section 404 of the Sarbanes-Oxley Act, or Section 404. This will require that we incur substantial additional professional fees and internal costs to expand our accounting and finance functions and that we expend significant management efforts. Prior to this offering, we have never been required to test our internal controls within a specified period, and we are not currently in compliance with, and we cannot be certain when we will be able to implement the requirements of Section 404. As a result, we may experience difficulty in producing accurate financial statements in a timely manner.

We may discover weaknesses in our system of internal financial and accounting controls and procedures that could result in a material misstatement of our financial statements. In addition, our internal control over

financial reporting will not prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that misstatements due to error or fraud will not occur or that all control issues and instances of fraud will be detected.

The rules governing the standards that must be met for our management to assess our internal control over financial reporting are complex and require significant documentation, testing, and possible remediation. If we are not able to comply with the requirements of Section 404 of the Sarbanes-Oxley Act in a timely manner, or if we are unable to maintain proper and effective internal controls, we may not be able to produce timely and accurate financial statements. In addition, in connection with the future attestation process by our independent registered public accounting firm, we may encounter problems or delays in completing the implementation of any requested improvements and receiving a favorable attestation. If we cannot favorably assess the effectiveness of our internal control over financial reporting, or if our independent registered public accounting firm is unable to provide an unqualified attestation report on our internal controls, our stockholders could lose confidence in our reporting, and the market price of our stock could decline. In addition, we could be subject to sanctions or investigations by the Nasdaq Global Market, the Securities and Exchange Commission, or SEC, or other regulatory authorities.

We are an "emerging growth company," and we cannot be certain if the reduced disclosure requirements applicable to emerging growth companies will make our common stock less attractive to investors.

We are an "emerging growth company" as defined in the JOBS Act and we intend to take advantage of some of the exemptions from reporting requirements that are applicable to other public companies that are not emerging growth companies, including:

- reduced obligations with respect to financial data, including presenting only two years of audited financial statements and only two years of selected financial data;
- an exception from compliance with the auditor attestation requirements of Section 404 of the Sarbanes- Oxley Act of 2002;
- reduced disclosure about our executive compensation arrangements in our periodic reports, proxy statements, and registration statements; and
- exemptions from the requirements of holding non-binding advisory votes on executive compensation or golden parachute arrangements.

We cannot predict if investors will find our common stock less attractive because we will rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile. We may take advantage of these reporting exemptions until we are no longer an emerging growth company. We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year (a) following the fifth anniversary of the closing of this offering, (b) in which we have total annual gross revenue of at least $1.1 billion, or (c) in which we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non- affiliates exceeds $700 million as of the prior June 30th, and (2) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period.

Because the initial public offering price of our common stock will be substantially higher than the pro forma as adjusted net tangible book value per share of our outstanding common stock following this offering, new investors will experience immediate and substantial dilution.

The initial public offering price of our common stock is substantially higher than the pro forma as adjusted net tangible book value per share of our common stock immediately following this offering based on the total

value of our tangible assets less our total liabilities. Therefore, if you purchase shares of our common stock in this offering, you will experience immediate dilution of $ per share, the difference between the assumed limited public offering price of $ per share, which is the midpoint of the range as set forth on the cover page of this prospectus, after deducting underwriting discounts and commissions and estimated offering expenses payable by us, and the pro forma as adjusted net tangible book value per share of our common stock as of $, immediately after giving effect to the issuance of shares of our common stock in this offering. See the section titled "Dilution."

If securities or industry analysts do not publish research or reports about our business, or publish unfavorable research reports about our business, our share price and trading volume could decline.

The trading market for our common stock will, to some extent, depend on the research and reports that securities or industry analysts publish about us or our business. We do not have any control over these analysts. If one or more of the analysts who cover us publishes unfavorable commentary about us or changes their opinion of our business prospects, our share price would likely decline. If one or more of these analysts ceases coverage of or fails to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our share price or trading volume to decline.

We do not intend to pay dividends for the foreseeable future and, consequently, your ability to achieve a return on your investment will depend on appreciation in the price of our common stock.

We have never declared or paid any dividends on our common stock. We intend to retain any earnings to finance the operation and expansion of our business, and we do not anticipate paying any cash dividends in the future. As a result, you may only receive a return on your investment in our common stock if the market price of our common stock increases. In addition, our loan and security agreements contain restrictions on our ability to pay dividends.

Our credit facility agreement contains covenants that may restrict our business and financing activities.

Borrowings under our credit facility agreement are secured by substantially all of our assets. Our credit facility agreements also restrict our ability to, among other things:

- dispose of or sell assets;
- make material changes in our business or management;
- consolidate or merge with or acquire other entities;
- incur additional indebtedness;
- incur liens on our assets;
- pay dividends or make distributions on our capital stock;
- make certain investments;
- enter into transactions with our affiliates; and
- make any payment in respect of any subordinated indebtedness.

These restrictions are subject to certain exceptions. In addition, our loan and security agreement requires us to maintain a minimum liquidity threshold, among other things.

The covenants in our credit facility agreements, as well as any future financing agreements that we may enter into, may restrict our ability to finance our operations, engage in, expand or otherwise pursue our business activities and strategies. Our ability to comply with these covenants may be affected by events beyond our

control, and future breaches of any of these covenants could result in a default under our credit facility agreements. If not waived, future defaults could cause all of the outstanding indebtedness under our credit facility agreements to become immediately due and payable and terminate all commitments to extend further credit.

If we do not have or are unable to generate sufficient cash available to repay our debt obligations when they become due and payable, either upon maturity or in the event of a default, we may not be able to obtain additional debt or equity financing on favorable terms, if at all, which may negatively impact our ability to operate our business.

Our charter documents and Delaware law could discourage takeover attempts and lead to management entrenchment.

Our amended and restated certificate of incorporation and amended and restated bylaws that will be in effect upon closing of this offering contain provisions that could delay or prevent a change in control of our company. These provisions could also make it difficult for stockholders to elect directors that are not nominated by the current members of our board of directors or take other corporate actions, including effecting changes in our management. These provisions include:

- a classified board of directors with three-year staggered terms, which could delay the ability of stockholders to change the membership of a majority of our board of directors;
- the ability of our board of directors to issue shares of preferred stock and to determine the price and other terms of those shares, including preferences and voting rights, without stockholder approval, which could be used to significantly dilute the ownership of a hostile acquiror;
- the exclusive right of our board of directors to elect a director to fill a vacancy created by the expansion of our board of directors or the resignation, death or removal of a director, which prevents stockholders from being able to fill vacancies on our board of directors;
- a prohibition on stockholder action by written consent, which forces stockholder action to be taken at an annual or special meeting of our stockholders;
- the requirement that a special meeting of stockholders may be called only by a majority vote of our entire board of directors, the chairman of our board of directors or our chief executive officer, which could delay the ability of our stockholders to force consideration of a proposal or to take action, including the removal of directors;
- the requirement for the affirmative vote of holders of at least % of the voting power of all of the then-outstanding shares of the voting stock, voting together as a single class, to amend the provisions of our amended and restated certificate of incorporation relating to the management of our business or our amended and restated bylaws, which may inhibit the ability of an acquiror to effect such amendments to facilitate an unsolicited takeover attempt; and
- advance notice procedures with which stockholders must comply to nominate candidates to our board of directors or to propose matters to be acted upon at a stockholders' meeting, which may discourage or deter a potential acquiror from conducting a solicitation of proxies to elect the acquiror's own slate of directors or otherwise attempting to obtain control of us.

In addition, as a Delaware corporation, we are subject to Section 203 of the Delaware General Corporation Law. These provisions may prohibit large stockholders, in particular those owning 15% or more of our outstanding voting stock, from merging or combining with us for a certain period of time.

A Delaware corporation may opt out of this provision by express provision in its original certificate of incorporation or by amendment to its certificate of incorporation or bylaws approved by its stockholders. However, we have not opted out of, and do not currently intend to opt out of, this provision.

These and other provisions in our amended and restated certificate of incorporation, amended and restated bylaws and Delaware law could make it more difficult for stockholders or potential acquirers to obtain control of our board of directors or initiate actions that are opposed by our then-current board of directors, including delay or impede a merger, tender offer, or proxy contest involving our company. The existence of these provisions could negatively affect the price of our common stock and limit opportunities for you to realize value in a corporate transaction.

Our board of directors is authorized to issue and designate shares of our preferred stock in additional series without stockholder approval.

Our amended and restated certificate of incorporation authorizes our board of directors, without the approval of our stockholders, to issue 5,000,000 shares of our preferred stock, subject to limitations prescribed by applicable law, rules, and regulations and the provisions of our amended and restated certificate of incorporation, as shares of preferred stock in series, and to establish from time to time the number of shares to be included in each such series, and to fix the designation, powers, preferences, and rights of the shares of each such series and the qualifications, limitations, or restrictions thereof. The powers, preferences, and rights of these additional series of preferred stock may be senior to or on parity with our common stock, which may reduce its value.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware and the federal district courts of the United States of America will be the exclusive forums for substantially all disputes between us and our stockholders, which restricts our stockholders' ability to bring a lawsuit against us or our directors, officers, or employees in jurisdictions other than Delaware and federal district courts.

Our amended and restated certificate of incorporation provides that the Court of Chancery of the State of Delaware is the exclusive forum for:

- any derivative action or proceeding brought on our behalf;
- any action asserting a breach of fiduciary duty;
- any action asserting a claim against us arising under the Delaware General Corporation Law, our amended and restated certificate of incorporation, or our amended and restated bylaws; and
- any action asserting a claim against us that is governed by the internal-affairs doctrine.

Our amended and restated certificate of incorporation further provides that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act.

INFORMATION REGARDING FORWARD-LOOKING STATEMENTS

This prospectus includes forward-looking statements. All statements other than statements of historical facts contained in this prospectus, including statements regarding our future results of operations and financial position, strategy and plans, industry environment, potential growth opportunities, and our expectations for future operations, are forward-looking statements. The words "believe," "may," "will," "estimate," "continue," "anticipate," "design," "intend," "expect," "could," "plan," "potential," "predict," "seek," "should," "would," or the negative version of these words and similar expressions are intended to identify forward-looking statements. We have based these forward-looking statements on our current expectations and projections about future events and trends that we believe may affect our financial condition, results of operations, strategy, short- and long-term business operations and objectives, and financial needs. The forward-looking statements are contained principally in "Prospectus Summary," "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Business." These forward-looking statements include, but are not limited to, statements concerning the following:

- our expectation that, for the foreseeable future, a significant portion of our revenues will be derived from sales of iFuse Implant System, or iFuse;
- our ability to expand our sales and marketing capabilities to increase demand for iFuse, expand geographically, and obtain favorable coverage and reimbursement determinations from third-party payors;
- our estimates of our market opportunity;
- developments or disputes concerning our intellectual property or other proprietary rights;
- competition in the markets we serve;
- our expectations of the reliability and performance of iFuse;
- our expectations of the benefits to patients, providers, and payors of iFuse;
- our reliance on a limited number of suppliers, including sole source suppliers, which may impact the availability of replacement instruments and materials;
- the factors we believe drive demand for iFuse and our ability to sustain or increase such demand;
- our ability to develop additional revenue opportunities, including new devices;
- the scope of protection we establish and maintain for intellectual property rights covering iFuse and any other device we may develop;
- our estimates regarding our costs and risks associated with our international operations and international expansion;
- our ability to retain and recruit key personnel and expand our sales force;
- our expectations regarding acquisitions and strategic operations;
- our ability to fund our working capital requirements;
- our compliance with, and the cost of, federal, state, and foreign regulatory requirements;
- the factors that may impact our financial results; and
- anticipated trends and challenges in our business and the markets in which we operate.

These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described in "Risk Factors." Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of

factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this prospectus may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur. Moreover, except as required by law, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. We undertake no obligation to update publicly any forward-looking statements for any reason after the date of this prospectus to conform these statements to actual results or to changes in our expectations.

In addition, statements that “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based upon information available to us as of the date of this prospectus, and while we believe such information forms a reasonable basis for such statements, such information may be limited or incomplete, and our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all potentially available relevant information. These statements are inherently uncertain and investors are cautioned not to unduly rely upon these statements.

You should read this prospectus and the documents that we reference in this prospectus and have filed with the Securities and Exchange Commission as exhibits to the registration statement of which this prospectus is a part with the understanding that our actual future results, levels of activity, performance and events and circumstances may be materially different from what we expect.

MARKET, INDUSTRY, AND OTHER DATA

This prospectus contains estimates, projections, and other information concerning our industry, our business, and the markets for our products and product candidates, including data regarding the estimated size of those markets for our products and product candidates, their projected growth rates, the perceptions and preferences of surgeons and patients regarding certain procedures, surgeon and patient data, as well as data regarding market research, estimates, and forecasts prepared by our management. We obtained the industry, market, and other data throughout this prospectus from our own internal estimates and research, as well as from industry publications and research, surveys, and studies conducted by third parties.

Information is based on estimates, forecasts, projections, market research, or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances that are assumed in this information. In some cases, we do not expressly refer to the sources from which this data is derived.

USE OF PROCEEDS

We estimate that the net proceeds from this offering of shares of common stock will be approximately $ million, or $ million if the underwriters exercise their option to purchase additional shares in full, after deducting underwriting discounts and commissions and estimated offering expenses payable by us, assuming an initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus.

Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) our net proceeds by $ million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, after deducting underwriting discounts and commissions and estimated offering expenses payable by us. Each increase (decrease) by 1,000,000 shares in the number of shares offered by us would increase (decrease) the net proceeds from this offering by $ million, assuming the assumed initial public offering price remains the same, after deducting underwriting discounts and commissions.

We expect to use the net proceeds from this offering, as follows:

- Approximately $ million for sales and marketing activities to support ongoing commercialization of the iFuse Implant System, including, but not limited to, expansion of our sales force, additional medical affairs and educational efforts, and expanding our international sales presence; and
- The remainder, if any, for working capital and general corporate purposes, including research and development and clinical studies to bring new enhancements to the existing product offering.

We may also use a portion of our net proceeds to acquire or invest in complementary products, technologies, or businesses; however, we currently have no agreements or commitments to complete any such transactions.

As of the date of this prospectus, since we cannot specify with certainty all of the particular uses of the net proceeds, our management will have broad discretion over the use of the net proceeds from this offering. Pending the use of the proceeds from this offering, we intend to invest the net proceeds in short-term interest-bearing investment-grade securities, certificates of deposit or government securities.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock, and we do not currently intend to pay any cash dividends on our capital stock in the foreseeable future. In addition, our credit facilities with SVB and Oxford restrict our ability to pay dividends on our capital stock. We currently intend to retain all available funds and any future earnings to support operations and to finance the growth and development of our business. Any future determination to pay dividends will be made at the discretion of our board of directors subject to applicable laws, and will depend upon, among other factors, our results of operations, financial condition, contractual restrictions and capital requirements. Our future ability to pay cash dividends on our capital stock may also be limited by the terms of any future debt or preferred securities or future credit facility.

CAPITALIZATION

The following table sets forth our cash and cash equivalents and capitalization as of March 31, 2017:

- on an actual basis;
- on a pro forma basis to reflect:
  - the conversion of all outstanding shares of our preferred stock into an aggregate of 217,201,525 shares of common stock;
  - the issuance of shares of common stock upon the net exercise of outstanding warrants, with an exercise price of $0.51 per share, immediately prior to the closing of this offering, assuming an initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus;
  - the reclassification of our preferred stock warrant liability to additional paid-in capital immediately prior to the closing of this offering; and
  - the filing and effectiveness of our amended and restated certificate of incorporation upon the closing of this offering; and
- on a pro forma as adjusted basis to give further effect to the sale of shares of common stock in this offering assuming an initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

You should read this information together with our consolidated financial statements and related notes appearing elsewhere in this prospectus and the information set forth in "Selected Consolidated Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations."

	As of March 31, 2017		
	Actual	Pro Forma(1)	Pro Forma As Adjusted(1)
	(in thousands, except for share and per share amounts)		
Cash and cash equivalents	$ 28,732	$	$
Convertible preferred stock warrants liability	$ 681	$	$
Total borrowings(2)	29,389		
Convertible preferred stock, $0.0001 par value, 217,885,520 shares authorized, 213,689,844 shares issued and outstanding, actual; no shares issued and outstanding pro forma and pro forma as adjusted	118,548		
Stockholders' equity (deficit):			
Preferred stock, $0.0001 par value, no shares authorized, issued or outstanding, actual, 5,000,000 shares authorized, no shares issued or outstanding pro forma and pro forma as adjusted			
Common stock, $0.0001 par value, 348,000,000 shares authorized, 62,819,239 shares issued and outstanding, actual; 100,000,000 shares authorized, shares issued and outstanding pro forma; and 100,000,000 shares authorized, shares issued and outstanding pro forma as adjusted	7		
Additional paid-in capital	8,468		
Stockholders' notes receivable	(84)		
Accumulated other comprehensive income	477		
Accumulated deficit	(123,274)		
Total stockholders' equity (deficit)	(114,406)		
Total capitalization	$ 34,212	$	$

(1) Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) each of pro forma as adjusted cash and cash equivalents, additional paid-in capital, total stockholders' equity and total capitalization by $ million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. An increase (decrease) of 1,000,000 shares in the number of shares offered by us would increase (decrease) each of pro forma as adjusted cash and cash equivalents, additional paid-in-capital, total stockholders' equity and total capitalization by $ million, assuming that the assumed initial price to the public remains the same, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. The pro forma as adjusted information discussed above is illustrative only, and we will adjust this information based on the actual initial public offering price, number of shares offered and other terms of this offering determined at pricing.

(2) Total borrowings consist of $30.2 million of principal, net of discount.

The number of shares of common stock to be outstanding after this offering is based on shares of common stock outstanding as of March 31, 2017, and excludes the following:

- 55,294,071 shares of common stock issuable upon the exercise of options outstanding as of March 31, 2017, with a weighted-average exercise price of $0.23 per share;
- 4,141,369 shares of common stock, as converted, issuable upon the exercise of warrants outstanding as of March 31, 2017, with a weighted-average exercise price of $0.48 per share;
- 1,712,363 additional shares of our common stock reserved for future issuance under our 2008 Stock Plan, which shares will cease to be available for issuance at the time our 2017 Equity Incentive Plan becomes effective upon the execution of the underwriting agreement for this offering;
- 42,502,151 shares of our common stock reserved for future issuance under our 2017 Equity Incentive Plan, as well as any increases in the number of share of common stock reserved for future issuance under this plan, which will become effective upon the execution of the underwriting agreement for this offering; and
- 9,444,922 shares of our common stock reserved for future issuance under our 2017 Employee Stock Purchase Plan, as well as any increases in the number of share of common stock reserved for future issuance under this plan, which will become effective upon the execution of the underwriting agreement for this offering.

DILUTION

If you invest in our common stock in this offering, your ownership interest will be immediately diluted to the extent of the difference between the assumed initial public offering price per share and the pro forma as adjusted net tangible book value per share of our common stock after this offering.

Historical net tangible book value (deficit) per share represents our total tangible assets less our liabilities and preferred stock that is not included in equity divided by the total number of shares outstanding. As of March 31, 2017, our historical net tangible book value (deficit) was $(115.2) million, or $(1.83) per share.

Our pro forma net tangible book value as of March 31, 2017, was $ million, or $ per share after giving effect to (i) the conversion of all outstanding shares of our preferred stock into an aggregate of 217,201,525 shares of common stock; (ii) the issuance of shares of common stock upon the net exercise of outstanding warrants, with an exercise price of $0.51 per share, immediately prior to the closing of this offering, assuming an initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus; (iii) the reclassification of our preferred stock warrant liability to additional paid-in capital immediately prior to the closing of this offering.

After giving further effect to receipt of the net proceeds of our sale of shares of common stock, assuming an initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, after deducting underwriting discounts and commissions and estimated offering expenses, our pro forma as adjusted net tangible book value as of March 31, 2017, would have been approximately $ million, or $ per share. This represents an immediate increase in pro forma as adjusted net tangible book value of $ per share to our existing stockholders and an immediate dilution of $ per share to our existing stockholders and an immediately dilution of $ per share to investors purchasing common stock in this offering.

The following table illustrates this dilution to new investors on a per share basis:

Assumed initial public offering price per share		$
Historical net tangible book value (deficit) per share as of March 31, 2017	$(1.83)	
Pro forma increase in net tangible book value (deficit) per share attributable to the conversion of our preferred stock and preferred stock warrants		
Pro forma net tangible book value per share as of March 31, 2017		
Increase in net tangible book value per share attributable to new investors purchasing shares in this offering		
Pro forma as adjusted net tangible book value per share after this offering		
Dilution per share to new investors participating in this offering		$

If the underwriters' option to purchase additional shares in this offering is exercised in full, the pro forma as adjusted net tangible book value would be $ per share, the increase in the pro forma net tangible book value per share for existing stockholders would be $ per share and the dilution to new investors participating in this offering would be $ per share.

Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) the pro forma as adjusted net tangible book value, by $ per share and the dilution per share to new investors by $ per share, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

We may also increase or decrease the number of shares we are offering. An increase (decrease) of 1,000,000 shares in the number of shares we are offering would increase (decrease) our pro forma as adjusted net tangible book value by $ million, or $ per share, and the pro forma dilution per share to investors in this offering

by $ per share, assuming that the assumed initial public offering price remains the same, and after deducting underwriting discounts and commissions and estimated offering expenses. The pro forma information discussed above is illustrative only and will change based on the actual initial public offering price, number of shares and other terms of this offering determined at pricing.

The table below summarizes, as of March 31, 2017, on the pro forma basis described above, the number of shares of our common stock, the total consideration, and the average price per share (1) paid to us by our existing stockholders and (2) to be paid by new investors participating in this offering assuming an initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, before deducting underwriting discounts and commissions and estimated offering expenses payable by us.

	Shares Purchased		Total Consideration		Weighted-Average Price Per Share
	Number	Percent	Amount	Percent	
			(in thousands)		
Existing stockholders		%	$	%	$
New investors					
Total		100.0%	$	100.0%	

In addition, if the underwriters' option to purchase additional shares is exercised in full, the number of shares held by existing stockholders will be reduced to % of the total number of shares of common stock to be outstanding upon closing of this offering, and the number of shares of common stock held by new investors participating in this offering will be further increased to % of the total number of shares of common stock to be outstanding upon closing of the offering.

Each $1.00 increase (decrease) in the assumed initial public offering price of $ per share would increase (decrease) total consideration paid by new investors by $ million and increase (decrease) the percent of total consideration paid by new investors by %, assuming the number of shares we are offering, as set forth on the cover page of this prospectus, remains the same. We may also increase or decrease the number of shares we are offering. An increase (decrease) of 1,000,000 in the number of shares offered by us would increase (decrease) total consideration paid by new investors by $ million, assuming that the assumed initial price to the public remains the same.

The number of shares of common stock to be outstanding after the closing of this offering excludes:

- 55,294,071 shares of common stock issuable upon the exercise of options outstanding as of March 31, 2017, with a weighted-average exercise price of $0.23 per share;
- 4,141,369 shares of common stock, as converted, issuable upon the exercise of warrants outstanding as of March 31, 2017, with a weighted-average exercise price of $0.48 per share;
- 1,712,363 additional shares of our common stock reserved for future issuance under our 2008 Stock Plan, which shares will cease to be available for issuance at the time our 2017 Equity Incentive Plan becomes effective upon the execution of the underwriting agreement for this offering;
- 42,502,151 shares of our common stock reserved for future issuance under our 2017 Equity Incentive Plan, as well as any increases in the number of share of common stock reserved for future issuance under this plan, which will become effective upon the execution of the underwriting agreement for this offering; and
- 9,444,922 shares of our common stock reserved for future issuance under our 2017 Employee Stock Purchase Plan, as well as any increases in the number of share of common stock reserved for future issuance under this plan, which will become effective upon the execution of the underwriting agreement for this offering.

To the extent that any outstanding stock options or warrants are exercised, new options are issued under our stock-based compensation plans or we issue additional shares of common stock in the future, there will be further dilution to investors participating in this offering. If all outstanding options under our 2008 Stock Plan as of March 31, 2017 and all outstanding warrants as of March 31, 2017 were exercised for cash, then our existing stockholders, including the holders of these options and warrants, would own % and our new investors would own % of the total number of shares of our common stock outstanding upon the closing of this offering, respectively. In such event, the total consideration paid by our existing stockholders, including the holders of these options and warrants, would be $, or %, the total consideration paid by our new investors would be $, or %, the average price per share paid by our existing stockholders would be $ and the average price per share paid by our new investors would be $.

SELECTED CONSOLIDATED FINANCIAL DATA

The following selected consolidated financial data should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements and related notes included within this prospectus. The consolidated statements of operations data for the years ended December 31, 2015 and 2016, and the consolidated balance sheet data at December 31, 2015 and 2016, are derived from our audited consolidated financial statements and related notes included elsewhere in this prospectus. The consolidated statements of operations data for the three months ended March 31, 2016 and 2017, and the consolidated balance sheet data at March 31, 2017, are derived from our unaudited consolidated financial statements and related notes included elsewhere in this prospectus. Our historical results are not necessarily indicative of the results to be expected in the future and our results for the three months ended March 31, 2017 are not necessarily indicative of the results that may be expected for the full fiscal year.

	Year Ended December 31,		Three Months Ended March 31,	
	2015	2016	2016	2017
			(unaudited)	
	(in thousands, except per share data)			
Consolidated Statements of Operations Data:				
Revenue	$ 41,173	$ 42,101	$ 9,589	$ 11,426
Cost of goods sold	5,398	5,165	1,153	1,434
Gross profit	35,775	36,936	8,436	9,992
Operating expenses:				
Sales and marketing	39,799	35,215	8,854	10,273
Research and development	8,606	6,380	1,625	1,419
General and administrative	13,793	12,906	4,439	3,855
Total operating expenses	62,198	54,501	14,918	15,547
Loss from operations	(26,423)	(17,565)	(6,482)	(5,555)
Interest and other income (expense), net:				
Interest income	22	71	11	33
Interest expense	(1,686)	(3,308)	(817)	(945)
Other income (expense), net	(67)	213	647	(122)
Net loss	(28,154)	(20,589)	(6,641)	(6,589)
Other comprehensive income:				
Changes in foreign currency translation	247	67	(178)	5
Comprehensive loss	$ (27,907)	$ (20,522)	$ (6,819)	$ (6,584)
Net loss per common share, basic and diluted(1)	$ (0.51)	$ (0.35)	$ (0.11)	$ (0.11)
Weighted-average common shares used to compute basic and diluted net loss per common share(1)	55,292,845	59,659,307	58,782,930	61,735,139
Pro forma net loss per common share, basic and diluted (unaudited)(1)		$		$
Pro forma weighted-average number of common shares used to compute basic and diluted net loss per share(unaudited)(1)				

(1) See Note 14 to our consolidated financial statements included elsewhere in this prospectus for the method used to calculate net loss per common share, basic and diluted, and pro forma net loss per common share, basic and diluted.

	As of December 31,		As of March 31,
	2015	2016	2017
		(in thousands)	(unaudited)
Consolidated Balance Sheet Data:			
Cash and cash equivalents	$ 20,272	$ 27,900	$ 28,732
Working capital	23,089	22,938	23,899
Total assets	35,421	39,436	40,980
Convertible preferred stock warrant liability	957	588	681
Total borrowings	25,056	29,310	29,389
Total liabilities	32,822	35,048	36,838
Convertible preferred stock	92,796	113,121	118,548
Total stockholders' deficit	(90,197)	(108,733)	(114,406)

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with "Selected Consolidated Financial Data" and our consolidated financial statements and related notes included elsewhere in this prospectus. This discussion and other parts of this prospectus contain forward-looking statements that involve risks, uncertainties, and assumptions, such as our plans, objectives, expectations, intentions and beliefs. Our actual results could differ materially from those discussed in these forward-looking statements. Some of the numbers included herein have been rounded for convenience of presentation. Factors that could cause or contribute to such differences include, but are not limited to, those identified below and those discussed in "Risk Factors" included elsewhere in this prospectus.

Overview

We are a medical device company that has pioneered a proprietary minimally invasive surgical implant system to fuse the sacroiliac joint for treatment of common types of sacroiliac joint disorders that cause lower back pain. We introduced our iFuse Implant System, or iFuse, in 2009 in the United States and in 2010 in certain countries in the European Union. Since 2009, more than 25,000 iFuse Procedures have been performed by over 1,300 surgeons, primarily in the United States. Based on our commercial experience and our market research, we believe iFuse is currently used in approximately 70% of minimally invasive surgical fusions of the sacroiliac joint in the United States.

We have incurred net losses since our inception in 2008. During 2015 and 2016 and for the three months ended March 31, 2017 we had net losses of $28.2 million, $20.6 million, and $6.6 million, respectively. As of March 31, 2017, we had an accumulated deficit of $123.3 million. To date, we have financed our operations primarily through private placements of equity securities, certain debt-related financing arrangements and sales of our products. We have devoted substantially all of our resources to research and development of our products, sales and marketing activities and clinical and regulatory matters for our products. There can be no assurances that we will be able to generate sufficient revenue from our existing products or from any of our product candidates in development, and to transition to profitability and generate positive cash flows. Following this offering, we expect that our operating expenses will increase as we continue to build our commercial infrastructure, develop, enhance and commercialize our existing and new products and incur additional operational and reporting costs associated with being a public company. As a result, we expect to continue to incur operating losses for the foreseeable future and may never achieve profitability. Furthermore, even if we do achieve profitability, we may not be able to sustain or increase profitability on an ongoing basis. If we do not achieve profitability, it will be more difficult for us to finance our business, accomplish our strategic objectives and continue operations.

Factors Affecting Results of Operations

Coverage and Reimbursement

Prior to our launch of iFuse, Medicare and most private insurance companies reimbursed surgeons for sacroiliac joint fusions using either an established Category I Current Procedure Terminology, or CPT, code or an unlisted code. A Category I CPT code is typically assigned to procedures that are consistent with contemporary medical practice and are widely performed. Procedures with a longstanding Category I CPT code are usually reimbursed.

However, effective July 1, 2013, the AMA's CPT Editorial Panel created a new Category III CPT code for fusion of the sacroiliac joint using a minimally invasive or percutaneous approach. Category III CPT codes are used for new and emerging technologies and are reimbursed sporadically. This new code functionally redefined coding for sacroiliac joint fusions because it meant that minimally invasive or percutaneous fusion procedures

should not be billed using the general Category I CPT code for sacroiliac fusion surgery. This coding change was accompanied by the establishment of a Medicare hospital outpatient rate for the new code.

Following the creation of the new Category III CPT code, a number of papers demonstrating the clinical success of the iFuse Procedure were published. These studies, along with the support of several professional societies and surgeons, resulted in the AMA CPT Editorial Panel establishing a new Category I CPT code specifically for sacroiliac joint fusion surgery using a minimally invasive or percutaneous approach. This new Category I CPT code became effective on January 1, 2015.

Subsequently, in March 2015, our INSITE prospective, randomized controlled multi-center clinical trial was published. In June 2015, the largest spine society in the world, the North American Spine Society, or NASS, published a positive coverage recommendation document, based on the clinical evidence, advocating to insurance companies and Medicare Administrative Contractors, or MACs, that sacroiliac joint fusion using a minimally invasive surgical approach should be routinely reimbursed. In March 2015, International Society for Advancement of Spine Surgery, or ISASS also published a similar positive advocacy document intended to encourage insurance companies in the United States to reimburse for the procedure.

Coverage decisions for this code are made independently by each of the private insurance companies and the eight MACs, and the process of obtaining coverage is laborious. As of June 30, 2016, because of the iFuse clinical evidence, all eight MACs were covering the procedure. As of March 31, 2017, eight of the largest 50 private payors were covering the iFuse Procedure regularly while the vast majority of private payors were evaluating their coverage policies. In addition, because of the iFuse clinical evidence, the private payors HCSC, Geisinger and SelectHealth, have issued positive coverage policies for iFuse while specifically excluding coverage for any competitive products. Beginning in the fourth quarter of 2016, the increasing coverage, combined with our sales and marketing efforts, has led to an increase in the number of procedures and we believe will lead to a return to revenue growth.

Our Sales Force

We market and sell iFuse primarily through a direct sales force and a small number of third-party distributors. Our target customer base includes approximately 7,500 surgeons who perform spine and/or pelvic surgery, including orthopedic spine surgeons, neurosurgeons, general orthopedic surgeons, and orthopedic trauma surgeons.

Our direct sales organization in the United States is comprised of seven sales regions. Each region is comprised of a number of territory sales managers who act as the primary customer contact. Our territory sales managers have extensive training and experience selling medical devices for spine problems and pain management, generally focusing on emerging technologies and markets. As of March 31, 2017, our territory sales managers were led by seven regional sales managers who reported to our Senior Director of U.S. Sales. Our Senior Director of U.S. Sales reports to our Chief Commercial Officer. As of March 31, 2017, our U.S. sales force consisted of 48 sales representatives directly employed by us and 13 third-party distributors.

In addition to general sales and marketing training, we provide our sales organization with comprehensive, hands-on cadaveric and dry-lab training sessions focusing on the clinical benefits of our products and how to use them. We believe our robust training and professional development programs have been an important component of our success to date and will help support our anticipated future growth. We expect to continue to increase the size of our sales organization in order to increase sales and market penetration and to provide the significant, ongoing level of customer support required by our sales and marketing strategy.

As of March 31, 2017, we had 27 employees working in our European operations, and have established operations in Italy (2010), Germany (2014) and United Kingdom (2015). As of March 31, 2017, our international sales force consisted of 12 sales representatives directly employed by us and 28 exclusive third-party distributors, which together have had sales in 27 countries through March 31, 2017. We anticipate continuing to build our

operations in the major European countries while establishing distributor arrangements in smaller ones. We intend to follow a similar model in Europe to the one established in the United States, working with internationally recognized healthcare professional experts as we expand our training and reimbursement activities. As of the date of this prospectus, surgeons had performed the first iFuse Procedures in New Zealand, Hong Kong, Australia and Taiwan.

We have in the past and expect in the future to enter into different compensation arrangements with our sales professionals which include minimum guaranteed commissions. This has impacted our compensation expenses in the past and we expect it will in the future.

Share-Based Compensation Expense

Prior to this offering, we have granted employee compensation in the form of equity awards. In connection with this offering, we expect to implement equity compensation incentive plans which provide for future grants of equity compensation awards to our employees and directors. We will measure the share compensation cost in the period in which we grant such awards and recognize the share compensation expense over the requisite service period of the award.

Public Company Costs

The activities associated with the initial public offering process, as well as any future public offerings, may have a significant impact on our results of operations and cash flows. We expect to incur a material increase in incremental general and administrative expenses as a result of becoming a publicly traded company. These costs include expenses associated with our financial and operational reporting, investor relations, registrar and transfer agent fees, incremental insurance costs, and accounting and legal services, among others.

Components of Results of Operations

Revenue

We derive substantially all our revenue from sales of iFuse. Revenue from sales of iFuse fluctuate based on volume of cases (procedures performed), discounts, mix of international and U.S. sales, and the number of implants used for a particular patient. Similar to other orthopedic companies, our revenue can also fluctuate from quarter to quarter due to a variety of factors, including reimbursement, sales force, physician awareness, and seasonality. Our revenue from international sales may also be significantly impacted by fluctuations in foreign currency exchange rates between the U.S. dollar (our reporting currency) and the local currency.

Cost of Goods Sold, Gross Profit, and Gross Margin

We utilize third-party manufacturers for production of the iFuse Implants and instrument sets. Cost of goods sold consists primarily of costs of the components of iFuse Implants and instruments, scrap and inventory obsolescence, as well as distribution-related expenses such as logistics and shipping costs. Beginning in 2013, our cost of goods sold included the effect of the excise tax on the sale of medical devices sold in the United States. Effective January 2016, the Patient Protection and Affordable Care Act was amended to include a provision to suspend the sales tax on medical devices through 2017. We anticipate that our cost of goods sold will increase as reimbursement increases and as we develop and sell new products, including our next generation iFuse implant, the iFuse-3D, and new instruments.

Our gross margins have been and will continue to be affected by a variety of factors, including the cost to have our products manufactured for us, pricing pressure, and the factors described above impacting our revenue. Our gross margins are typically higher on products we sell directly as compared to products we sell through third-party distributors.

Operating Expenses

Our operating expenses consist of sales and marketing, research and development, and general and administrative expenses. Personnel costs are the most significant component of operating expenses and consist of salaries, sales commissions and other cash and stock-based compensation related expenses. We expect operating expenses to increase in absolute dollars, as we continue to invest and grow our business, but decrease as a percentage of revenue. In late 2015, we implemented cost-saving measures which reduced our operational expenses though headcount reductions, reduced project spending, and more targeted marketing and surgeon trainings.

Sales and Marketing Expenses

Sales and marketing expenses primarily consist of salaries, stock-based compensation expense, and other compensation related costs, for personnel employed in sales, marketing, medical affairs and professional education departments. In addition, our sales and marketing expenses include commissions and bonuses, generally based on a percentage of sales, to our sales managers and directors, direct sales representatives and third-party distributors. We expect our sales and marketing expenses to increase in absolute dollars with the continued commercialization of our current and future products and continued investment in our global sales organization, including broadening our relationships with third-party distributors, expanding exclusivity commitments among them and increasing the number of our direct sales representatives, especially with increased reimbursement and adoption in the United States. Our sales and marketing expenses may fluctuate from period to period due to the seasonality of our business and as we continue to add direct sales representatives in new territories.

Research and Development Expenses

Our research and development expenses primarily consist of engineering, product development, clinical and regulatory expenses (including clinical study expenses), and consulting services, outside prototyping services, outside research activities, materials, depreciation and other costs associated with development of our products. Research and development expenses also include related personnel and consultants' compensation and stock-based compensation expense. We expense research and development costs as they are incurred. We expect research and development expense to increase in absolute dollars as we develop new products, add research and development personnel and undergo clinical activities, including more clinical studies to gain additional regulatory clearances and wider surgeon adoption.

General and Administrative Expenses

General and administrative expenses primarily consist of compensation, stock-based compensation expense, and other costs for finance, accounting, legal, compliance, reimbursement, and administrative matters. We expect our general and administrative expenses to increase to support the growth of our business. We also expect to incur additional general and administrative expenses as a result of operating as a public company, including expenses related to compliance with the rules and regulations of the Securities and Exchange Commission and those of the Nasdaq Global Market on which our securities will be traded, additional insurance expenses, investor relations activities, and other administrative and professional services. We expect the general and administrative expenses to increase as we continue to incur incremental costs for public company reporting and governance, but decrease as a percentage of revenue over time.

Interest Expense

Interest expense is related to borrowings and includes the amortization of debt discounts derived from the issuance of warrants.

Other Income (Expense), Net

Other income (expense), net consists primarily of the changes in fair value of our preferred stock warrant liability and net gain (loss) on foreign currency transactions. In connection with this initial public offering, we expect that our preferred stock warrant liability will be eliminated.

Comparison of the Three Months Ended March 31, 2016 and 2017

Revenue, Cost of Goods Sold, Gross Profit, and Gross Margin

	Three Months Ended March 31,			
	2016	2017	$ Change	% Change
	(in thousands, except for percentages)			
Revenue	$ 9,589	$ 11,426	$ 1,837	19%
Cost of goods sold	1,153	1,434	281	24%
Gross profit	8,436	9,992	1,556	18%
Gross margin	88%	87%		

Revenue. Revenue increased by $1.8 million, or 19%, for the three months ended March 31, 2017 compared to the three months ended March 31, 2016. The majority of the increase is due to a higher number of domestic cases as a result of improved U.S. reimbursement coverage, as well as a higher number of international cases as a result of an expanded international direct sales force.

Cost of Goods Sold, Gross Profit, and Gross Margin. Total cost of goods sold increased $0.3 million, or 24%, from the three months ended March 31, 2016 to the three months ended March 31, 2017, which corresponds to the increase in the number of cases performed. Gross profit increased $1.6 million, or 18%, to $10.0 million, from the three months ended March 31, 2016 to the three months ended March 31, 2017, due to higher revenue.

Operating Expenses

	Three Months Ended March 31,					
	2016		2017			
	Amount	% of Total Revenue	Amount	% of Total Revenue	$ Change	% Change
	(in thousands, except for percentages)					
Sales and marketing	$ 8,854	92%	$10,273	90%	$ 1,419	16%
Research and development	1,625	17%	1,419	12%	(206)	(13)%
General and administrative	4,439	46%	3,855	34%	(584)	(13)%
Total operating expenses	$14,918	155%	$15,547	136%	$ 629	

Sales and Marketing Expenses. Sales and marketing expenses increased by $1.4 million, or 16%, for the three months ended March 31, 2017, compared to the three months ended March 31, 2016. The increase was primarily due to $0.8 million in increased salaries, commissions, and related expenses due to an increase in the number of sales representatives hired in late 2016 and first quarter of 2017 to support the growth of our business. The remainder of the increase is due to $0.3 million in increased marketing professional services and $0.2 million in higher travel expenses for employees and surgeon training programs.

Research and Development Expenses. Research and development expenses decreased by $0.2 million, or 13%, for the three months ended March 31, 2017, compared to the three months ended March 31, 2016. The decrease was primarily due to a $0.1 million reduction in clinical spending related to the substantial completion of the INSITE, SIFI and iMIA studies in the first quarter of 2016 and $0.1 million reduction in project spending such as consulting and materials from lower engineering project spending in the first quarter of 2017 as compared to the same period of the prior year.

General and Administrative Expenses. General and administrative expenses decreased by $0.6 million, or 13%, for the three months ended March 31, 2017, compared to the three months ended March 31, 2016. The decrease was primarily due to $1.5 million of professional public offering fees expensed in the first quarter of 2016 as a result of delays in the public offering process. The decrease was partially offset by a $0.5 million write-off of principal and interest due on a promissory note from our Chief Executive Officer. In addition, we incurred $0.4 million of higher legal cost related to patent matters and general corporate legal spend during the first quarter of 2017 compared to the same period in the prior year.

Interest and Other Income (Expense), Net

	Three Months Ended March 31,			
	2016	2017	$ Change	% Change
	(in thousands, except for percentages)			
Interest expense	$ (817)	$ (945)	$ (128)	16%
Other income (expense), net	658	(89)	(747)	(114)%

Interest Expense. Interest expense increased by $0.1 million, or 16%, for the three months ended March 31, 2017, compared to the three months ended March 31, 2016, primarily due to a $4.0 million increase in our level of borrowings in December 2016. In addition, the variable interest rate of our outstanding debt increased due to the Fed raising the prime interest rate in December 2016.

Other Income (Expense), Net. Other income (expense), net, decreased by $0.7 million for the three months ended March 31, 2017, compared to the three months ended March 31, 2016. The decrease was primarily due to a $0.6 million change in the fair value of our preferred stock warrants outstanding, which are accounted for as a liability and revalued at each reporting period and $0.1 million of foreign exchange losses based on movement in the British Pound and Euro during the first quarter of 2016 compared to the same period of 2017.

Comparison of the Years Ended December 31, 2015 and 2016

Revenue, Cost of Goods Sold, Gross Profit, and Gross Margin

	Year Ended December 31,			
	2015	2016	$ Change	% Change
	(in thousands, except for percentages)			
Revenue	$ 41,173	$ 42,101	$ 928	2%
Cost of goods sold	5,398	5,165	(233)	(4)%
Gross profit	35,775	36,936	1,161	3%
Gross margin	87%	88%		

Revenue. Revenue increased $0.9 million, or 2%, from 2015 to 2016. The increase of $0.6 million was primarily due to higher international revenue as a result of an expanded international direct sales force. The remaining increase of $0.3 million was due to improved U.S. reimbursement coverage, which resulted in a modest increase in the number of iFuse Procedures performed domestically.

Cost of Goods Sold, Gross Profit, and Gross Margin. Total cost of goods sold decreased $0.2 million, or 4%, from 2015 to 2016. The decrease was primarily due to $0.7 million in reduced medical device tax as a result of a 2-year tax moratorium effective January 1, 2016 and a $0.3 million decrease in excess write-offs of surgical tools incurred in 2015. These decreases were offset primarily by an increase of $0.8 million in product costs as a result of a higher overhead component to our implants. Gross profit increased $1.2 million, or 3%, to $36.9 million from 2015 to 2016 due to higher revenue and lower cost of sales.

Operating Expenses

	Year Ended December 31,					
	2015		2016			
	Amount	% of Total Revenue	Amount	% of Total Revenue	$ Change	% Change
	(in thousands, except for percentages)					
Sales and marketing	$39,799	97%	$35,215	84%	$(4,584)	(12)%
Research and development	8,606	21%	6,380	15%	(2,226)	(26)%
General and administrative	13,793	34%	12,906	31%	(887)	(6)%
Total operating expenses	$62,198	152%	$54,501	130%	$(7,697)	

Sales and Marketing Expenses. Sales and marketing expenses decreased $4.6 million, or 12%, from 2015 to 2016. The decrease was primarily due to $2.9 million in reduced salaries, guaranteed minimum commissions, and related expenses from lower domestic headcount, $0.7 million in reduced surgeon training costs, $0.5 million in lower travel expenses for employees and surgeon training programs, and $0.5 million in reduced general marketing expenses. The reductions were part of cost-saving measures put in place in late 2015 with a goal of focusing resources on high potential sales and marketing opportunities.

Research and Development Expenses. Research and development expenses decreased $2.2 million, or 26%, from 2015 to 2016. The decrease was partially due to a $0.9 million reduction in clinical trial expense as the INSITE and SIFI studies matured. The decrease was also due to $0.6 million in reduced consulting and materials from lower engineering project spending and a $0.6 million reduction in salaries and related expenditures, including travel, from lower headcount; both part of the cost-saving measures put in place in late 2015 to focus on key research and development activities that would drive the business in the near term.

General and Administrative Expenses. General and administrative expenses decreased by $0.9 million, or 6%, from 2015 to 2016. The decrease was partially due to a $1.3 million reduction in legal fees of which $0.7 million was for general legal matters and $0.6 million was for compliance work and investigatory work performed in 2015 related to a legal claim. In addition, the decrease was partially due to a $0.6 million reduction in external professional fees related to reimbursement related activities and a $0.4 million reduction in compliance and regulatory fees incurred in 2015 in efforts to prepare for an offering. These decreases were offset primarily by an increase of $1.5 million in professional public offering fees previously recorded on the Balance Sheet, recognized in 2016 as a result of delays in the public offering process.

Interest and Other Income (Expense), Net

	Years Ended December 31,			
	2015	2016	$ Change	% Change
	(in thousands except for percentages)			
Interest expense	$ (1,686)	(3,308)	$(1,622)	96%
Other income (expense), net	(45)	284	329	(731)%

Interest Expense. Interest expense increased $1.6 million, or 96%, from 2015 to 2016 primarily due to an additional debt financing arrangement with Silicon Valley Bank, or SVB, and Oxford Finance LLC, or Oxford, that we entered into in late October 2015.

Other Income (Expense), Net. Other income (expense) increased $0.3 million, from 2015 to 2016, primarily due a gain of $0.4 million related to the change in the fair value of our preferred stock warrants outstanding, which are accounted for as a liability and revalued at each reporting period. The gain was offset by $0.1 million of foreign exchange losses based on movement in the British Pound and Euro.

Liquidity, Capital Resources, and Borrowings

At March 31, 2017, our principal sources of liquidity were cash and cash equivalents of $28.7 million, unused borrowing capacity under our line of credit of the lesser of $4.0 million and 80% of the amount of certain customer accounts receivable, and $5.0 million of unused borrowing capacity under our Term Loan which is contingent upon achievement of certain conditions. Since inception, we have financed our operations through private placements of preferred stock, debt financing arrangements, and the sale of our products. At March 31, 2017, we had $29.4 million principal amount of outstanding debt under our Term Loan, net of debt discounts. Our Term Loan and Line of Credit are described below under “Borrowings.”

We have incurred an accumulated deficit of $123.3 million from our operations through March 31, 2017, and expect to incur additional losses in the future. Our recurring losses from operations and negative cash flows raise substantial doubt about our ability to continue as a going concern. As a result, an explanatory paragraph was included in the report on our financial statements as of, and for the year ended, December 31, 2016, describing the existence of substantial doubt about our ability to continue as a going concern. We believe that our cash and cash equivalents as of March 31, 2017, together with the expected net proceeds from this offering, cash generated from sales and funds available under our borrowing arrangements will be sufficient to meet our anticipated cash requirements for at least the next 12 months following this offering. We will need to generate significant sales to achieve profitability and we might not be able to do so. Our expected future capital requirements may depend on many factors including expanding our surgeon base, the expansion of our salesforce, and the timing and extent of spending on the development of our technology to increase our product offerings. We may seek funds through borrowings or through additional rounds of financing, including private or public equity or debt offerings. Any future debt financing or additional equity that we raise may contain terms that are not favorable to us or our stockholders. Furthermore, we cannot be certain that additional funding will be available on acceptable terms, if at all. If we are unable to raise additional capital or generate sufficient cash from operations to adequately fund our operations, we will need to curtail planned activities to reduce costs, which will likely harm our ability to execute on our business plan and continue operations.

Borrowings

In October 2015, we entered into a term loan facility and a revolving line of credit with SVB and Oxford, for (i) $35.2 million and (ii) the lesser of $4.0 million and 80% of the amount of certain customer accounts receivable, respectively. The first tranche of the term loan closed in October 2015 for $16.2 million, the proceeds of which were used to pay off previous loans with SVB of $15.5 million and final fees of $0.7 million related to the previous loans. Prepayment fees on the then existing debt facilities were waived. We drew the second tranche of $10.0 million in November 2015 and the third tranche of $4.0 million in December 2016. The agreement also provides for a fourth tranche of $5.0 million available through March 2017 contingent upon us achieving at least $24.0 million in trailing six-month revenue. The maturity date of the Term Loan is December 1, 2019, and it carries an interest rate equal to the greater of 11% or the WSJ Prime rate plus 7.75%. In connection with this agreement, we also issued to SVB and Oxford warrants to purchase, in the aggregate, 1,145,231 shares of our Series 6 preferred stock, with an exercise price of $0.92 per share. Subsequently, in August 2016, we amended the agreement to extend the draw period of the fourth tranche for an additional three months. In conjunction with the additional draw of the Term Loan, we issued an additional 174,844 shares warrants for the purchase of Series

7 preferred stock at an exercise price of $0.56 per share in December 2016. In February 2017, we amended the agreement to extend the interest only period by six months to October 2017 and extended the draw period of the fourth tranche through January 2018. As of the date of this prospectus, our total debt balance is $30.2 million.

As of December 31, 2016 and March 31, 2017, the amount of the revolving line of credit was the lesser of $4.0 million or 80% of the amount of certain customer accounts receivable. It carries an interest rate equal to the WSJ Prime rate plus 3% with a maturity of December 1, 2019. No draws have been made on this facility as of December 31, 2016 or March 31, 2017.

All debt facilities continue to be collateralized by all of our assets except intellectual property. We agreed not to pledge a security interest in our intellectual property to any other party so long as SVB and Oxford has debt outstanding from us.

As of March 31, 2017, we were in compliance with all of our debt obligations and covenants.

Contractual Obligations

The following table summarizes our contractual obligations as of December 31, 2016:

	Payments Due By Period				
	Total	Less than 1 year	1-3 years	4-5 years	More than 5 years
			(in thousands)		
Principal obligations on the debt arrangements[1]	$30,200	$ 3,356	$26,844	$ —	$ —
Interest obligations on the debt arrangements[1]	6,836	3,507	3,329	—	—
Operating leases[2]	2,111	1,248	751	80	32
Total	$39,147	$ 8,111	$30,924	$ 80	$ 32

(1) Principal obligations on the debt arrangements reflect the amendment to the debt arrangements in February 2017 and the increase in the prime interest rate in March 2017. For further discussion, see Note 6, “Borrowings” of the Notes to the Consolidated Financial Statements.

(2) Operating lease obligations consist primarily of lease payments for our San Jose, California facility and Europe facilities.

Cash Flows

The following table sets forth the primary sources and uses of cash for each of the periods presented below:

	Years Ended December 31,			
	2015	2016	$ Change	% Change
	(in thousands, except for percentages)			
Net cash (used in) provided by:				
Operating activities	$(26,718)	$(16,753)	$ 9,965	(37)%
Investing activities	(2,238)	(441)	1,797	(80)%
Financing activities	31,383	24,755	(6,628)	(21)%
Effects of exchange rate changes on cash and cash equivalents	247	67	(180)	(73)%
Net increase in cash and cash equivalents	$ 2,674	$ 7,628	$ 4,954	

	Three Months Ended March 31,			
	2016	2017	$ Change	% Change
	(in thousands, except for percentages)			
Net cash (used in) provided by:				
Operating activities	$(5,224)	$(4,665)	$ 559	(11)%
Investing activities	(58)	(40)	18	(31)%
Financing activities	176	5,532	5,356	3043%
Effects of exchange rate changes on cash and cash equivalents	(178)	5	183	(103)%
Net increase in cash and cash equivalents	$(5,284)	$ 832	$ 6,116	

Cash Used in Operating Activities

Net cash used in operating activities improved $0.6 million from the three months ended March 31, 2016 to the three months ended March 31, 2017. The improvement in the net cash used in operating activities was primarily due to the timing of vendor payments and higher accounts payable levels resulting in lower cash usage for the period.

Net cash used in operating activities improved $10.0 million, or 37%, from 2015 to 2016. The improvement in the net cash used in operating activities was primarily due to cost savings efforts, reduced inventory levels, and timing of vendor payments.

Cash Used in Investing Activities

Net cash used in investing activities was relatively constant from the three months ended March 31, 2016 to the three months ended March 31, 2017 and primarily consisted of instrument set purchases. The instrument sets are carried by our sales representatives and used during iFuse procedures.

Net cash used in investing activities improved $1.8 million, or 80%, from 2015 to 2016. The improvement in net cash used in investing activities was primarily due to a reduction in instrument set purchases.

Cash Provided by Financing Activities

Cash provided by financing activities increased $5.4 million from the three months ended March 31, 2016 to the three months ended March 31, 2017. Cash provided by financing activities for the three months ended March 31, 2017 consisted primarily of net proceeds of $5.4 million from the issuance of Series 7 preferred stock from February through March 2017. Cash provided by financing activities for the three months ended March 31, 2016 consisted primarily of proceeds of $0.1 million from the exercise of common stock options.

Cash provided by financing activities declined $6.6 million, or 21%, from 2015 to 2016. Cash provided by financing activities during 2016 consisted of net proceeds of $20.3 million from the issuance of Series 7 preferred stock from June through August 2016, proceeds from additional debt financing of $4.0 million in December 2016 and $0.3 million from the exercise of common stock options. Cash provided by financing activities during 2015 consisted of net proceeds of $21.6 million from the issuance of Series 6 preferred stock from April through June 2015, proceeds from debt financing of $10.0 million in November 2015, and $0.8 million from the exercise of common stock options, partially offset by payments of $1.1 million related to the preparation of a public offering.

Critical Accounting Policies, Significant Judgments, and Use of Estimates

This discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with U.S. GAAP. The preparation of these

consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the consolidated financial statements, as well as the reported revenue generated and expenses incurred during the reporting periods. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates. We believe that the accounting policies discussed below are critical to understanding our historical and future performance, as these policies relate to the more significant areas involving management's judgments and estimates. For more detail on our critical accounting policies, see Note 2 to our consolidated financial statements appearing elsewhere in this prospectus.

Revenue Recognition

Our revenue is derived from the sale of our products to medical groups and hospitals through our direct sales force and distributors throughout the United States and Europe.

We recognize revenue when persuasive evidence of an arrangement exists, title and risk of loss has transferred to the customer, the sales price is fixed or determinable, and collectability is reasonably assured. For the majority of product sales where our sales representative delivers the product at the point of implantation at hospitals or other medical facilities, we recognize revenue related to product sales upon delivery of the product and receipt of a purchase agreement or agreement on pricing terms with the customer. For the remaining sales to distributors, where the product is ordered in advance of implantation and a valid purchase order has been received, we recognize revenue upon the delivery of product and when all other revenue recognition criteria are met.

Stock-based Compensation

Stock-based compensation cost is measured at the date of grant based on the estimated fair value of the award, net of estimated forfeitures. We estimate the grant date fair value and the resulting stock-based compensation expense using the Black Scholes option pricing model. The grant date fair value of a stock-based award is recognized as an expense over the requisite service period of the award on a straight-line basis.

We account for stock-based compensation arrangements with non-employees using a fair value approach. The fair value of these options is measured using the Black-Scholes option pricing model reflecting an expected life that is assumed to be the remaining contractual life of the option. The compensation costs of these arrangements are subject to remeasurement over the vesting terms as earned. In July 2016, we modified the terms of 10,365,515 vested and unvested stock option awards by reducing their exercise price to the fair value of our common stock on the date of modification which resulted in an incremental value of $0.4 million being allocated to the options.

We recorded total non-cash stock-based compensation expense of $1.2 million and $1.4 million during 2015 and 2016, respectively. At December 31, 2016, we had $2.9 million of total unrecognized employee stock-based compensation expense, net of estimated forfeitures, related to stock option grants. This amount will be recognized as expense over a weighted-average period of 2.5 years. We expect to continue to grant stock options in the future, and, to the extent that we do, our actual stock-based compensation expense recognized in future periods will likely increase. The stock-based compensation expense that we recognized in 2016 increased, and the stock-based compensation expense that we recognized in the first quarter of 2017 and will recognize in each quarter thereafter through 2019 will increase, as a result of our determination to calculate that expense based on deemed fair values of our common stock that are higher than the exercise prices of certain stock options granted prior to this offering.

The intrinsic value of all outstanding options as of the date of this prospectus was approximately million based on the assumed initial public offering price of $ per share, which is the midpoint of the price

range set forth on the cover page of this prospectus, of which approximately $ million related to vested options and approximately $ million related to unvested options.

Determining Fair Value of Stock Options

We determine the fair value of each grant of stock options using the estimated fair value of our common stock and the assumptions set forth below. Each of these inputs is subjective and generally requires significant judgment.

The fair value of employee stock options was estimated using the following assumptions:

	Years Ended December 31,		Three Months Ended March 31,	
	2015	2016	2016	2017
Expected term	6.25	6.25	6.25	6.25
Expected volatility	45%-50%	44%-54%	47%	53-55%
Risk-free interest rate	1.54%-1.88%	1.14%-2.19%	1.40%	1.99-2.28%
Dividend yield	0%	0%	0%	0%

Our board of directors intends all options granted to be exercisable at a price per share not less than the per share fair value of our common stock underlying those options on the date of grant. The estimated fair value of our common stock was determined at each valuation date in accordance with the guidelines outlined in the *American Institute of Certified Public Accountants Practice Aid, Valuation of Privately-Held-Company Equity Securities Issued as Compensation*. Our board of directors, with the assistance of management, developed these valuations using significant judgment and taking into account numerous factors, including developments at our company, market conditions and contemporaneous independent third-party valuations using the Market Approach. The enterprise values derived from the approaches discussed above were then allocated to each of our classes of stock using the Option Pricing Method, or OPM, the Probability Weighted Expected Return Method, or PWERM, or the Hybrid Method. The allocation of these enterprise values to each part of our capital structure, including our common stock, was done based on the OPM and the Common Stock Equivalent method for the initial public offering scenarios. OPM treats the rights of the holders of preferred and common shares as equivalent to call options on any value of the enterprise above certain break points of value based upon the liquidation preferences of the holders of preferred shares, as well as their rights to participation and conversion. Thus, the estimated value of the common stock can be determined by estimating the value of its portion of each of these call option rights. The OPM backsolve method derives the implied enterprise value of a company from a recent transaction involving the company's own securities issued on an arms-length basis. Under the PWERM the value is estimated based upon analysis of future values for the enterprise under varying scenarios, probabilities are ascribed to these scenarios based on expected future outcomes. Following the closing of this offering, the fair value of our common stock will be determined based on the closing price of our common stock on the Nasdaq Global Market.

Preferred Stock Warrant Liability

We have issued freestanding warrants to purchase shares of common and preferred stock in connection with the issuance of various debt facilities and debt instruments. We account for these warrants as a liability in our financial statements because the underlying instrument into which the warrants are exercisable contains deemed liquidation provisions that are outside our control.

The warrants were recorded at fair value using the Black-Scholes option pricing model. The warrants are re- measured at each financial reporting period with any changes in fair value being recognized as a component of other income (expense), net in the statements of operations. We will continue to adjust the liability for changes in fair value until the earlier of (i) exercise or expiration of the warrants, or (ii) the closing of an initial public offering, at which time certain preferred stock warrants will be converted into warrants to purchase common stock and the liability will be reclassified to additional paid-in capital, if they qualify for equity classification.

Common Stock Warrants

We account for warrants for shares of common stock as equity in accordance with the accounting guidance for derivatives. The accounting guidance provides a scope exception from classifying and measuring as a financial liability a contract that would otherwise meet the definition of a derivative if the contract is both (i) indexed to the entity's own stock and (ii) classified in the stockholders' deficit section of the balance sheet. We determined that the warrants for shares of common stock issued in connection with the debt arrangements are required to be classified in equity. We estimate the fair value of our warrants for shares of common stock by using the Black-Scholes option pricing model. Warrants classified as equity are recorded as additional paid-in capital on the consolidated balance sheet and no further adjustments to their valuation are made.

Income Taxes

We account for income taxes under the liability method, whereby deferred tax assets and liabilities are determined based on the difference between the financial statement and tax bases of assets and liabilities using the enacted tax rates in effect for the year in which the differences are expected to affect taxable income. We assess the likelihood that the resulting deferred tax assets will be realized. A valuation allowance is provided when it is more likely than not that some portion or all of a deferred tax asset will not be realized.

As of December 31, 2016, we had net operating loss carryforwards of approximately $105.0 million and $83.7 million available to reduce future taxable income, if any, for federal and state income tax purposes, respectively. If not utilized, our federal and state net operating loss carryforwards begin to expire in 2029 and 2017, respectively, and valuation allowances have been established, where necessary. We also have research credit carryforwards of approximately $1.7 million and $1.5 million available to reduce future taxable income, if any, for both federal and California state income tax purposes, respectively. The federal credits begin to expire in 2030, and the California credits have no expiration date. Realization of these net operating loss and research credit carryforwards could expire unused and be unavailable to reduce future income tax liabilities, which could materially and adversely affect our results of operations.

We did not record a provision or benefit for income taxes during the three months ended March 31, 2016 or 2017. We continue to maintain a full valuation allowance against our net deferred tax assets.

We assess all material positions taken in any income tax return, including all significant uncertain positions, in all tax years that are still subject to assessment or challenge by relevant taxing authorities. Assessing an uncertain tax position begins with the initial determination of the positions sustainability and is measured at the largest amount of benefit that is greater than fifty percent likely of being realized upon ultimate settlement. As of each balance sheet date, unresolved uncertain tax positions must be reassessed, and we will determine whether (i) the factors underlying the sustainability assertion have changed and (ii) the amount of the recognized tax benefit is still appropriate. The recognition and measurement of tax benefits requires significant judgment. Judgments concerning the recognition and measurement of a tax benefit may change as new information becomes available.

The Tax Reform Act of 1986 limits the use of net operating loss and tax credit carryforwards in certain situations where changes occur in the stock ownership of a company. We have determined that we have experienced Section 382 ownership changes in 2010 and $1.4 million of our NOL carryforwards are subject to limitation.

Off-Balance Sheet Arrangements

During 2015 and 2016 and for the three months ended March 31, 2017, we did not have any relationships with unconsolidated organizations or financial partnerships, such as structured finance or special purpose entities that would have been established for the purpose of facilitating off-balance sheet arrangements or other contractually narrow or limited purposes.

Seasonality

Our business is affected by seasonal variations. For instance, we have historically experienced lower sales in the summer months and higher sales in the last quarter of the fiscal year. However, taken as a whole, seasonality does not have a material impact on our financial results.

Inflation

We believe that inflation has not had a material impact on our consolidated statements of operations for 2015 and 2016 and for the three months ended March 31, 2017. However, there can be no assurance that future inflation will not have an adverse impact on our consolidated results of operations or financial conditions.

JOBS Act Accounting Election

In April 2012, the Jumpstart Our Business Startups Act of 2012, or JOBS Act, was enacted. Section 107(b) of the JOBS Act provides that an "emerging growth company" can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act for complying with new or revised accounting standards. Thus, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have irrevocably elected not to avail ourselves of this extended transition period, and, as a result, we will adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies.

We are in the process of evaluating the benefits of relying on other exemptions and reduced reporting requirements under the JOBS Act. Subject to certain conditions, as an emerging growth company, we may rely on certain of these exemptions, including without limitation, (i) not being required to provide an auditor's attestation report on our system of internal controls over financial reporting pursuant to Section 404(b) of the Sarbanes-Oxley Act and (ii) not being required to comply with any requirement that may be adopted by the PCAOB regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements, known as the auditor discussion and analysis. We will remain an emerging growth company until the earlier of (a) the last day of the fiscal year in which we have total annual gross revenue of $1.0 billion or more; (b) the last day of the fiscal year following the fifth anniversary of the date of the closing of this offering; (c) the date on which we have issued more than $1.0 billion in nonconvertible debt during the previous six years; or (d) the date on which we are deemed to be a large accelerated filer under the rules of the U.S. Securities and Exchange Commission, or SEC.

Quantitative and Qualitative Disclosures about Market Risk

Interest Rate Risk

We are exposed to interest rate risks related to our cash, cash equivalents and borrowings. We had cash and cash equivalents of $27.9 million and $28.7 million as of December 31, 2016 and March 31, 2017, respectively, which consist of bank deposits. Our cash balance consisted of bank deposits and money market funds in 2015 and bank deposits in 2016. Such interest-earning instruments carry a degree of interest rate risk; however, historical fluctuations in interest income have not been significant.

We had outstanding debt of $30.2 million as of December 31, 2016 and March 31, 2017, with interest rates ranging from 11% to 11.75%. As of the date of this prospectus, we have outstanding debt of $30.2 million and we are exposed to interest rate risk in connection with any future borrowings with SVB and Oxford under our term loan, which carries an interest rate equal to the greater of 11% or the WSJ Prime rate plus 7.75%, and our revolving line of credit, which carries an interest rate equal to the WSJ Prime rate plus 3%. For variable rate debt, interest rate changes generally do not affect the fair value of the debt instrument, but do impact future earnings and cash flows, assuming other factors are held constant. In the ordinary course of business, we may enter into contractual arrangements to reduce our exposure to interest rate risks. We do not believe that a 10% change in interest rates would have a significant impact on our consolidated financial statements.

Foreign Currency Exchange Risk

We operate in countries other than the United States, and, therefore, we are exposed to foreign currency risks. Revenue from sales outside of the United States represents approximately 8% of our total revenue. We bill most direct sales outside of the United States in local currencies, which are mostly comprised of the Euro and the British Pound. Operating expenses related to these sales are largely denominated in the same respective currency, thereby limiting our transaction risk exposure. We therefore believe that the risk of a significant impact on our operating income from foreign currency fluctuations is not significant. We do not believe that a 10% change in foreign currency exchange rates would have a significant impact on our net income. We do not currently hedge our exposure to foreign currency exchange rate fluctuations; however, we may choose to hedge our exposure in the future.

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board, or FASB, issued Accounting Standards Update, or ASU, 2014-09, *Revenue from Contracts with Customers*, which required an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. ASU 2014-09 will replace most existing revenue recognition guidance in U.S. GAAP when it becomes effective. The new standard is effective January 1, 2018 for public companies. Early application is permitted as of January 1, 2017. The standard permits the use of either the retrospective or cumulative effect transition method. In March 2016, the FASB issued ASU 2016-08, Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations (Reporting Revenue Gross versus Net), which clarifies the implementation guidance on principal versus agent considerations in ASU 2014-09. In April 2016, the FASB issued ASU 2016-10, Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing, which clarifies certain aspects of identifying performance obligations and licensing implementation guidance. In May 2016, the FASB issued ASU 2016-12, Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients, which relates to disclosures of remaining performance obligations, as well as other amendments to guidance on collectability, non-cash consideration and the presentation of sales and other similar taxes collected from customers. These standards have the same effective date and transition date of January 1, 2018. Management continues to assess the new standard, which includes the review of contracts and revenue channels. We expect that, as a result of the adoption of this ASU, the timing of recognizing revenue for implants sold by our direct sales force to over half of the hospitals, may be generally earlier than under the existing revenue recognition guidance. Currently, revenue for these transactions is recognized upon receipt of a purchase order agreement after surgery, when the evidence of arrangement criterion is met. However, under Topic 606, we may be required to recognize revenue upon the delivery of the product on the date of surgery if there is an agreement that creates enforceable rights and obligations. Historically, the time between the surgery and the receipt of the purchase order for these transactions was, on average, six days which represents an immaterial amount of revenue. We continue to evaluate the effects that Topic 606 will have on our financial statements and related disclosures, and preliminary assessments are subject to change.

In August 2014, the FASB issued ASU 2014-15, *Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern*, The ASU requires management to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern and to provide related footnote disclosures. In doing so, companies will have reduced diversity in the timing and content of footnote disclosures than under today's guidance. We have adopted ASU 2014-15 as of the year ended December 31, 2016. The adoption of the ASU did not have a material impact on our consolidated financial statements and related disclosures.

In July 2015, the FASB issued ASU 2015-11, *Inventory (Topic 330): Simplifying the Measurement of Inventory*. ASU 2015-11 simplifies the guidance on the subsequent measurement of inventory, excluding inventory measured using last-in, first out or the retail inventory method. Under the new standard, in scope inventory should be measured at the lower of cost and net realizable value. We have adopted this new standard for the first quarter of the fiscal year 2017 and the adoption of this guidance does not have a material impact on our consolidated financial statements.

In November 2015, the FASB issued ASU 2015-17, *Balance Sheet Classification of Deferred Taxes*. ASU 2015-17 specifies that deferred tax assets and liabilities shall be classified as noncurrent, or long-term, in a classified statement of financial position. The ASU is effective for public entities for annual periods beginning after December 15, 2016, and interim periods within those annual periods. Earlier application is permitted for all entities as of the beginning of an interim or an annual reporting period. We have adopted this new standard for the first quarter of the fiscal year 2017 and the adoption of this guidance is not expected to have a material impact on our consolidated financial statements.

In February 2016, the FASB issued its new lease accounting guidance. Under the new guidance, ASU 2016-02, Leases, lessor accounting is largely unchanged. The new lease guidance simplifies the accounting for sale and leaseback transactions primarily because lessees must recognize lease assets and lease liabilities. Under the new guidance, lessees will be required to recognize a lease liability, which is a lessor's obligation to make lease payments arising from a lease, measured on a discounted basis; and a right-of-use asset, which is an asset that represents the lessee's right to use, or control use of, a specified asset for the lease term for all leases (with the exception of short-term leases) at the adoption date. The new guidance is effective for fiscal years, and for interim periods within those fiscal years, beginning after December 15, 2018. Early adoption is permitted for any interim or annual financial statements net yet issued. Lessees (for capital and operating leases) and lessors (for sales-type, direct financing and operating leases) must apply a modified retrospective approach for all leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements. We are currently evaluating the impact of this standard on its consolidated financial statements.

In March 2016, the FASB issued ASU 2016-09, which simplified several aspects of accounting for stock-based compensation transactions. The areas for simplification in this update involve several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. The new guidance is effective for public entities in years beginning after December 15, 2016 and in interim periods within those years. Other entities must apply the new guidance in years beginning after December 15, 2017 and in interim periods within years beginning after December 15, 2018. We have adopted this standard in the first quarter of 2017. The adoption did not have a material effect on our financial statements because our deferred tax assets are subject to a full valuation allowance and we will maintain our current forfeiture policy to estimate forfeitures expected to occur to determine stock-based compensation expense.

In August 2016, the FASB issued ASU 2016-15 *Statement of Cash Flows (Topic 230), Classification of Certain Cash Receipts and Cash Payments*. ASU 2016-15 provides guidance on the following eight specific cash flow classification issues: (1) debt prepayment or debt extinguishment costs; (2) settlement of zero-coupon debt instruments or other debt instruments with coupon interest rates that are insignificant in relation to the effective interest rate of the borrowing; (3) contingent consideration payments made after a business combination; (4) proceeds from the settlement of insurance claims; (5) proceeds from the settlement of corporate-owned life insurance policies, including bank-owned life insurance policies; (6) distributions received from equity method investees; (7) beneficial interests in securitization transactions; and (8) separately identifiable cash flows and application of the predominance principle. Current GAAP does not include specific guidance on these eight cash flow classification issues. The amendments of this ASU are effective for reporting periods beginning after December 15, 2017, with early adoption permitted. We are currently evaluating the impact of adopting ASU 2014-15 on our consolidated financial statements and related disclosures.

BUSINESS

Overview

We are a medical device company that has pioneered a proprietary minimally invasive surgical implant system to fuse the sacroiliac joint for treatment of common types of sacroiliac joint disorders that cause lower back pain. We introduced our iFuse Implant System, or iFuse, in 2009 in the United States and in 2010 in certain countries in the European Union. Since 2009, more than 25,000 iFuse Procedures have been performed by over 1,300 surgeons, primarily in the United States. Based on our commercial experience and our market research, we believe iFuse is currently used in approximately 70% of minimally invasive surgical fusions of the sacroiliac joint in the United States. For the year ended December 31, 2016 and three months ended March 31, 2017, we generated revenue of $42.1 million and $11.4 million, respectively, and our net loss was $20.6 million and $6.6 million, respectively. We expect to continue to incur operating losses in the future.

The two sacroiliac joints connect the sacral bone at the base of the spine with the two iliac bones of the pelvis, and absorb and transmit shock between the legs and the upper body. Patients with sacroiliac joint dysfunction may experience pain that can be debilitating. We believe that the sacroiliac joint is the last major joint to be addressed by the orthopedic implant industry.

Our iFuse Implants are triangular, and three implants are typically used in each procedure. Our implants are made of titanium and are coated with a porous surface using a titanium plasma spray process. Each iFuse Implant is at least three times the strength of a typical eight millimeter surgical screw and the large porous surface area allows fixation of the bone to the implants.

iFuse is supported by published evidence of safety, clinical effectiveness, durability and reduction in opioid users. These benefits are supported by more than 50 peer reviewed papers, including three prospective multi-center studies, two of which were randomized controlled clinical trials.

- INSITE was a randomized controlled study conducted in the United States. Positive 24-month follow-up results were published in August 2016 in the *International Journal of Spine Surgery* showing statistically significant and clinically important reduction in pain and disability. In April 2015, INSITE was awarded the “Best Overall Paper” out of approximately 450 submitted clinical study papers at the International Society for Advancement of Spine Surgery, or ISASS, conference.
- iMIA was a randomized controlled study conducted in Europe. Positive six-month follow-up results were published in *European Spine Journal* in May 2016, and the 12 follow-up results were accepted in March 2017 for publication in *Pain Physician*, showing statistically significant and clinically profound reduction in pain and disability.
- SIFI was a single-arm study conducted in the United States. Positive 24-month follow-up results were published in the *International Journal of Spine Surgery* in April 2016, showing substantial and sustained reduction in pain and disability.

A pooled analysis of these three prospective studies was published in March 2017 in *SPINE*, showing consistent and durable reduction in pain and disability, and improvement in quality of life.

- A controlled study that followed patients for up to six years was published in February 2017 in *Neurosurgery*, showing that at their last follow up visit more than 80% of patients who received non-surgical management were using opioids, while only 7% of patients treated with iFuse were using opioids.

The INSITE clinical trial included 148 subjects treated at 19 centers in the United States, with subjects randomized in a two to one ratio to either immediate sacroiliac joint fusion with iFuse or non-surgical management. The study design allowed subjects in the non-surgical management group to cross over and have

surgery after six months. By 24 months after the start of the clinical trial, 89% of the non-surgical management group subjects still participating in the trial had elected to cross over to have the iFuse Procedure. The study's results can be summarized as follows:

- **Reduction in Pain**. There was a statistically significant and clinically important pain reduction in subjects treated with iFuse as compared to those treated with non-surgical management. Subjects surgically treated with iFuse had mean 52, 54 and 55-point reductions in sacroiliac joint pain at 6, 12 and 24 months, respectively, as measured on the 0–100 Visual Analog Scale, or VAS. By contrast, subjects in the non-surgical management group had only a mean 12-point reduction ($p<0.0001$) at six months. In addition, the non-surgical management group subjects who elected after six months to cross over to have the iFuse Procedure had pain reduction similar to that seen in subjects originally assigned to sacroiliac joint fusion with iFuse. At 24 months, the proportion of subjects with a reduction in VAS sacroiliac joint pain of 20 or more points was 83% in the iFuse group and 10% in the non-surgical management group.
- **Reduction in Disability**. There was a statistically significant reduction in disability with iFuse as compared to non-surgical management. Subjects surgically treated with iFuse had a mean 27-point reduction in disability at six months, on the 0–100 Oswestry Disability Index, or ODI, while subjects in the non-surgical management group had only a mean 5-point reduction ($p<0.0001$). At 24 months, the iFuse group had a mean 28-point reduction in ODI. At six months, the proportion of subjects with ODI improvements of at least 15 points was 72.5% and 13.0% in the iFuse and non-surgical management groups, respectively ($p<0.0001$). In addition, the subjects who elected after six months to cross over to have the iFuse Procedure had similar reduction in disability as the subjects originally assigned to sacroiliac joint fusion with iFuse. At 24 months, the proportion of subjects with an ODI improvement of at least 15 points was 68% and 7.5% in the iFuse and non-surgical management groups, respectively ($p<0.0001$).

Patients from this study will be followed for up to five years in a separate long-term study.

A published study following patients for up to six years showed that pain relief was maintained for patients treated with iFuse, while patients treated with non-surgical management showed worsening pain over that period. Moreover, the cumulative four-year revision rate with iFuse, an important clinical outcome, is approximately 3.6%, or one-third of the reported revision rate of lumbar, or lower back, fusion.

Market

Over 30 million Americans experience lower back pain at any given time, according to *The New England Journal of Medicine.* Published clinical studies have shown that 15% to 30% of all lower back pain is associated with the sacroiliac joint. Our experience in both clinical trials and commercial settings indicates that iFuse could be beneficial to at least 30% of patients who visit trained healthcare providers and are screened for exclusion and inclusion criteria. Based on our market experience and internal estimates, we believe that 10% of Americans that experience lower back pain related to the sacroiliac joint are potential candidates for the iFuse Procedure. Accordingly, we estimate that the potential market for iFuse in the United States would be 465,000 patients annually.

Studies have also shown that the disability from disease of the sacroiliac joint is comparable to the disability associated with a number of other serious orthopedic conditions (for example, knee and hip arthritis, narrowing of the spinal canal, or spinal stenosis, and degenerative disc disease), all of which have surgical solutions where an implant is used and a significant market exists. For example, there are a large number of lumbar fusions to treat lower back pain in the United States.

Frequently, sacroiliac joint patients are aging and/or may have experienced one or more of the following events that have caused disruption or degeneration of the sacroiliac joint: falls, previous lumbar surgery, automobile accidents, and/or pregnancies. We believe that Americans spend approximately $85.9 billion per year on spine problems and that approximately 65% of people who suffer from sacroiliac pain are women. In the United States, iFuse is intended for sacroiliac joint fusion for conditions including sacroiliac joint dysfunction that is a direct result of sacroiliac joint disruption and degenerative sacroiliitis. This includes conditions whose symptoms began during pregnancy or in the peripartum period and have persisted postpartum for more than six months. In all other countries where iFuse is available commercially, the system is indicated for sacroiliac joint fusion.

Diagnosis

It is often difficult to identify the source of lower back pain. As a result, some surgical procedures performed on the spine have a sub-optimal success rate. For example, published studies of lumbar fusion have shown success rates of only approximately 60%. Unsuccessful spine surgery may result in failed back surgery syndrome, which has been shown to result in high healthcare costs with poor overall relief of pain. We believe low success rates of lumbar fusion are likely related to failure, in some cases, to diagnose the sacroiliac joint as the correct cause of pain.

In addition to training surgeons to perform the iFuse Procedure, we have made considerable investments in teaching healthcare professionals to accurately diagnose sacroiliac joint disorders. We provide instruction and training on how to perform provocative maneuvers in a physician's office that can reveal the sacroiliac joint as the source of pain. If provocative tests are positive, surgeons confirm the diagnosis by injecting a small amount of local anesthetic into the joint under fluoroscopic guidance. If the local anesthetic produces immediate pain reduction, it confirms that the sacroiliac joint is the source of the pain. In addition to the differentiated characteristics of our iFuse Procedure and implants, we believe that more accurate diagnosis is part of the reason for the high success rate of iFuse. As is customary in the orthopedic implant industry, a member of our team is typically present in the operating suite during surgery to provide technical assistance for the use of iFuse.

Surgical Treatment of Sacroiliac Joint Disease

Patients with sacroiliac joint dysfunction frequently experience significant pain simply from sitting, standing, or rolling over in bed. The pain can be exacerbated with activity—when a patient walks or runs, for example, the shock from each step is transmitted up the leg to the iliac bones of the pelvis. This results in small movements of the sacroiliac joints and pressure transferred across the joints. The initial goal in fusion of the sacroiliac joint is to immediately stabilize the joint because the movement of the damaged or arthritic joint is believed to cause the pain. After the joint has been stabilized, the goal is to permanently fuse the joint over time.

Surgical fusion of the sacroiliac joint with an open surgical technique was first reported in 1908; further reports were described in the 1920s. The open procedure uses plates and screws, is extremely invasive, and involves greater blood loss and longer recovery time when compared to the iFuse minimally invasive procedure. Open surgery for elective sacroiliac joint fusion has become less common in the United States since we introduced iFuse. The table below highlights some of the key differences between the iFuse Procedure and open surgery.

	Fusion with Open Surgery	iFuse Procedure
Size of incision	6 to 12 inches	1 to 2 inches
Average hospital stay	5.1 nights	1.3 nights
Average blood loss	800 ml	33 ml

Due to its invasiveness, pain, long recovery time, and infrequent use, the open fusion procedure was rarely taught in medical school or residency programs. Prior to our launch of iFuse, most spine surgeons had never performed a sacroiliac joint fusion. As a result, when patients presented with lower back pain, spine surgeons often did not include a sacroiliac joint evaluation in their diagnostic work-up.

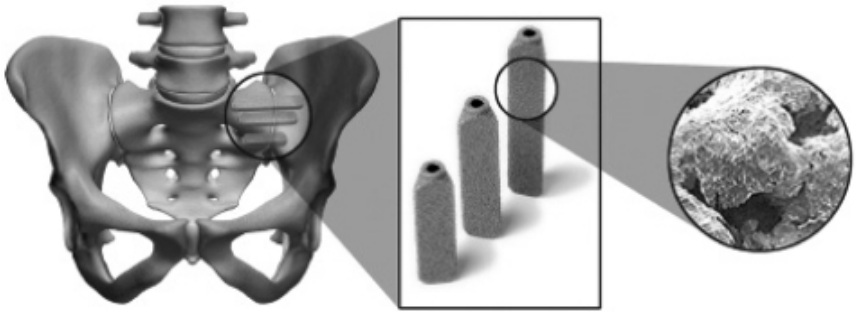
Non-Surgical Treatment of Sacroiliac Joint Disease

Although a number of non-surgical treatments exist for sacroiliac joint pain, they did not provide the level of pain or disability relief seen with the iFuse Procedure for the patients participating in the INSITE study.

- **Medical therapy**, including opiates and non-steroidal anti-inflammatory medications.
- **Physical Therapy**, which can involve exercises as well as massage.
- **Intra-articular injections of steroid medications**, which are typically performed by physicians who specialize in pain treatment or anesthesia.
- **Radiofrequency ablation**, or the cauterizing, of the lateral branches of the sacral nerve roots.

Our Solution—iFuse

Our iFuse system is designed to address the shortcomings of alternative treatments, including open surgery, non-surgical management, and screw-based procedures. As shown in the graphic below, our iFuse Implants are triangular, and three implants are typically used in each procedure. Our implants are made of titanium and are coated with a porous surface using a titanium plasma spray process. Each iFuse Implant is at least three times the strength of a typical eight millimeter surgical screw and the large porous surface area allows fixation of the bone to the implants.



The iFuse Procedure is performed under general anesthesia and involves an incision approximately one to two inches in length. The surgeon uses a custom instrument set we provide to prepare a triangular channel across the sacroiliac joint for each implant. An iFuse Implant is then pressed into a triangular channel, which is slightly smaller than the implant, creating what is known as an intereference fit. The triangular shape of our iFuse Implants, as shown above, prevents them from rotating. Our iFuse Implants have more than 30 times the rotation resistance of screws based on a study we sponsored. iFuse Implants cross the sacroiliac joint and provide stability, which is why we believe pain diminishes soon after the iFuse Procedure. We have issued patents on implants with cross-sections of different shapes, including the triangular shape we use for iFuse. We also have issued patents for the method of placing those implants for applications across the sacroiliac joint, as well as other parts of the spine and pelvis.

By contrast, open fusion of the sacroiliac joint, as well as the minimally invasive solutions offered by other companies typically use screws and/or plates for fixation. When placed across the sacroiliac joint, standard orthopedic screws, with no features to encourage biologic fixation, have an exhibited propensity to rotate and loosen over time. Because of the triangular shape, porous coating, strength, and other differentiating factors of our iFuse Implants, we believe that our published clinical data does not apply to other minimally invasive solutions, for which little published evidence of safety, clinical effectiveness, durability, or economic utility currently exists. We are unaware of any data to show that our competitors' sacroiliac joint screws, with features allowing biologic fixation, have a lower rate of loosening than standard orthopedic screws. In addition, placement of plates for open fusion procedures typically requires larger incisions and more invasive dissection, which results in longer recovery times and increased morbidity.

Surgical revision is an important outcome for patients. A recent single site retrospective study published in the *International Journal of Spine Surgery* showed a cumulative revision rate of more than 30% at four years for screw-based treatment of sacroiliac joint pain (based on 38 cases) and a revision rate of less than 6% for iFuse (based on 274 cases). Based on an extensive review of the published medical literature before that study, private payors HCSC, Geisinger and SelectHealth Medical Technology Assessment Committees determined that coverage of minimally invasive (MIS) sacroiliac joint fusion specific to iFuse was appropriate as the literature related to other MIS sacroiliac joint fusion systems was inadequate to determine safety and effectiveness. Use of all other technologies is considered experimental/investigational or unproven and therefore not covered.

Our implants cross the sacroiliac joint and provide stability, which is why we believe pain diminishes soon after the iFuse Procedure. Typically, surgeons recommend protected weight-bearing for three weeks. However, post-operative instructions are patient-specific and some patients are allowed to perform weight-bearing activities sooner. Follow-up studies have shown that bony bridging across the sacroiliac joint is still present five years after the iFuse Procedure.

Three implants are used in most iFuse Procedures. Each implant bridges across the joint from the iliac bone to the sacrum. Placing each implant requires four basic steps:

- **Pin**. The surgeon inserts a guide pin through the iliac bone, across the sacroiliac joint and into the sacrum.
- **Drill**. Surgeons drill over the guide pin, through the iliac bone, across the sacroiliac joint and just into the sacrum. This step is optional if using the sharp-tip broach.
- **Broach**. The surgeon impacts a triangular broach over the pin which prepares a triangular channel that is slightly smaller than the iFuse Implant.
- **Implant**. The surgeon impacts the implant into the triangular channel thereby spanning the sacroiliac joint and docking in the sacrum. The channel is slightly smaller than the implant, which produces an interference fit.

iFuse is a cannulated system, which means that the drill, broach and implants have hollow channels which fit over the pin for guidance purposes. As is typical across the orthopedic implant industry, a member of our team is normally present in the operating suite during surgery to provide technical assistance for the use of iFuse.

We currently offer three custom instrument sets for placement of iFuse Implants in the body. The standard set is comprised of largely stainless steel materials; the XL (Extra Long) set is the same as the standard set but most instruments are elongated by three inches for treatment of larger patients; and the radiolucent set is comprised of instruments made with more radiolucent materials, such as PEEK and aluminum to improve visualization under fluoroscopy during an iFuse Procedure.

Our Strategy

Our objective is to maintain and enhance our leadership position in providing clinically proven products and training for minimally invasive sacroiliac joint fusion and provide relief for as many patients as possible. To accomplish this objective, we intend to:

- Continue to educate physicians, payors, and patients globally about the growing body of compelling evidence supporting the safety, clinical effectiveness, durability and reduction in opioid use associated with the iFuse Procedure;
- Increase reimbursement coverage based on our evidence of safety, clinical effectiveness, durability and reduction in opioid use;
- Continue to invest in iFuse awareness, surgeon training, new products, and additional clinical and economic studies;

- Educate and train the healthcare community on the prevalence, anatomy, diagnosis, and treatment options, including minimally invasive surgical fusion of the sacroiliac joint;
- Expand our direct field organization in the United States and select European countries to drive adoption of our iFuse products;
- Maintain our technological leadership by investing in the creation of new or improved products for sacroiliac joint surgery and obtain domestic and international regulatory clearance to market them in the United States and additional countries; and
- Continue to grow and defend our existing intellectual property portfolio.

Our Published Studies

iFuse is the only minimally invasive product for sacroiliac joint fusion commercially available in the United States that, to our knowledge, is supported by published evidence of safety, clinical effectiveness, durability, and economic utility. These benefits are supported by more than 50 published papers (22 of which we financially supported), including a prospective, randomized controlled multi-center clinical trial referred to as "INSITE" and a prospective multi-center clinical study referred to as "SIFI." INSITE six-month follow-up results were published in March 2015 in the *International Journal of Spine Surgery*, and 12-month follow-up results have been accepted for publication by *Neurosurgery*. SIFI six-month follow-up results were published in *Medical Devices—Evidence and Research* in December 2013, and 12-month follow-up results were published in August 2015 in the *Global Spine Journal*. These results demonstrate clinically important and statistically significant improvement for sacroiliac joint pain, disability due to lower back pain, quality of life, and patient satisfaction. Moreover, the level of published evidence supporting the safety and effectiveness of sacroiliac joint fusion using iFuse is high. The INSITE study was awarded the Leon L. Wiltse Award for Best Overall Paper (out of approximately 450 submitted abstracts) by the ISASS meeting program committee.

In the United States, iFuse is intended for sacroiliac joint fusion for conditions including sacroiliac joint dysfunction that is a direct result of sacroiliac joint disruption and degenerative sacroiliitis. This includes conditions whose symptoms began during pregnancy or in the peripartum period and have persisted postpartum for more than six months. Clinical Studies have demonstrated that treatment with iFuse improved pain, patient function, and quality of life. In all other countries where iFuse is available commercially, the system is indicated for sacroiliac joint fusion. The published studies summarized below include clinical outcome information. We have not yet cleared claims for use of iFuse to reduce pain, reduce disability, improve quality of life, or other clinical outcome claims without reference to published papers. We financially supported the studies described below.

INSITE Study Design

INSITE enrollment took place between January 2013 and May 2014 at 19 sites in the United States. Adults between 21 and 70 years old were eligible to participate if they had a confirmed diagnosis of sacroiliac dysfunction due to degenerative sacroiliitis and/or sacroiliac joint disruption. Diagnosis was based on the subject's history, provocative tests performed in the surgeon's office, and at least a 50% decrease in sacroiliac joint pain 30 to 60 minutes after local anesthetic was injected into the joint under image guidance. Eligibility required a sacroiliac VAS pain score of at least 50, where zero represents no pain and 100 represents the worst pain imaginable, as well as a baseline ODI score of at least 30, which has a scale of 0-100, where zero represents no disability and scores greater than 60 represent very severe disability.

Exclusion criteria included inability to diagnose pain related to the sacroiliac joint, sacroiliac joint pain due to inflammatory conditions, severe back pain deemed to be due primarily to other causes, history of recent major trauma to the pelvis, metabolic bone disease, or any condition that made treatment with the study devices infeasible or interfered with the ability to participate in physical therapy. Subjects involved in litigation, on

disability leave, or receiving workers' compensation related to their back or sacroiliac joint pain were also excluded. Subjects were randomly assigned to sacroiliac joint fusion or non-surgical management in a two to one ratio. After six months of follow-up, subjects could elect to receive sacroiliac joint fusion surgery using iFuse. All of the subjects who were randomized to non-surgical management completed at least six months of follow up before electing to cross over to surgery.

Subjects assigned to non-surgical management began non-surgical management immediately. Non-surgical management consisted of four components: 1) management of pain with medication, including narcotics; 2) physical therapy; 3) steroid injections in the sacroiliac joint; and 4) radiofrequency ablation of local nerves. Physical therapy followed American Physical Therapy Association, or APTA, guidelines. Not all non-surgical management interventions were provided to all non-surgical management subjects. Non-surgical management interventions were provided serially, typically in order of increasing invasiveness, according to individual needs.

Baseline assessments included medical history and physical examination. Subjects were scheduled for follow-up at one, three, six, 12, 18, and 24 months after enrollment. At each follow-up, the subjects evaluated their pain and disability by completing questionnaires to assess pain and disability.

A high-resolution pelvic CT scan was performed at the 24-month follow up for those subjects randomized to and treated with iFuse. The primary purpose of the CT scan is to judge the adherence of bone onto the implants on both the sacral and iliac sides of the sacroiliac joint and to determine whether there is bone bridging across the joint. Other radiographic endpoints were assessed as well.

The study required that subjects receive only the assigned treatment to month six. After six months, the study allowed subjects assigned to non-surgical treatment to cross over to surgery. Cross over was allowed because the anticipated success rate for non-surgical management was low, and many subjects would not have participated without the ability to cross over to surgical care within the study. One-hundred percent of subjects who crossed over to iFuse in the study did so after their six-month visit was complete in compliance with the design of the study. Nearly 90% of non-surgical management subjects still participating at month 6 crossed over to surgical care after six months. All subjects who crossed over had sacroiliac joint fusion using iFuse and were subsequently evaluated with follow-up visits.

The primary endpoint was a composite success or failure endpoint. Success was defined as reduction from baseline VAS sacroiliac joint pain by at least 20 points, absence of device-related serious adverse events, absence of neurological worsening related to the sacral spine, and absence of surgical re-intervention (removal, revision, reoperation, or supplemental fixation) for sacroiliac joint pain. Secondary endpoints included improvement from baseline in VAS, ODI, as well as treatment satisfaction and other criteria. Other important measures included quality of life assessments.

In the study, 442 subjects at 19 centers were screened for participation, of which 148 were enrolled and treated. Mean subject age was 51 years and 18 (12%) were 65 years of age or older. Most subjects (94.6%) were Caucasian and approximately two-thirds were female.

Enrolled subjects were highly debilitated by sacroiliac joint pain as indicated by high baseline VAS scores (mean 82.3) and ODI scores (mean 56.8). Nineteen percent were not working due to chronic pain. The duration of pain prior to enrollment averaged 6.4 years (range 0.5 to 40.7 years), and 87.2% had had pain for more than one year and 73.6% had pain for more than two years.

Trial subjects had previously undergone sacroiliac-specific physical therapy (72.3% of subjects), sacroiliac steroid injections (85.8%) and radiofrequency ablation of the sacroiliac joint (16.2%). Approximately two-thirds were taking opioid pain medications at baseline and all reported that multiple activities commonly caused or worsened their sacroiliac joint pain.

Follow-up was excellent with 96% of non-surgical subjects having 6-month follow-up and 87% of sacroiliac joint fusion patients having 24-month follow-up.

All subjects assigned to sacroiliac joint fusion underwent the procedure. Of the subjects assigned to surgery, 76 had the iFuse Procedure on one sacroiliac joint, while 26 underwent the procedure on both sacroiliac joints. Mean procedure time was 45 minutes (range 14 to 140 minutes). Mean estimated blood loss was 33 ml (range 0.5 to 250 ml). Three implants were used in 91.2% of cases and most implants were seven millimeters in diameter. The hospital length of stay ranged from zero to seven days, and 97.1% were discharged in two days or less.

Of the 46 subjects assigned to non-surgical management:

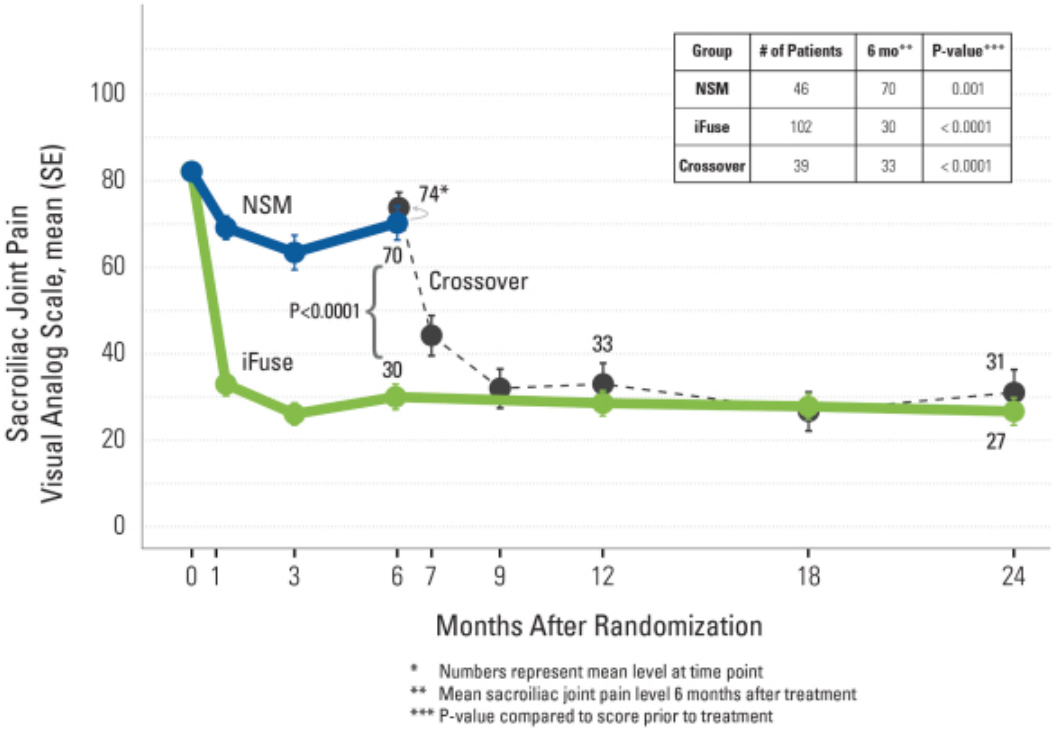
- All but one received physical therapy during the six months after treatment assignment;
- 73.9% underwent at least one steroid injection;
- 45.7% underwent radiofrequency ablation of the sacroiliac joint; and
- 87.0% underwent at least two types of non-surgical management treatments in addition to pain medications.

The above data suggests that the intensity of non-surgical management interventions was high and representative of that provided in standard clinical practice.

INSITE Results

INSITE results can be summarized as follows.

- **Reduction in Pain**. There was a statistically significant and clinically important pain reduction in subjects treated with iFuse as compared to non-surgical management. As shown in the graph below, subjects surgically treated with iFuse had a mean 52-point VAS reduction in sacroiliac joint pain at six months. The reduction in pain was sustained with a mean 55-point reduction in sacroiliac joint pain observed at 24 months. By contrast, subjects in the non-surgical management group had only a mean 12-point reduction ($p<0.0001$) at six months. In addition, the non-surgical management group subjects who elected after six months to cross over to have the iFuse Procedure had pain reduction similar to that seen in subjects originally assigned to sacroiliac joint fusion with iFuse. At 24 months, the proportion of subjects with a reduction in VAS sacroiliac joint pain of 20 or more points was 83% in the iFuse group and 10% in the non-surgical management group.

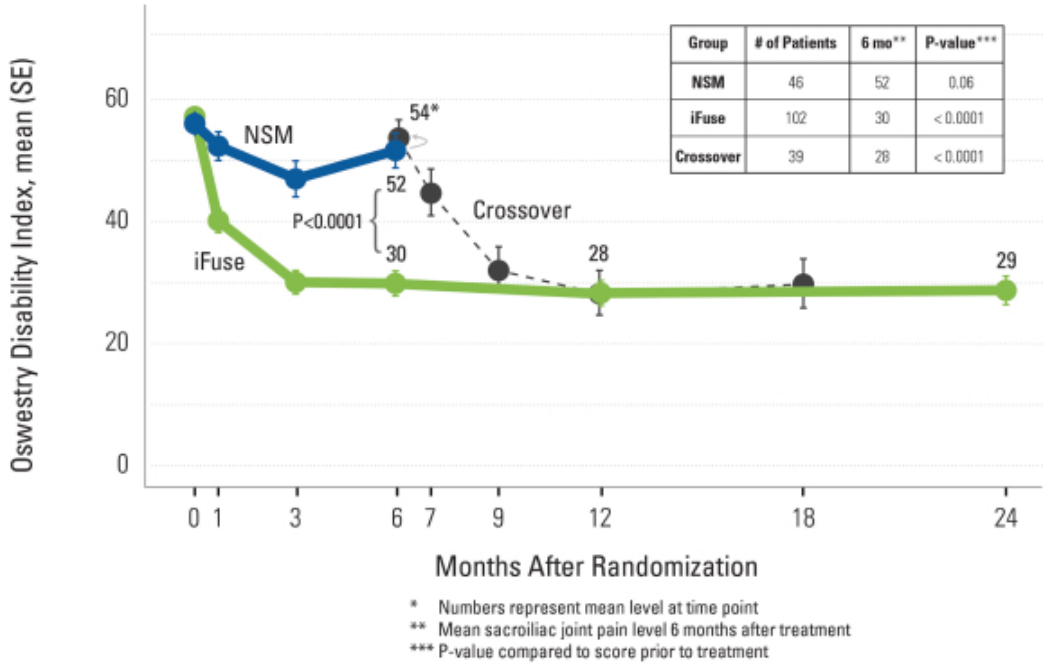


Subjects who elected not to cross over to surgery had reduced pain at six months, but their pain worsened somewhat over time. In contrast, the non-surgical management group subjects who elected to cross over to have the iFuse Procedure had pain reduction similar to that seen in subjects originally assigned to sacroiliac joint fusion with iFuse. These clinically important differences show the effectiveness of sacroiliac joint fusion with iFuse.

- **Reduction in Disability**. There was a statistically significant reduction in disability with iFuse as compared to non-surgical management. As shown in the graph below, subjects surgically treated with iFuse had a mean 27-point ODI reduction in disability at six months, while subjects in the non-surgical management group had only a mean 4.6-point decrease ($p<0.0001$). At 24 months, the iFuse group had a mean 28-point reduction in disability. At six months, the proportion of subjects with ODI improvements of at least 15 points was 72.5% and 13.0% in the iFuse and non-surgical

management groups, respectively. At 24 months, the proportion of subjects with an improvement of at least 15 points due to the assigned treatment was 68.2% and 7.5% in the iFuse and non-surgical management groups, respectively (p<0.0001).

As shown in the figure below, the subjects who elected after six months to cross over to have the iFuse Procedure had similar reduction in disability as the subjects originally assigned to sacroiliac joint fusion with iFuse. These clinically important differences show the effectiveness of sacroiliac joint fusion with iFuse.



Patient Satisfaction

Patient satisfaction was assessed by asking subjects whether they were very satisfied, somewhat satisfied, somewhat dissatisfied or very dissatisfied with the treatment received. At six months, 77.2% of subjects who had received the iFuse Procedure were very satisfied, compared with 27.3% of subjects in the non-surgical management group. At six months, 79.2% of surgery subjects said they would definitely have the procedure again. These results are consistent with the satisfaction results from other studies, covering approximately 500 subjects. Satisfaction rates were high, with 73% reporting being very satisfied with sacroiliac joint treatment by month 24 and 71% indicated they would have the procedure again.

Adverse Events

During the first six months, the mean number of adverse events per subject was slightly higher in the surgery group (1.3 events) as compared to the non-surgical management group (1.1 events, p=0.3063). The most common adverse event related to our implant was leg pain resulting from misplacement of the implant, resulting in impingement of the implant on a lumbar spine nerve root. The most common adverse event for our implant procedure has been minor wound infections. None of these adverse events required surgical treatment. The following table shows the number and percentages of subjects who had adverse events related to the iFuse device and the iFuse Procedure.

	Non-Surgical Management (n=46) N (%*)	Sacroiliac Joint Fusion (n=102) N (%)
Category		
Related to iFuse Implant		
Definitely related	—	2 (2.0%)
Probably related	—	1 (1.0%)
Total	—	3 (2.9%)
Related to non-surgical management or iFuse Procedure**	3 (6.5%)	6 (5.9%)
Definitely related	1 (2.2%)	10 (9.8%)
Probably related	4 (8.7%)	16 (15.7%)
Total		

* Percent reported as number of events divided by number assigned to treatment.
** Events from first 180 days shown.

In summary, we believe the INSITE study, a prospective, randomized controlled multi-center clinical trial, provided substantial evidence of the clinically important and statistically significant effectiveness of sacroiliac joint fusion using iFuse compared with non-surgical management. Further, the fact that subjects who crossed over responded, as well as those who were originally assigned to the iFuse group, adds significantly to the trial's validity and importance.

iMIA European Clinical Trial

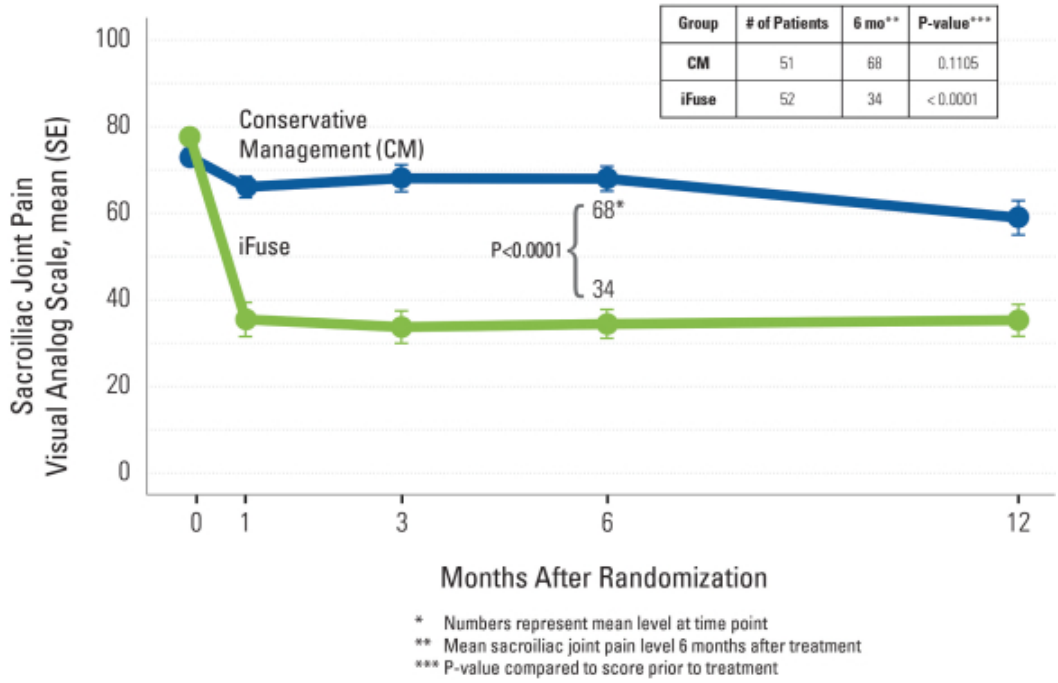
iMIA is a second prospective, randomized clinical trial of sacroiliac joint fusion using iFuse compared to non-surgical management with a design very similar to that of INSITE. iMIA enrolled and treated 103 subjects at nine sites in four European countries. The trial's six-month results were published in European Spine Journal in May 2016.

In iMIA, 103 adults with chronic sacroiliac joint pain at nine sites in four European countries were randomly assigned approximately one-to-one to either immediate sacroiliac joint fusion with iFuse or conservative management. Conservative management was performed according to the European guidelines for the diagnosis and management of pelvic girdle pain and consisted of optimization of medical therapy, individualized physical therapy and adequate information and reassurance as part of a multifactorial treatment.

At twelve months, which is as far out as data is currently available, mean low back pain improved by 41.6 points in the surgically treated group and 14.0 points in the conservative management group (difference of 27.6 points, p<0.0001). Mean ODI improved by 25.0 points in the surgical group and 8.7 points in the conservative management group (p<0.0001).

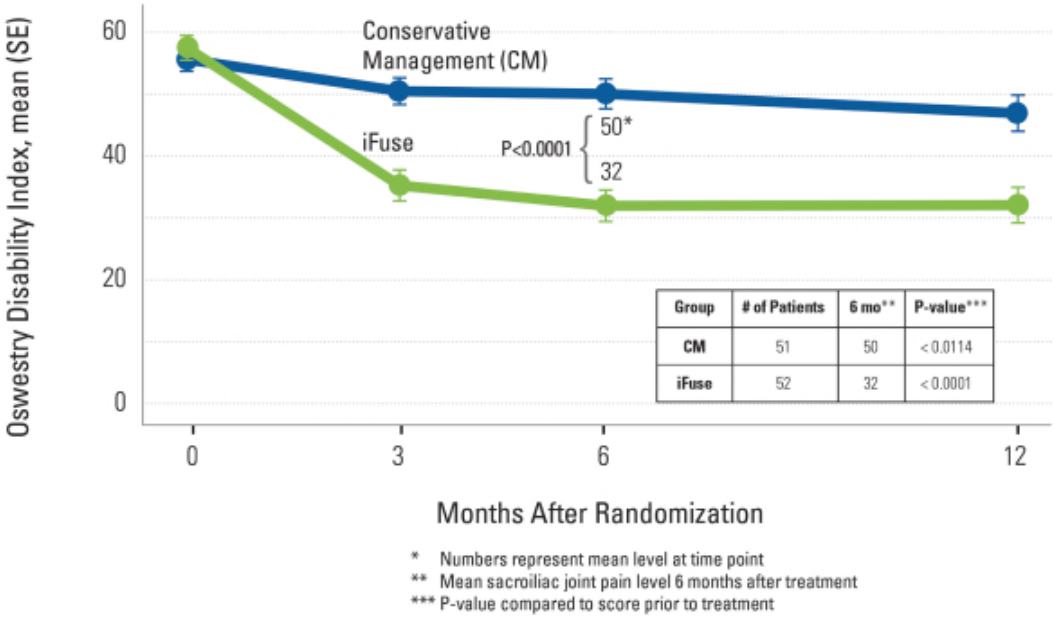
Adverse events occurred at a low rate and the frequency of adverse events did not differ between groups. One case of postoperative nerve impingement occurred in the surgical group, which was resolved by repositioning the implant.

The figure below shows mean VAS pain scores at baseline and throughout follow-up. The results show clinically profound, rapid and sustained reduction in pain following treatment with iFuse, in contrast with conservative management.



* Numbers represent mean level at time point
** Mean sacroiliac joint pain level 6 months after treatment
*** P-value compared to score prior to treatment

The figure below shows mean ODI scores at baseline and throughout follow-up. The results shows clinically profound, rapid and sustained reduction in disability following treatment with iFuse, in contrast with conservative management.



SIFI Clinical Trial

Sacroiliac Joint Fusion with iFuse Implant System, or SIFI, was a prospective, multicenter single-arm clinical trial. Eligibility criteria and endpoints were similar to INSITE. A manuscript summarizing two-year results was published in *International Journal of Spine Surgery* in April 2016.

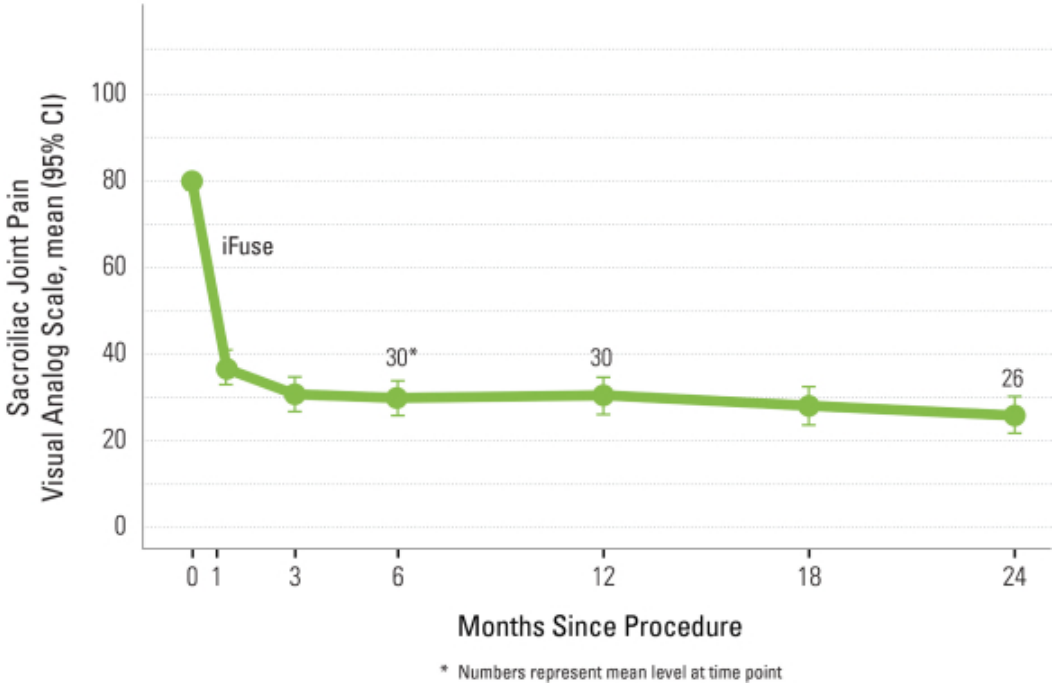
All of the 172 enrolled subjects received the iFuse Procedure at 26 sites between August 2012 and December 2013. All enrolled subjects were included in statistical analysis. Mean subject age was 51 years and 96.5% subjects were Caucasian and approximately 70% were female. Follow-up rates at month 6, 12 and 24 were 97%, 91% and 87%, respectively.

Baseline sacroiliac pain and disability scores were high. The mean baseline VAS score was 79.8, while the mean baseline ODI score was 55.2. The mean duration of pain prior to enrollment was five years (range 0.4 to 41 years), and 84.3% had had pain for more than one year and 64.5% had had pain for more than two years.

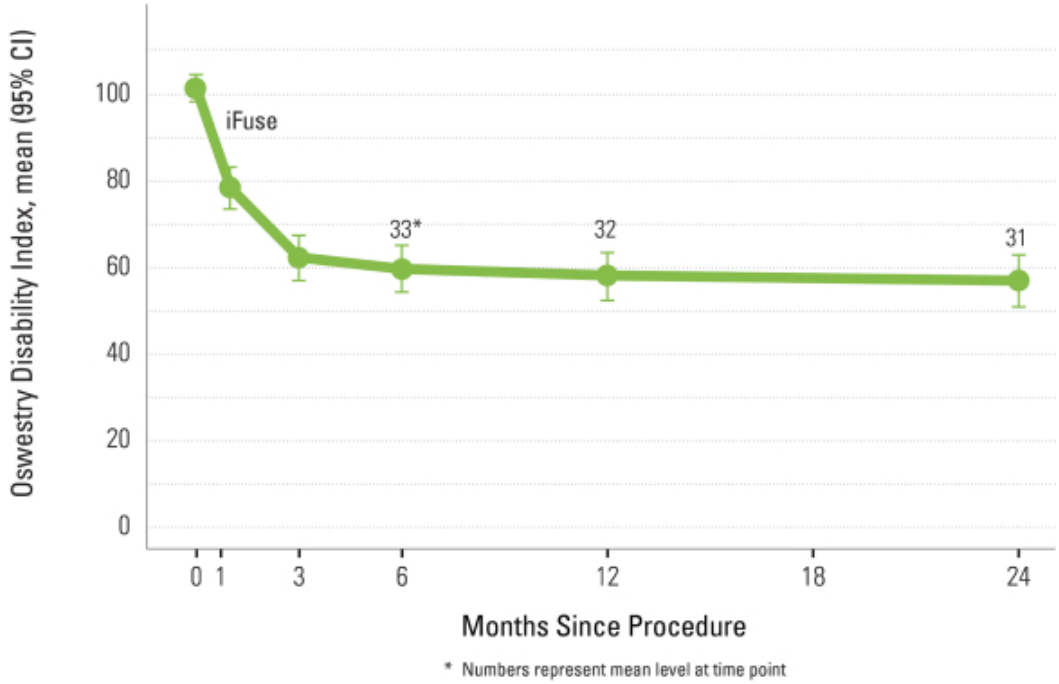
Seventy-six percent were taking opioid pain medications at baseline and all reported that multiple activities commonly caused their sacroiliac joint pain. Many subjects (44.2%) had a history of prior lumbar fusion, and concomitant spine disease was common. Sacroiliac joint pain persisted despite prior treatments with physical therapy (64.5% of subjects), sacroiliac joint steroid injections (94.2%) and prior radiofrequency ablation of the joint (15.7%).

Hospital length of stay ranged from zero to seven days, and 95.3% were discharged in two days or less. Prolonged hospital stays were related to subject comorbidities, not procedure-related adverse events.

The figure below shows mean VAS pain scores at baseline and throughout follow-up. The results show clinically important, rapid and sustained reduction in pain across the subject population.



The figure below shows the ODI scores at baseline and throughout the study. The results show clinically important and sustained reduction in disability across the subject population.



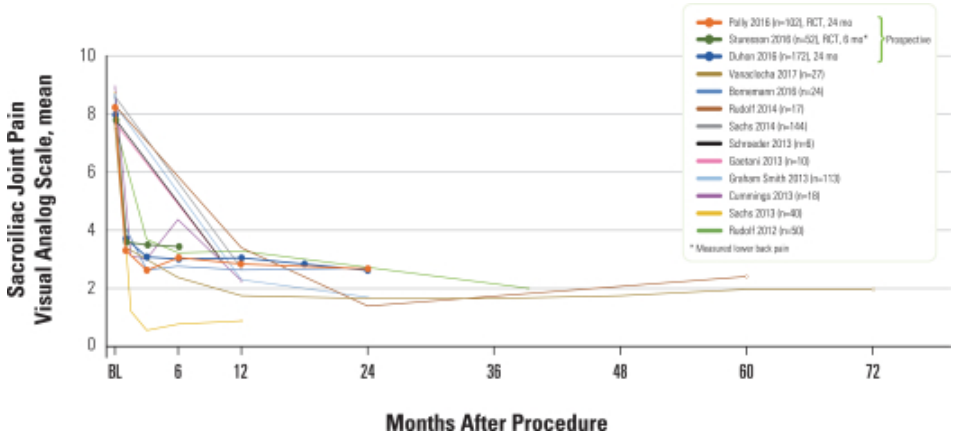
Satisfaction rates were high, with 78.1% reporting being very satisfied with sacroiliac joint treatment by month 24 and 93.8% being very or somewhat satisfied. 74.7% indicated they would definitely have the procedure again; 88.4% indicated they would probably or definitely have the procedure again.

Four adverse events (2.4% of all subjects) were rated by the investigator to be definitely device-related and 3 (1.8%) were probably device-related. Pain related to implant impingement on sacral nerve roots occurred in 3 cases (including one non-study-related side), all of which resolved with immediate repositioning of implants. In 4 cases, sacroiliac joint or hip pain was attributed to the presence were an implant or bone growth around the implant. Twenty-six events were rated as probably or definitely related to the placement procedure. The most common events were wound infection, irritation or drainage, sacroiliac joint pain related to implant malposition (described above), and recurrent sacroiliac joint pain related to inadequate device placement. One subject had a deep wound infection that required surgical debridement.

Additional Published Clinical Studies

We have demonstrated the long-term durability of pain relief resulting from treatment with iFuse in several other published studies. A study published in the *Open Orthopedics Journal* in 2014, which we financially supported, showed that significant clinical pain relief observed at 12 months was maintained for five years. Similar results with four and one-half year follow-up were published in the *Journal of Spine* in 2014.

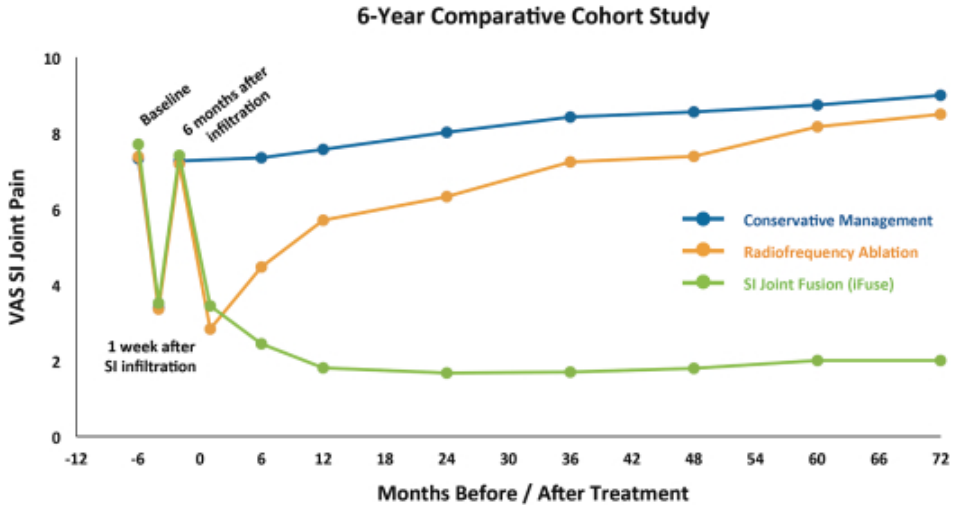
Of more than 500 patients treated with iFuse in ten studies we have sponsored or followed in which satisfaction was measured, 91% were satisfied or very satisfied with the result. All of the iFuse studies published as of April 2017 report sacroiliac joint pain using the VAS pain scale are in the graph below. We financially supported nine of these thirteen clinical studies.



To date, several studies, some not sponsored by SI-BONE, have been published on the safety and effectiveness of sacroiliac joint fusion using iFuse. These are prospective or retrospective, single site or multi-site, and U.S.- or Europe-based. These clinical studies demonstrate the iFuse Procedure to be safe and effective. These studies demonstrate pain reduction and/or ODI improvement that is statistically significant and clinically important. The type and rate of reported adverse events were similar to those reported in INSITE and SIFI. These additional studies are consistent with the results of INSITE and SIFI.

A study published in April 2017 in *Neurosurgery* shows the impact of non-coverage by the healthcare system of sacroiliac joint fusion. In this study, a neurosurgeon reports the clinical experience of 423 patients seen in his clinic for sacroiliac joint pain. While many patients' pain resolved without intervention, 152 of the patients (36%) had continued sacroiliac joint pain. Of these patients, 74 did not have access to the procedure due to their insurers' denial of coverage and instead were forced to undergo continued non-surgical treatment. Of the remaining 78 patients, 51 underwent radiofrequency ablation of lateral branches of sacral nerve roots and 27 underwent sacroiliac joint fusion with the iFuse Implant System.

The group treated non-surgically had poor outcomes, including increased pain, disability and opioid use, as well as worsened work status. By contrast, patients who were able to undergo the iFuse Procedure had very large improvements in pain and disability, improved work status and substantially decreased opioid use (from 63% at baseline to 7% at last follow-up). The differences in all outcomes (pain, disability, work status and opioid use) were both statistically significant and clinically profound. The graph below shows the pain scores of the three treatment cohorts followed in this study.



There are several important aspects to this study:

- It can be considered a “pseudorandomized trial” in that insurance denials (which dictated which treatment the patient could receive) was not clearly related to any important predictor of clinical outcomes. This enhances the comparability of groups.
- It is the longest reported cohort of non-surgical treatment of sacroiliac joint pain published to date.
- Non-surgical treatment was clearly associated with poor outcomes, consistent with our experience in the US, in which patients receive repeated, and sometimes expensive, non-surgical treatments but do not derive significant benefit.

Coverage and Reimbursement

In the United States, the primary purchasers of iFuse products are inpatient and outpatient healthcare facilities. These purchasers bill various third-party payors such as Medicare, Medicaid, private commercial insurance companies, health maintenance organizations, accountable care organizations, or ACOs, and other healthcare-related organizations, to cover all or a portion of the costs and fees associated with iFuse, and bill patients for any applicable deductibles or co-payments.

Medicare reimbursement rates for the iFuse Procedure vary due to geographic location, the nature of facility in which the procedure is performed and other factors. Although private payor coverage policies and reimbursement rates tend to vary, the Medicare program is commonly used as a model for how private payors and other governmental payors develop their coverage and reimbursement policies for healthcare items and services, including iFuse Procedures.

In the United States, the American Medical Association, or AMA, generally assigns specific billing codes for surgical procedures under a coding system known as Current Procedure Terminology, or CPT, which we and our customers must use to bill and receive reimbursement for our iFuse Procedure. Once the CPT code is

established, the Centers for Medicare & Medicaid Services, or CMS, establishes payment levels and coverage rules under Medicare while private payors establish rates and coverage rules independently.

Prior to our launch of iFuse, Medicare and most private insurance companies reimbursed surgeons for sacroiliac joint fusions using either an established Category I CPT code or an unlisted code. A Category I CPT code is typically assigned to procedures that are consistent with contemporary medical practice and are widely performed. Procedures with a longstanding Category I CPT code are usually reimbursed.

However, effective July 1, 2013, the AMA's CPT Editorial Panel created a new Category III CPT code for fusion of the sacroiliac joint using a minimally invasive or percutaneous approach. Category III CPT codes are used for new and emerging technologies and are reimbursed sporadically. This new code functionally redefined coding for sacroiliac joint fusions because it meant that minimally invasive or percutaneous fusion procedures should not be billed using the general Category I CPT code for sacroiliac fusion surgery. This coding change was accompanied by the establishment of a Medicare hospital outpatient prospective payment rate for the new code.

Following the creation of the new Category III CPT code, a number of papers demonstrating the clinical success of the iFuse Procedure were published. These studies, along with the support of several professional societies and surgeons resulted in the AMA CPT Editorial Panel establishing a new Category I CPT code specifically for sacroiliac joint fusion surgery using a minimally invasive or percutaneous approach. This new Category I CPT code became effective on January 1, 2015.

Subsequently, in March 2015, our INSITE prospective, randomized controlled multi-center clinical trial was published. In June 2015, the largest spine society in the world, the North American Spine Society, or NASS, published a positive coverage recommendation, based on the clinical evidence, advocating to insurance companies and Medicare Administrative Contractors, or MACs, that sacroiliac joint fusion using a minimally invasive surgical approach should be routinely reimbursed. In March 2015, the International Society For Advancement of Spine Surgery, or ISASS, also published a similar positive advocacy document intended to encourage insurance companies in the United States to reimburse for the procedure.

Coverage decisions for this code are made independently by each of the private insurance companies and the eight MACs, and the process of obtaining coverage is laborious. As of June 30, 2016, because of the iFuse clinical evidence, all eight MACs were covering the procedure. As of March 31, 2017, Medicaid programs in 44 states were covering the iFuse Procedure. As of May 2017, eight of the largest 50 private payors were covering the iFuse Procedure regularly, while the vast majority of private payors were evaluating their coverage policies. In addition, because of the iFuse clinical evidence, the private payors, HCSC, Geisinger and SelectHealth, have issued positive coverage policies for iFuse while specifically excluding coverage for any competitive products. Beginning in the fourth quarter of 2016, the increasing coverage, combined with our sales and marketing efforts, has led to an increase in the number of procedures and a return to revenue growth.

Outside the United States, reimbursement levels vary significantly by country, and by region within some countries. Reimbursement is obtained from a variety of sources, including government-sponsored and private health insurance plans, and combinations of both. Some countries will require us to gather additional clinical data before recognizing and granting broader coverage and reimbursement for our products. It is our intent to complete the requisite clinical studies and obtain coverage and reimbursement approval beyond what we have today in countries where it makes economic sense to do so.

Third-party payors, whether foreign or domestic, or governmental or commercial, are developing increasingly sophisticated methods of controlling healthcare costs. In addition, in the United States, no uniform policy of coverage and reimbursement for medical device products and services exists among third-party payors. Therefore, coverage and reimbursement for medical device products and services can differ significantly from payor to payor. In addition, payors continually review new technologies for possible coverage and can, without notice, deny coverage for these new products and procedures. As a result, the coverage determination process is

often a time-consuming and costly process that requires us to provide scientific and clinical support for the use of our products to each payor separately, with no assurance that coverage and adequate reimbursement will be obtained, or maintained if obtained.

In addition to uncertainties surrounding coverage policies, there are periodic changes to reimbursement. Third-party payors regularly update reimbursement amounts and also from time to time revise the methodologies used to determine reimbursement amounts. This includes annual updates to payments to physicians, hospitals, and ambulatory surgical centers for procedures during which our products are used. An example of payment updates is the Medicare program's updates to hospital and physician payments, which are done on an annual basis using a prescribed statutory formula.

Private Payors. Private payors also decide whether to cover and how much to pay on an individual basis. We target and track 50 of the largest private payors that cover over 200 million lives in the United States as of December 31, 2016. As of March 2017, eight large private payors are covering the procedure regularly on a case-by-case basis or have issued formal positive written coverage policies, while 42 do not cover the procedure. In most cases, the payors who are not covering are re-evaluating coverage based on the new Category I CPT code, the INSITE study and other clinical evidence, and the recommendations of NASS and ISASS. Many payors will only review their coverage policies for a particular procedure on a scheduled basis, which can be every few months or as infrequently as once per year.

The table below shows the ten largest private payors in the United States, their approximate number of covered lives as of December 31, 2016, and their status regarding reimbursement coverage as of December 31, 2016:

Rank	Health Plan	Enrollment	Coverage Status
1	United Healthcare	48 million	Case-by-case coverage
2	Anthem (WellPoint)	34 million	Non-coverage
3	Aetna	20 million	Non-coverage
4	Health Care Service Corporation	15 million	Positive coverage**
5	Cigna	14 million	Non-coverage
6	Humana	10 million	Non-coverage
7	Kaiser	10 million	Case-by-case coverage*
8	Health Net	6 million	Non-coverage
9	Independence BC	6 million	Non-coverage
10	Highmark BCBS	5 million	Non-coverage

* For plans representing approximately 8 million covered lives.
** Effective January 1, 2017, HCSC began covering minimally invasive sacroiliac joint fusion using iFuse exclusively.

While we believe the increased coverage described above will have a positive effect on the number of iFuse Procedures and our associated revenue in the future, the effect likely will happen with a lag time: after a positive coverage decision is made, a number of months may pass before it impacts the number of procedures and associated revenue, since the surgeons have to be made aware of the coverage decision, schedule re-examinations of patients who were candidates for surgery and subsequently schedule surgeries for the patients who are still candidates.

In addition to clinical evidence, a number of economic publications we financially supported, including those in *ClinicoEconomics and Outcomes Research*, demonstrate that iFuse provides a cost savings to the healthcare system for non-surgical management over time. One of these studies used data from INSITE to calculate the incremental cost-effectiveness of the iFuse Procedure and found it to be similar to that of hip and knee arthroplasty. The two latter procedures are generally accepted as being safe, effective and highly cost-effective. The incremental cost effectiveness ratio, or ICER, of a procedure or therapy is a common way of

quantifying its cost-effectiveness. Therapies with ICERs below $50,000 are considered cost-effective and generally gain acceptance. For example, studies have shown that the ICER of total joint replacement surgery for knees is approximately $12,000 and that for hip replacements is approximately $10,000. One study showed the ICER of the iFuse procedure to be $13,000, nearly as cost effective as knee and hip surgeries, which are both common and well-accepted procedures.

A second study detailed a health economics model examining the cost impact of failing to consider the sacroiliac joint in the diagnosis of patients with low back pain in patients seeking surgery. Taking into account both the prevalence of sacroiliac joint dysfunction and the costs of diagnostic workup and surgical treatment, if a surgeon evaluating a patient with chronic low back pain fails to consider the sacroiliac joint, on average $3,100 more healthcare expenditures will ensue. The study concluded that taking the sacroiliac joint into account can save healthcare systems substantial amounts due primarily to reduction in misdiagnosis and its attendant costs. A third study used data from our two prospective trials conducted in the United States to examine the impact of sacroiliac joint fusion on worker productivity. Results suggest that sacroiliac joint fusion can increase the productivity of affected workers by an average of $6,900 compared to continued non-surgical care.

Many payors rely on assessments of new medical technologies and procedures by specialized third party review organizations to guide their coverage decisions. In May 2016, the ECRI Institute Health Technology Assessment Information Service published a positive review of the iFuse Implant System, citing our clinical evidence. In April 2017, the UK's National Institute for Health and Care Excellence, or NICE, published guidance on minimally invasive sacroiliac joint fusion, recommending that the procedure be available to properly diagnosed patients in the U.K. National Health System. NICE develops guidance and quality standards in health and social care and is a worldwide leader in technology evaluations. The recommendation states that the safety and efficacy of minimally invasive sacroiliac joint fusion surgery is adequate provided that standard arrangements are in place. Use with standard arrangements is the most positive recommendation that NICE can make for an interventional procedure such as MIS SI joint fusion. Two review organizations, Hayes, Inc. and Blue Cross Blue Shield's Evidence Street, still consider minimally invasive sacroiliac joint fusion surgery experimental and have so far not published positive assessments of the procedure or iFuse technology.

Medical Affairs and Education

We have created a medical affairs team that focuses both internally and externally. Internally, specialized medical knowledge, and practical experience with iFuse are used to help train our sales, marketing, quality, reimbursement, clinical, regulatory, engineering, and product development teams. This same specialized medical knowledge and practical experience allow us to create and execute a wide variety of programs to train the relevant external medical community, to assist them in identifying and diagnosing patients with sacroiliac joint dysfunction and to perform the iFuse Procedure. The medical affairs team is led by a board certified fellowship trained orthopedic spine surgeon. As of March 31, 2017, our faculty consisted of 48 surgeons, 15 pain management physicians, seven nurse practitioners/physician's assistants, and 63 physical therapists. These third- party consultants educate surgeons, physician's assistants, nurses, physical therapists, and other healthcare professionals regarding sacroiliac joint diagnosis and the iFuse Procedure.

Our surgeon training programs are for orthopedic spine surgeons, neurosurgeons, general orthopedic surgeons, and orthopedic trauma surgeons. Since its introduction, approximately 1,300 surgeons have treated patients with iFuse. We also have a large number of educational programs for the broader medical community including primary care physicians and other healthcare practitioners that may manage a sacroiliac joint patient non-surgically, such as physical therapists, pain management physicians, and chiropractors. We work to educate case managers, facilities where the iFuse Procedure is performed such as hospitals, as well as payors and health plans. For example, as of March 31, 2017, we have trained over 830 case managers across the United States. Case managers help patients navigate the healthcare system so that they receive the appropriate treatment. In addition to the continuing education program for case managers, we have created continuing education programs for physical therapists and chiropractors. As of March 31, 2017, our physical therapy continuing education programs were approved in 45 states. These programs include instruction on the diagnosis and non-surgical

treatment of sacroiliac joint dysfunction due to degenerative sacroiliitis and sacroiliac joint disruptions. Our medical affairs programs focus on working with leading spine surgeons to educate other surgeons on the differential diagnosis of sacroiliac joint disorders and the use of iFuse. We also work closely with medical societies to raise the awareness of and the appropriate diagnosis of sacroiliac joint dysfunction and the associated treatment options.

Sales and Marketing

We market and sell iFuse primarily through a direct sales force and a small number of third-party distributors. Our target customer base includes approximately 7,500 surgeons who perform spine and/or pelvic surgery, including orthopedic spine surgeons, neurosurgeons, general orthopedic surgeons, and orthopedic trauma surgeons.

Our direct sales organization in the United States is comprised of eight sales regions. Each region is comprised of a number of territory sales managers who act as the primary customer contact. Our territory sales managers have extensive training and experience selling medical devices for spine problems and pain management, generally focusing on emerging technologies and markets. As of March 31, 2017, our territory sales managers were led by seven regional sales managers who reported to our Senior Director of U.S. Sales. The Senior Director of U.S. Sales reports to our Chief Commercial Officer. As of March 31, 2017, our U.S. sales force consisted of 48 sales representatives directly employed by us and 13 third-party distributors.

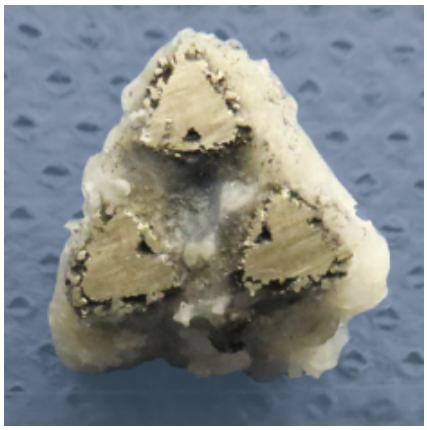
In addition to general sales and marketing training, we provide our sales organization with comprehensive, hands-on cadaveric and dry-lab training sessions focusing on the clinical benefits of our products and how to use them. We believe our robust training and professional development programs have been an important component of our success to date and will help support our anticipated future growth. We expect to continue to increase the size of our sales organization in order to increase sales and market penetration and to provide the significant, ongoing level of customer support required by our sales and marketing strategy.

As of March 31, 2017, we had 27 employees working in our European operations, and have established operations in Italy (2010), Germany (2014), and the United Kingdom (2015). As of March 31, 2017, our international sales force consisted of 12 sales representatives directly employed by us and 28 exclusive third- party distributors, which together had sales in 27 countries through March 31, 2017. We anticipate continuing to build our operations in the major European countries while establishing distributor arrangements in smaller ones. We intend to follow a similar model in Europe to the one established in the United States, working with internationally recognized healthcare professional experts as we expand our training and reimbursement activities. As of the date of this prospectus, surgeons had performed the first iFuse Procedures in New Zealand, Hong Kong, Australia and Taiwan.

Research and Development

Since the launch of the initial system, we have introduced a number of new instrument enhancements, product enhancements and procedure enhancements. The most notable instrument enhancement was the release of the revamped instruments in the Radiolucent Set. We also run a “Non Standard Product” program that designs and manufactures one-off, Class I instruments to our surgeon customers based on one-off requests.

Our next generation iFuse implant, the iFuse-3D, was cleared for marketing by the U.S Food and Drug Administration, or FDA, in March 2017 and the European Union in May 2017. This implant is produced with 3D printing and is designed to promote in-growth, through-growth and on-growth by bone. This product has shown positive bone growth in animal studies as evidenced in two peer reviewed studies accepted in March 2017 for publication in the *International Journal of Spine Surgery*. We are planning a gradual roll out of this product. The photographs below from sheep studies show robust growth of bone into our iFuse-3D implants, whether or not ground-up bone is added. Ground-up bone was added to the implant shown on the right.



We expect to continue developing enhancements to iFuse to meet our customers' changing needs and improve the surgery's effectiveness. Our research and development expense was $8.6 million and $6.4 million in 2015 and 2016, respectively.

Competition

We believe we were the first to develop, manufacture, and market an implant cleared by the FDA expressly for sacroiliac joint fusion. Over the past several years, other companies have subsequently recognized the opportunity and have entered the minimally invasive sacroiliac joint fusion market. However, all of these products are either screw-based or allograft products. We expect more competitors to enter into the market and an increased number of new product introductions by existing competitors. Many of our competitors are large, publicly traded companies that can dedicate far greater resources to the minimally invasive sacroiliac joint market than we can. These companies often have wide product offerings for spine and orthopedic surgery, which allow them to bundle products in order to win large hospital group contracts and can increase the barrier to entry for us. We also expect there to be a continued push for non-surgical alternatives.

In the United States, our primary competitors are Globus Medical, Inc., Medtronic plc, X-Spine Systems, Inc., XTant, and Zyga Technology, Inc. Globus Medical, SIGNUS Medizintechnik GmbH, and X-Spine Systems are our primary competitors in Europe. However, they sell screw-based products, which we believe to be weaker and less able to resist rotation than our triangular iFuse Implants. We also compete against non-hardware products, such as allograft bone implants. These allograft products are comprised of human cells or tissues and are regulated by the FDA differently from hardware medical devices.

Based on our commercial experience and market research, we believe iFuse is currently used in approximately 70% of minimally invasive surgical fusions of the sacroiliac joint in the United States. iFuse is the only minimally invasive product for sacroiliac joint fusion commercially available in the United States that, to our knowledge, is supported by published evidence of safety, clinical effectiveness, durability, and economic utility. These benefits are supported by more than 50 published papers.

The following are the primary competitive factors on which companies compete in our industry:

- product and clinical procedure effectiveness;
- ease of surgical technique and use of associated instruments;
- safety;
- published clinical outcomes and evidence;
- sales force knowledge;
- product support and service, and customer service;
- comprehensive training, including disease, anatomy, diagnosis and treatment;
- product innovation and the speed of innovation;
- intellectual property;
- accountability and responsiveness to customers' demands;
- pricing and reimbursement;
- scientific (biomechanics) data; and
- attracting and retaining key personnel.

Intellectual Property

We protect our intellectual property through our pending patent applications and issued patents. As of March 31, 2017, we had been issued 23 patents in the United States, five patents in Japan and one in China. Also, as of March 31, 2017, we have 16 pending patent applications in the United States and 12 pending patent applications outside of United States. We have focused the majority of our foreign patent efforts in Brazil, China, Europe, India, Japan, and South Korea.

Generally, our current U.S. patents are expected to expire between August 2024 to March 2033, and our Japanese patents are expected to expire between August 2025 and October 2031.

We have 17 registered trademarks in the United States and have filed for seven more. In other countries, we have focused on registering three primary trademarks: "iFuse Implant System," "SI-BONE," and the SI-BONE logo. As of March 31, 2017, we have sought protection for at least two of these trademarks in 60 countries.

We also rely upon trade secrets, know-how and continuing technological innovation, and may rely upon licensing opportunities in the future, to develop and maintain our competitive position. We may seek to protect our proprietary rights through a variety of methods, including confidentiality agreements and proprietary information agreements with suppliers, employees, consultants and others who may have access to proprietary information, under which they are bound to assign to us inventions made during the term of their employment.

The term of individual patents depends on the legal term for patents in the countries in which they are granted. In most countries, including the United States, the patent term is generally 20 years from the earliest claimed filing date of a non-provisional patent application in the applicable country. There can be no assurance that patents will be issued from any of our pending applications or that, if patents are issued, they will be of sufficient scope or strength to provide meaningful protection for our technology. Notwithstanding the scope of the patent protection available to us, a competitor could develop treatment methods or devices that are not covered by our patents but which compete with our proprietary technology and products. Furthermore, numerous U.S. and foreign issued patents and patent applications owned by third parties exist in the fields in which we are developing products. Because patent applications can take many years to issue, there may be applications unknown to us, which applications may later result in issued patents that our existing or future products or proprietary technologies may be alleged and/or found to infringe.

There has been substantial litigation regarding patent and other intellectual property rights in the medical device industry. In the future, we may need to engage in litigation to enforce patents issued or licensed to us, to protect our trade secrets or know-how and brands, to defend against claims of infringement of the rights of others or to determine the scope and validity of the proprietary rights of others. Litigation could be costly and could divert our attention from other functions and responsibilities. Adverse determinations in litigation could reduce the barriers to entry that we have established for iFuse, or subject us to significant liabilities to third parties, require us to seek licenses from third parties or prevent us from manufacturing, selling or using iFuse, any of which could severely harm our business.

Regulation

Domestic Regulation of Our Products and Business

Our research, development and clinical programs, as well as our manufacturing and marketing operations, are subject to extensive regulation in the United States and other countries. Most notably, all of our products sold in the United States are subject to the Federal Food, Drug, and Cosmetic Act, or the FDCA, as implemented and enforced by the FDA. The FDA governs the following activities that we perform or that are performed on our behalf, to ensure that medical products distributed domestically or exported internationally are safe and effective for their intended uses:

- product design, development, and manufacture;
- product safety, testing, labeling, and storage;
- record keeping procedures;
- product marketing, sales, distribution and export; and
- post-marketing surveillance, complaint handling, medical device reporting, reporting of deaths, serious injuries or device malfunctions, and repair or recall of products.

There are numerous FDA regulatory requirements governing the clearance or approval and marketing of our products. These include:

- product listing and establishment registration, which helps facilitate FDA inspections and other regulatory action;
- investigational device exemptions to conduct premarket clinical trials, which include extensive monitoring, recordkeeping, and reporting requirements;
- Quality System Regulation, or QSR, which requires manufacturers, including third-party manufacturers, to follow stringent design, testing, control, documentation and other quality assurance procedures during all aspects of the manufacturing process;
- labeling regulations and FDA prohibitions against the promotion of products for uncleared, unapproved or off-label use or indication;
- clearance of product modifications that could significantly affect safety or effectiveness or that would constitute a major change in intended use of one of our cleared devices;
- approval of product modifications that affect the safety or effectiveness of one of our approved devices;
- medical device reporting regulations, which require that manufacturers comply with FDA requirements to report if their device may have caused or contributed to a death or serious injury, or has malfunctioned in a way that would likely cause or contribute to a death or serious injury if the malfunction of the device or a similar device were to recur;
- post-approval restrictions or conditions, including post-approval study commitments;
- post-market surveillance regulations, which apply when necessary to protect the public health or to provide additional safety and effectiveness data for the device;

- the FDA's recall authority, whereby it can ask, or under certain conditions order, device manufacturers to recall from the market a product that is in violation of governing laws and regulations;
- regulations pertaining to voluntary recalls; and
- notices of corrections or removals.

We have registered our facility with the FDA as a medical device manufacturer. The FDA has broad post- market and regulatory enforcement powers. We and our third-party manufacturers are subject to announced and unannounced inspections by the FDA to determine our compliance with the QSR and other regulations and these inspections may include the manufacturing facilities of our suppliers.

FDA Premarket Clearance and Approval Requirements

Unless an exemption applies, each medical device we wish to commercially distribute in the United States will require either premarket notification, or 510(k), clearance or approval of a premarket approval application, PMA, from the FDA. The FDA classifies medical devices into one of three classes. Devices deemed to pose lower risks are placed in either Class I or II, which typically requires the manufacturer to submit to the FDA a premarket notification requesting permission to commercially distribute the device. This process is generally known as 510(k) clearance. Some low risk devices are exempted from this requirement. Devices deemed by the FDA to pose the greatest risks, such as life-sustaining, life-supporting or implantable devices, or devices deemed not substantially equivalent to a previously cleared 510(k) device, are placed in Class III, requiring a PMA. All of our currently marketed products are Class II devices, subject to 510(k) clearance.

Clinical Trials

Clinical trials are generally required to support a PMA application and are sometimes required for 510(k) clearance. Such trials for implanted devices such as iFuse generally require an investigational device exemption application, or IDE, approved in advance by the FDA for a specified number of subjects and study sites, unless the product is deemed a nonsignificant risk device eligible for more abbreviated IDE requirements. Clinical trials are subject to extensive monitoring, recordkeeping and reporting requirements. Clinical trials must be conducted under the oversight of an institutional review board, or IRB, for the relevant clinical trial sites and must comply with FDA regulations, including but not limited to those relating to good clinical practices. To conduct a clinical trial, we also are required to obtain the subjects' informed consent in form and substance that complies with both FDA requirements and state and federal privacy and human subject protection regulations. We, the FDA or the institutional review board, or IRB, could suspend a clinical trial at any time for various reasons, including a belief that the risks to study subjects outweigh the anticipated benefits. Even if a trial is completed, the results of clinical testing may not adequately demonstrate the safety and effectiveness of the device or may otherwise not be sufficient to obtain FDA clearance or approval to market the product in the United States. Similarly, in Europe the clinical study must be approved by a local ethics committee and in some cases, including studies with high- risk devices, by the ministry of health in the applicable country.

Pervasive and Continuing Regulation

After a device is placed on the market, numerous regulatory requirements continue to apply. These include:

- Product listing and establishment registration, which helps facilitate FDA inspections and other regulatory action;
- QSR, which requires manufacturers, including third-party manufacturers, to follow stringent design, testing, control, documentation and other quality assurance procedures during all aspects of the manufacturing process;
- labeling regulations and FDA prohibitions against the promotion of products for uncleared, unapproved or off-label use or indication;
- clearance of product modifications that could significantly affect safety or effectiveness or that would constitute a major change in intended use of one of our cleared devices;

- approval of product modifications that affect the safety or effectiveness of one of our approved devices;
- medical device reporting regulations, which require that manufacturers comply with FDA requirements to report if their device may have caused or contributed to a death or serious injury, or has malfunctioned in a way that would likely cause or contribute to a death or serious injury if the malfunction of the device or a similar device were to recur;
- post-approval restrictions or conditions, including post-approval study commitments;
- post-market surveillance regulations, which apply when necessary to protect the public health or to provide additional safety and effectiveness data for the device;
- the FDA's recall authority, whereby it can ask, or under certain conditions order, device manufacturers to recall from the market a product that is in violation of governing laws and regulations;
- regulations pertaining to voluntary recalls; and
- notices of corrections or removals.

The FDA inspected our facilities in May 2014. As a result, we received a Form 483 with three observations that have been since been corrected following a corrective and preventative action plan. We responded to the Agency in writing and the matter was closed as of October 2014. To date, the FDA has not taken any further actions with respect to the May 2014 inspection or its findings. The FDA inspected our facilities again in December 2016. As a result, no findings were noted.

Promotional Materials—"Off-Label" Promotion

Advertising and promotion of medical devices, in addition to being regulated by the FDA, are also regulated by the Federal Trade Commission and by state regulatory and enforcement authorities. If the FDA determines that our promotional materials or training constitutes promotion of an unapproved use, it could request that we modify our training or promotional materials or subject us to regulatory or enforcement actions, including the issuance of an untitled letter, a warning letter, injunction, seizure, civil fine, or criminal penalties. It is also possible that other federal, state or foreign enforcement authorities might take action if they consider our promotional or training materials to constitute promotion of an unapproved use, which could result in significant fines or penalties under other statutory authorities, such as laws prohibiting false claims for reimbursement. In that event, our reputation could be damaged and adoption of the products would be impaired.

In addition, under the federal Lanham Act and similar state laws, competitors, and others can initiate litigation relating to advertising claims.

International Regulation of Our Products

Our research, development and clinical programs, as well as our manufacturing and marketing operations, are subject to extensive regulation in other countries. For example, in the European Economic Area, or EEA, our devices are required to comply with the Essential Requirements laid down in Annex I to the EU Medical Devices Directive (Council Directive 93/42/EEC), or Essential Requirements, concerning medical devices. Compliance with these requirements entitles us to affix the CE mark to our medical devices, without which they cannot be commercialized in the EEA.

To demonstrate compliance with the Essential Requirements, we must undergo a conformity assessment procedure, which varies according to the type of medical device and its classification. Except for low risk medical devices (Class I with no measuring function and which are not sterile), where the manufacturer can issue an EC Declaration of Conformity based on a self-assessment of the conformity of its products with the Essential

Requirements, a conformity assessment procedure requires the intervention of a Notified Body, which is an organization designated by the competent authorities of a EEA country to conduct conformity assessments. The Notified Body typically audits and examines products' Technical File and the quality system for the manufacture, design and final inspection of our devices before issuing a CE Certificate of Conformity demonstrating compliance with the relevant Essential Requirements. Following the issuance of this CE Certificate of Conformity, we can draw up an EC Declaration of Conformity and affix the CE mark to the products covered by this CE Certificate of Conformity and the EC Declaration of Conformity. We have successfully completed several Notified Body audits since our original certification in November 2010. Following these audits, our Notified Body issued International Standards Organization Certificates and CE Certificates of Conformity allowing us to draw up an EC Declaration of Conformity and affix the CE mark to certain of our devices.

After the product has been CE marked and placed on the market in the EEA, we must comply with a number of regulatory requirements relating to:

- registration of medical devices in individual EEA countries;
- pricing and reimbursement of medical devices;
- establishment of post-marketing surveillance and adverse event reporting procedures;
- Field Safety Corrective Actions, including product recalls and withdrawals; and
- interactions with physicians.

Failure to comply with these requirements may result in enforcement measures being taken against us by the competent authorities of the EEA countries. These can include fines, administrative penalties, compulsory product withdraws, injunctions and criminal prosecution. Such enforcement measures would have an adverse effect on our capacity to market our products in the EEA and, consequently, on our business and financial position.

Further, the advertising and promotion of our products in the EEA is subject to the provisions of the Medical Devices Directive, Directive 2006/114/EC concerning misleading and comparative advertising, and Directive 2005/29/EC on unfair commercial practices, as well as other national legislation in the EEA countries governing the advertising and promotion of medical devices. These laws may limit or restrict the advertising and promotion of our products to the general public and may impose limitations on our promotional activities with healthcare professionals.

Regulatory Status

In November 2008, we received 510(k) clearance to market iFuse from the FDA. Since 2008, we have received additional FDA 510(k) clearances for new instruments, additional implant sizes and labeling changes. In the United States, the iFuse Implant System is intended for sacroiliac fusion for conditions, including sacroiliac joint dysfunction that is a direct result of sacroiliac joint disruptions and degenerative sacroiliitis. This includes conditions where symptoms began during pregnancy or in the peripartum period and have persisted postpartum for more than six months. Clinical Studies have demonstrated that treatment with the iFuse Implant System improved pain, patient function, and quality of life. In the future, we plan to pursue additional 510(k) clearances for new products and changes to the current indication for iFuse.

In November 2010, we obtained a CE Certificate of Conformity and affixed a CE mark to our device to allow commercialization of iFuse in the EEA. In the EEA and Switzerland, iFuse is intended for sacroiliac joint fusion. Since 2010, we have added additional instruments and implant sizes and labeling updates to our product offerings in Europe. We plan to continue to work with our Notified Body to incorporate new products and labeling updates in our Technical Files for CE marking in European.

Since July 2013, we have obtained approval for iFuse in regions beyond the United States and the EEA, including Australia, Canada, Hong Kong, Israel, Malaysia, New Zealand, and Singapore. Additional product applications are under review in Mexico, South Korea, Taiwan, Saudi Arabia, and India. We are currently collecting information to determine our regulatory strategy in Japan and China.

In March 2017, our next generation iFuse-3D implants received marketing clearance from the FDA.

Healthcare Fraud and Abuse

Federal and state governmental agencies and equivalent foreign authorities subject the healthcare industry to intense regulatory scrutiny, including heightened civil and criminal enforcement efforts. These laws constrain the sales, marketing and other promotional activities of medical device manufacturers by limiting the kinds of financial arrangements we may have with hospitals, physicians and other potential purchases of our products. Federal healthcare fraud and abuse laws apply to our business when a customer submits a claim for an item or service that is reimbursed under Medicare, Medicaid or other federally-funded healthcare programs. Descriptions of some of the laws and regulations that may affect our ability to operate follows.

The federal Anti-Kickback Statute prohibits, among other things, persons from knowingly and willfully soliciting, receiving, offering or paying remuneration, directly or indirectly, in cash or in kind, to induce or reward either the referral of an individual for, or the purchase, order or recommendation of, items or services for which payment may be made, in whole or in part, under federal healthcare programs. The term “remuneration” has been broadly interpreted to include anything of value, and the government can establish a violation of the Anti-Kickback Statute without proving that a person or entity had actual knowledge of the law or a specific intent to violate. The Anti-Kickback Statute is subject to evolving interpretations and has been applied by government enforcement officials to a number of common business arrangements in the medical device industry. There are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution; however, those exceptions and safe harbors are drawn narrowly, and there is no exception or safe harbor for many common business activities. Failure to meet all of the requirements of a particular statutory exception or regulatory safe harbor does not make the conduct per se illegal under the Anti-Kickback Statute, but the legality of the arrangement will be evaluated on a case-by-case basis based on the totality of the facts and circumstances. A number of states also have anti-kickback laws that establish similar prohibitions that may apply to items or services reimbursed by government programs, as well as any third-party payors, including commercial payors.

The Civil False Claims Act prohibits, among other things, knowingly presenting or causing the presentation of a false or fraudulent claim for payment of federal funds, or knowingly making, or causing to be made, a false record or statement material to a false or fraudulent claim to avoid, decrease or conceal an obligation to pay money to the federal government. A claim including items or services resulting from a violation of the Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the False Claims Act. Actions under the False Claims Act may be brought by the government or as a *qui tam* action by a private individual in the name of the government. *Qui tam* actions are filed under seal and impose a mandatory duty on the U.S. Department of Justice to investigate such allegations. Most private citizen actions are declined by the Department of Justice or dismissed by federal courts. However, the investigation costs for a company can be significant and material even if the allegations are without merit. There are also criminal penalties, including imprisonment and criminal fines, for making or presenting a false or fictitious or fraudulent claim to the federal government.

False Claims Act liability is potentially significant in the healthcare industry because the statute provides for treble damages and mandatory penalties of $5,500 to $11,000 per false claim or statement (and penalties of $10,781 to $21,563 per false claim or statement for penalties assessed after August 1, 2016, based on violations occurring after November 2, 2015). Because of the potential for large monetary exposure, healthcare companies often resolve allegations without admissions of liability for significant and sometimes material amounts to avoid the uncertainty of treble damages and per claim penalties that may awarded in litigation proceedings. They may be required, however, to enter into corporate integrity agreements with the government, which may impose substantial costs on companies to ensure compliance.

In addition, the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, created federal criminal statutes that prohibit, among other actions, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, including private third-party payors, knowingly and willfully embezzling or stealing from a healthcare benefit program, willfully obstructing a criminal investigation of a healthcare offense, and knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services.

The federal Physician Payment Sunshine Act, which is being implemented by CMS as the Open Payments program, requires manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid, or the Children's Health Insurance Program to report annually with certain exceptions to CMS information related to payments or other "transfers of value" made to physicians and teaching hospitals, and requires applicable manufacturers and group purchasing organizations to report annually to CMS ownership and investment interests held by physicians and their immediate family members and payments or other "transfers of value" to such physician owners. Certain states also mandate implementation of commercial compliance programs, impose restrictions on device manufacturer marketing practices, and/or require tracking and reporting of gifts, compensation and other remuneration to healthcare professionals and entities.

The Foreign Corrupt Practices Act of 1997 and similar anti-bribery laws in other countries, such as the United Kingdom Anti-Bribery Act generally prohibit companies and their intermediaries from making improper payments to government officials and/or other persons for the purpose of obtaining or retaining business. Our policies mandate compliance with these anti-bribery laws.

Violations of these laws can subject us to administrative, civil and criminal penalties, including imprisonment, fines, damages, and exclusion from participation in federal healthcare programs, including Medicare and Medicaid.

Coverage and Reimbursement

Coverage and reimbursement for iFuse products and related procedures vary by setting of care, payor type, and region. In the United States, healthcare providers that purchase iFuse products look to various third-party payors, such as Medicare, Medicaid, private commercial insurance companies, health maintenance organizations, accountable care organization, or ACOs, and other healthcare-related organizations, to cover and pay for all or part of the costs of these procedures. These providers bill patients for any applicable deductibles or co-payments. Sales volumes and prices of company products will continue to depend in large part on the availability of coverage and reimbursement from such third-party payors.

In the United States, the Medicare program is commonly used as a model for how private payors and other governmental payors develop their coverage and reimbursement policies for healthcare items and services, including iFuse Procedures. Medicare's coverage policies may vary across the country, however. Unless a national coverage policy exists for a particular technology, each Medicare Administrative Contractor, or MAC, is permitted to make its own determination of whether that item or service is covered by Medicare.

Medicare's reimbursement rates for the iFuse Procedure vary due to geographic location, the nature of facility in which the procedure is performed (i.e., hospital inpatient department, hospital outpatient department, or ambulatory surgical center) and other factors. Medicare reviews and updates its payment rates and methodologies for these settings of care annually, and rates can change significantly from year to year. In addition, Congress can alter reimbursement rates at any time by mandating changes to Medicare's payment methodologies.

Similarly, private payor coverage policies and reimbursement rates tend to vary across payors and settings of care. Payors continually review the clinical evidence for new technologies and can change their coverage policies without notice or deny payment if the product was not used in accordance with the payor's coverage policy. Payors also review and challenge the prices charged for products and procedures.

In the United States, a large percentage of insured individuals receive their medical care through managed care programs, which monitor and often require pre-approval of the services that a member will receive. Some managed care programs pay their providers on a per capita basis, which puts the providers at financial risk for the services provided to their patients by paying these providers a predetermined payment per member per month.

Outside the United States, reimbursement levels vary significantly by country, and by region within some countries. Reimbursement is obtained from a variety of sources, including government-sponsored and private health insurance plans, and combinations of both. Some countries will require us to gather additional clinical data before recognizing and granting broader coverage and reimbursement for our products. European Economic Area, or EEA.

Manufacturing and Supply

We use third-party manufacturers to produce our instruments and implants. The majority of our instruments have secondary manufacturing suppliers and we continually work with additional manufacturers to establish secondary suppliers. Our iFuse Implants are currently provided by a single source, Orchid Bio-Coat, a division of Orchid Orthopedic Solutions LLC, or Orchid. In April 2016, we entered into a Quality and Manufacturing Agreement with Orchid MPS Holdings, LLC, or Orchid, which agreement was amended in March 2017, pursuant to which Orchid manufactures certain of our implants in accordance with our specifications. We purchase product under the agreement pursuant to purchase orders we are required to deliver against a blanket purchase order we provide based on our product forecast; provided, however, that while we are required to purchase the amounts forecast in the blanket purchase order, we are not required to purchase product in excess of a specified amount of inventory based on our original forecast. During the first year of the agreement, the prices we pay for products are fixed under the agreement; provided that on an annual basis thereafter we will meet with Orchid to review changes in direct costs beyond certain thresholds and may negotiate changes to prices based on such changes in costs. In addition, the prices we pay for product may be increased with our consent to the extent such products are ordered with delivery timelines shorter than agreed upon order timelines. The initial term of the agreement is three years; provided, however, the agreement may be terminated immediately by (a)(i) either party as the result of the other party's bankruptcy or insolvency, (ii) in the case of Orchid, our failure to make payments for products purchased under the agreement if such failure continues for a specified period after notice from Orchid, or (iii) either party as the result of a material breach of the agreement and such breaching party fails to cure such breach within a specified period after notice from the non-breaching party, (b) us in the event Orchid fails to remedy any deficiencies we may identify pursuant to our right to inspect Orchid's facilities under the agreement, and (c) either party with prior written notice as provided under the agreement. To mitigate supply risk, we carry a minimum of two months of reserve stock based on current sales estimates and typically place implant orders with Orchid prior to estimated demand.

In addition we have added a second source supplier for machine parts. On February 1, 2017, we entered into a non-exclusive Manufacturing, Quality and Supply Agreement with rms Company, or RMS, pursuant to which RMS manufactures certain of our implants in accordance with our specifications. We may purchase product under the agreement pursuant to purchase orders we deliver from time to time based on forecasted requirements; provided, however, we have no minimum purchase obligations under the agreement. During the initial three year term of the agreement, the prices we pay for products are fixed under the agreement provided that if order volumes deviate from forecasted amounts beyond certain thresholds we or RMS may request to negotiate further price changes. After the initial term, the agreement automatically renews for successive one year periods; provided, however, the agreement may be terminated early by either party in the event of a material breach of the agreement by the other party or by the insolvency of the other party. We may terminate the agreement at any time in the event (i) RMS fails to ship conforming product and such failure results in delays as specified in the agreement, (ii) RMS changes its manufacturing site without our prior approval, (iii) of a change of control of RMS, or (iv) RMS breaches a non-solicit covenant with respect to our employees or consultants. The parts manufactured by RMS need to be coated by Orchid to finish the goods.

Aside from quality agreements, we do not currently have manufacturing agreements with any of our manufacturers and orders are controlled through purchase orders.

We believe that our manufacturing operations, and those of our suppliers, are in compliance with regulations mandated by the FDA, as well as Medical Devices Directive regulations in the EEA. Manufacturing facilities that produce medical devices or component parts intended for distribution world-wide are subject to regulation and periodic planned and unannounced inspection by the FDA and other domestic and international regulatory agencies.

In the United States, products we sell are required to be manufactured in compliance with the FDA's QSR, which covers the methods used in, and the facilities used for, the design, testing, control, manufacturing, labeling, quality assurance, packaging, storage, and shipping. In international markets, we are required to obtain and maintain various quality assurance and quality management certifications. We have obtained the following international certifications: Quality Management System ISO13485, Full Quality Assurance Certification for the design and manufacture of iFuse, and a Design Examination certificate for iFuse.

We are required to demonstrate continuing compliance with applicable regulatory requirements to maintain these certifications and will continue to be periodically inspected by international regulatory authorities for certification purposes. Further, we and certain of our suppliers are required to comply with all applicable regulations and current good manufacturing practices. As set forth above, these FDA and international regulations cover, among other things, the methods and documentation of the design, testing, production, control, quality assurance, labeling, packaging, sterilization, storage, and shipping of our products. Compliance with applicable regulatory requirements is subject to continual review and is monitored rigorously through periodic inspections. If we or our manufacturers fail to adhere to current good manufacturing practice requirements, this could delay production of our products and lead to fines, difficulties in obtaining regulatory approvals, recalls, enforcement actions, including injunctive relief or consent decrees, or other consequences, which could, in turn, have a material adverse effect on our financial condition or results of operations.

Product Liability and Insurance

The manufacture and sale of our products subjects us to the risk of financial exposure to product liability claims. Our products are used in situations in which there is a risk of serious injury or death. We carry insurance policies which we believe to be customary for similar companies in our industry. We cannot assure you that these policies will be sufficient to cover all or substantially all losses that we experience.

We endeavor to maintain executive and organization liability insurance in a form and with aggregate coverage limits that we believe are adequate for our business purposes, but our coverage limits may prove not to be adequate in some circumstances.

Legal Proceedings

We are, and from time to time may be, party to litigation and subject to claims incident to the ordinary course of business. As our growth continues, we may become party to an increasing number of litigation matters and claims. The outcome of litigation and claims cannot be predicted with certainty, and the resolution of these matters could materially affect our future results of operations, cash flow or financial position. We are not presently party to any legal proceedings that in the opinion of management, if determined adversely to us, would individually or taken together have a material adverse effect on our business, operating results, financial condition or cash flow.

Employees

As of March 31, 2017, we had 183 employees, including sales and marketing, product development, general administrative and accounting, both domestically and internationally. As of March 31, 2017, we had a direct field sales organization of 73 in the United States and 12 in Europe. In the United States, we sell primarily through our direct field organization, and we have a small number of third-party distributors. None of our employees is subject to a collective bargaining agreement, and we consider our relationship with our employees to be good.

Company History

SI-BONE was founded in 2008 by the main inventor of iFuse and member of our board of directors, orthopedist Mark A. Reiley, M.D., our President, Chief Executive Officer and Chairman, Jeffrey W. Dunn, and orthopedic surgeon Leonard Rudolf, M.D. Dr. Reiley previously invented balloon kyphoplasty and founded Kyphon Inc., which was sold to Medtronic plc in 2007. He also invented the INBONE total ankle replacement system, which was sold to Wright Medical Technology, Inc. in 2008.

Facilities

Our leased headquarters in San Jose, California, is comprised of approximately 18,892 square feet. Our headquarters houses our research, product development, marketing, finance, education, and administration functions. We believe our facilities are adequate and suitable for our current needs but in the future we may need additional space.

MANAGEMENT

Executive Officers, Key Employees and Directors

The following table sets forth information regarding our executive officers, key employees and directors, as of May 1, 2017:

Name	Age	Position(s)
Executive Officers and Key Employees		
Jeffrey W. Dunn	62	President, Chief Executive Officer, and Chairman
Laura A. Francis	50	Chief Financial Officer
W. Carlton Reckling, M.D.	55	Chief Medical Officer and Vice President, Medical Affairs
Anthony J. Recupero	58	Chief Commercial Officer
Scott A. Yerby, Ph.D.	49	Chief Technology Officer
Daniel J. Cher, M.D.	52	Vice President, Clinical Affairs
Roxanne Dubois	52	Vice President, Regulatory and Quality
Nikolas F. Kerr	46	Vice President, Product Marketing
Andrea Mercanti	53	Vice President, EMEA Operations
Michael Mydra	56	Vice President, Health Outcomes & Reimbursement
Michael A. Pisetsky	39	Vice President, General Counsel and Chief Compliance Officer
Joseph W. Powers	58	Vice President, Marketing
Non-Employee Directors		
David P. Bonita, M.D.(2)	41	Director
Timothy E. Davis, Jr.(1)(2)	47	Director
John G. Freund, M.D.(3)	63	Director
Gregory K. Hinckley(1)	70	Director
Karen A. Licitra(2)	57	Director
Timothy B. Petersen(1)	53	Director
Mark A. Reiley, M.D.	67	Director
Keith C. Valentine(3)	49	Director

(1) Member of the audit committee.
(2) Member of the compensation committee.
(3) Member of the nominating and corporate governance committee.

Executive Officers

Jeffrey W. Dunn has served as our President and Chief Executive Officer and as the Chairman of our board of directors since our inception in April 2008. Prior to joining us, Mr. Dunn served as Chief Executive Officer of INBONE Technologies, Inc., an ankle replacement and small bone fusion medical device company, from December 2006 to April 2008, until its sale to Wright Medical Technology, Inc. in April 2008. From August 2000 to June 2006, Mr. Dunn was the Chief Executive Officer of Active Decisions, Inc., a software as a service business, until its sale to Knova Software, Inc. From December 1999 to June 2000, Mr. Dunn was the Chief Executive Officer of Velogic, Inc., an internet performance testing software company, until its sale to Keynote Systems Inc. From June 1999 to December 1999, Mr. Dunn was the Chief Executive Officer of EnterpriseLink

Inc., a provider of enterprise Internet enablement software, until its sale to Merant, Inc. From November 1994 to June 1998, Mr. Dunn was Chief Executive Officer of AccelGraphics Inc., a 3D graphics system supplier, until its sale to Evans and Sutherland Computer Corporation. As well, during his career, Mr. Dunn held executive positions with Evans and Sutherland, Cygnet Systems, Inc., Avnet, Inc. and Xerox Corporation. Mr. Dunn received a B.A. from Colgate University and an M.B.A. from Babson College. We believe Mr. Dunn's experience in the industry, his role as our President and Chief Executive Officer, and his knowledge of our company enable him to make valuable contributions to our board of directors.

Laura A. Francis has served as our Chief Financial Officer since May 2015. Prior to joining us, Ms. Francis was the Chief Financial Officer for Auxogyn, Inc., a women's health company, from December 2012 to September 2014. From September 2004 to December 2012, Ms. Francis served as Vice President of Finance, Chief Financial Officer and Treasurer for Promega Corporation, a life science reagent company. From March 2002 to September 2004, Ms. Francis served as the Chief Financial Officer of Bruker BioSciences Corporation, a public life science instrumentation company. From May 2001 to March 2002, Ms. Francis served as Chief Operating Officer and Chief Financial Officer of Nutra-Park Inc., an agricultural biotechnology company. From April 1999 to May 2001, Ms. Francis was Chief Financial Officer of Hypercosm, Inc., a software company. From October 1995 to April 1999, Ms. Francis was an engagement manager with McKinsey & Company, a consulting firm. Early in her career, Ms. Francis was an audit manager with Coopers & Lybrand, an accounting firm. Ms. Francis received a B.B.A. from the University of Wisconsin and an M.B.A. from Stanford University. She is a Certified Public Accountant (inactive) in the State of California.

W. Carlton Reckling, M.D. has served as our Vice President, Medical Affairs since April 2012 and our Chief Medical Officer since February 2017. From July 1994 to April 2012, Dr. Reckling was a spine surgeon at the Spine Center in Loveland, Colorado, Rocky Mountain Orthopedic Specialists in Cheyenne, Wyoming, the Center for Spine & Orthopedic Surgery in Cheyenne, Wyoming, Associates in Orthopedic Surgery in Cheyenne, Wyoming, and Ramsey Hospital and Clinics in St. Paul, Minnesota. Dr. Reckling received a B.S. in Chemical Engineering from Northwestern University, an M.D. from Creighton University, and an M.B.A. from the University of Wyoming. He completed his internship and his residency in orthopedic surgery at the University of Minnesota. While in the Minnesota program, he spent time at the Twin Cities Scoliosis Center. He completed his fellowship in spine surgery at Queen's University Medical Centre in Nottingham, England. Dr. Reckling also underwent additional training in general surgery at the University of Minnesota Hospitals and Clinics in Minneapolis, Minnesota. Dr. Reckling is a board-certified orthopedic spine surgeon.

Anthony J. Recupero has served as our Chief Commercial Officer since July 2016. Prior to joining us, Mr. Recupero was the President of Catalyst Performance Advisors, LLC, where he advised leading medical device companies on commercial strategy from June 2013 to July 2016. In July 2008, Mr. Recupero joined Baxano, Inc., a medical device company with minimally invasive products to treat degenerative conditions of the spine affecting the lumbar region, initially as Vice President of Sales and Marketing and was promoted in February 2009 to President and Chief Executive Officer until its acquisition by TranS1 in June 2013. From January 2005 to July 2008, Mr. Recupero was President of Recupero Consulting Group, LLC, where he advised leading medical device companies on commercial strategy. From October 1999 to December 2004, Mr. Recupero was the Vice President of Sales for Kyphon. Early in his career, Mr. Recupero progressed to senior sales management roles at United States Surgical Corporation and Sulzer Spine-Tech, Inc. Mr. Recupero received a B.A. in Communications from State University of New York at Albany.

Scott A. Yerby, Ph.D. has served as our Chief Technology Officer since January 2011. Prior to joining us, Dr. Yerby served as Vice President, Research and Development for ProMed, Inc., a medical supply company, from June 2009 to January 2011. From May 2007 to June 2009, Dr. Yerby sat on the board of several non-profit organizations. From June 2000 to May 2007, Dr. Yerby served as Vice President of Research and Development for St. Francis Medical Technologies, Inc., a spinal manufacturing company, until its acquisition by Kyphon, Inc. From June 1997 to June 2000, Dr. Yerby served as Director of Experimental Biomechanics at the Palo Alto VA Hospital. Early in his career, Dr. Yerby held appointments as Consulting Assistant Professor at Stanford

University in the Department of Mechanical Engineering, Division of Biomechanical Engineering, and the Department of Functional Restoration, Division of Orthopedic Surgery. Dr. Yerby received B.S. and M.S. degrees in Mechanical Engineering and a Ph.D. in Biomedical Engineering, all from the University of California, Davis.

Key Employees

Daniel J. Cher, M.D. has served as our Vice President, Clinical Affairs since January 2012. From May 2008 to December 2011, Dr. Cher served as Vice President of Clinical and Regulatory Affairs at Chestnut Medical Technologies, Inc., a company developing new minimally invasive therapies for interventional neuroradiology. From March 2007 to January 2008, Dr. Cher served as Vice President of Clinical and Regulatory Affairs at Pulmonx Inc., a medical device company developing products for patients with emphysema. From October 2004 to March 2007, Dr. Cher was Medical Director and Vice President of Clinical Research at Kyphon. From October 2003 to September 2004, Dr. Cher was Medical Director for Cardima, Inc., a medical device company developing products for cardiac ablation. Prior to Cardima, Dr. Cher was a statistician at Conceptus Inc., a manufacturer and developer of medical devices aimed at permanent female sterilization. During the last 17 years, Dr. Cher has provided clinical and regulatory strategic consulting services to medical device companies in the San Francisco Bay Area and beyond. Dr. Cher received a B.S. in Biology from Stanford University and an M.D. from Yale University. Dr. Cher completed his residency in internal medicine at the University of Wisconsin, Madison, and at California Pacific Medical Center in San Francisco. He completed additional training in general internal medicine and research methods at Stanford University and the Palo Alto VA Hospital.

Roxanne Dubois has served as our Vice President, Regulatory and Quality since February 2014. Previously, Ms. Dubois served as our Senior Director, Regulatory from December 2012 to February 2014 and as a consultant for us from February 2012 to December 2012. From February 2009 to February 2014, Ms. Dubois was Vice President, Regulatory as an employee and consultant with Tenaxis Medical Inc., a medical device company. From January 2006 to December 2008, Ms. Dubois served as Vice President, Regulatory and Quality at Carbylan BioSurgery, Inc., a medical device company. From February 2005 to January 2006, Ms. Dubois served as Director, Regulatory at Kyphon. Previously, Ms. Dubois held various regulatory roles at Angiotech BioMaterials Corporation, ReGen Biologic, Inc., and Collagen Corporation. Ms. Dubois received a B.S. in Biochemistry from California Polytechnic State University, San Luis Obispo.

Nikolas F. Kerr has served as our Vice President, Product Marketing since August 2016. Prior to joining us, Mr. Kerr was President of Kerr Consulting Group where he advised leading medical device companies on product strategy. Previously, Mr. Kerr was Senior Director of Marketing for Benvenue Medical from December 2013 to June 2014. From August 2011 to December 2013, Mr. Kerr was Senior Director of Marketing for Baxano. From August 2006 to August 2011, Mr. Kerr served in various marketing roles at Medtronic's Spinal & Biologics Group including the Director of Global Marketing for the Kyphon division. And from August 1998 to August 2006, Mr. Kerr served in various sales, marketing, and business development roles for Milliken & Company. Mr. Kerr started his career with Credit Suisse as an Analyst for Debt Capital Markets. Mr. Kerr received a B.S. in Finance and Economics and Master of International Business Economics from the Darla Moore School of Business, University of South Carolina.

Andrea Mercanti has served as our Vice President, EMEA Operations since May 2013, and he previously served as our Vice President, European Operations from September 2010 to April 2013. Prior to joining us, Mr. Mercanti was General Director for Italy of MBA Incorporado, an orthopedic, spine and biomaterials distributor, from April 2009 to August 2010. From January 2008 to March 2009, Mr. Mercanti was Vice President, Sales Europe for Europe for Orthofix International N.V., a spinal care solutions company. From December 2006 to December 2007, Mr. Mercanti was Business Unit Director for Italy, Regional Director South Europe, and Director of South Europe and German speaking countries at Kyphon. From December 2005 to November 2006, he served as Regional Director for South Europe for Kyphon. From January 1987 to December 2004, Mr. Mercanti held positions in strategic sales in different divisions of Medtronic, including 12 years in the

Neurological Business Unit with spinal cord stimulation treatment for pain and, in the last four years, as Director of Spine Business. Mr. Mercanti received a degree in economics from the Technical and Economics School at the Instituto Milano in Milan, Italy.

Michael Mydra has served as our Vice President, Health Outcomes and Reimbursement since April 2012. Prior to joining us, Mr. Mydra was Vice President, Health Outcomes & Reimbursement for Vertos Medical, Inc., a manufacturer of lumbar spine technologies, from August 2009 to February 2012. From September 2003 to March 2009, Mr. Mydra served as Vice President, Reimbursement for Sanarus Medical, Inc., a medical device manufacturer. From September 1998 to September 2003, Mr. Mydra served as Director of Corporate and Payor Development at Urologix, Inc., a medical device manufacturer. Early in his career, Mr. Mydra worked at Blue Cross Blue Shield of Minnesota, a health insurance provider. Mr. Mydra received a B.A. in Biology and an M.B.A. from the University of St. Thomas, and he received a graduate certificate from the Advanced Management Program for Healthcare Executives sponsored by the University of Minnesota Carlson School of Management and the Mayo Foundation.

Michael A. Pisetsky has served as our Vice President, General Counsel and Chief Compliance Officer since August 2016. Mr. Pisetsky joined us in March 2015 as our Director of Legal. From August 2011 to March 2015, Mr. Pisetsky practiced law privately, serving as General Counsel to New Wave Surgical Corp. and a large operator of shopping centers in the Southeast, among a number of other companies in the medical technology and healthcare services space. From August 2008 to July 2011, Mr. Pisetsky was an Associate in the Business Department at Cooley LLP in Palo Alto, representing a portfolio of medical technology, biotech, healthcare services and general technology clients, from inception to public offering and eventual sale. Mr. Pisetsky received his B.A. with Honors from Harvard College. Mr. Pisetsky received his J.D. (magna cum laude) and M.B.A., including a certificate in Health Sector Management, concurrently from Duke University.

Joseph W. Powers has served as our Vice President, Marketing since August 2012. Previously, Mr. Powers served as our Senior Director, Business Development from January 2012 to July 2012 and as our Western Area Sales Director from December 2009 to December 2011. Prior to joining us, Mr. Powers served as Vice President, Clinical/Marketing at Benvenue Medical, Inc., a medical device company that makes minimally invasive systems for spine repair, from March 2007 to April 2009. From January 2004 to March 2007, Mr. Powers served as a Spine Consultant at Kyphon, and from December 2002 to December 2004, Mr. Powers served as Director, Product Marketing at Kyphon. Previously, Mr. Powers held positions in marketing management and project management at Target Therapeutics Inc., a medical device company. Mr. Powers received a B.S. in Biology and Chemical Engineering from Arizona State University.

Non-Employee Directors

David P. Bonita, M.D. has served as a member of our board of directors since April 2014. Dr. Bonita has also served as a Private Equity Partner at OrbiMed Advisors LLC, an investment company focused on the healthcare industry, since June 2013. From December 2007 to June 2013, Dr. Bonita was a Private Equity Principal at OrbiMed. From June 2004 to December 2007, he was a Private Equity Senior Associate at OrbiMed. Prior to OrbiMed, Dr. Bonita was a corporate finance analyst in the healthcare investment banking group of Morgan Stanley from February 1998 to July 1999. From August 1997 to February 1998, Dr. Bonita served as a corporate finance analyst in the healthcare investment banking group of UBS AG, a global financial service firm. Dr. Bonita has served and continues to serve on the board of directors of numerous private and public companies, including Loxo Oncology, Inc., a developer of oncological drugs, from October 2013 to present; ViewRay Inc., a designer and manufacturer of radiation therapy and imaging technologies, from January 2008 to present; and Ambit Biosciences Corporation, a drug developer focusing on oncology, autoimmune, and inflammatory diseases from October 2012 to November 2014. Dr. Bonita received an A.B. in Biological Sciences from Harvard College and an M.D. and an M.B.A. from Columbia University. We believe Dr. Bonita’s extensive investment experience in the healthcare industry and his experience as a public company director enable him to make valuable contributions to our board of directors.

Timothy E. Davis, Jr. has served as a member of our board of directors since our inception in April 2008. Mr. Davis has served as President and Chief Executive Officer of Active Implants, LLC, a company that provides orthopedic implant solutions, since February 2017. From January 2014 through September 2015, Mr. Davis served as Chief Executive Officer of MicroPort Orthopedics, Inc., a multinational producer of orthopedic products, following the purchase of Wright Medical Group's OrthoRecon Business in January 2014. From December 2006 to January 2014, Mr. Davis served in a number of executive positions for Wright Medical Technology, Inc., a subsidiary of Wright Medical Group, Inc., including President of the OrthoRecon business. From 2004 to 2006, Mr. Davis was a Partner with MB Venture Partners, LLC, a medical technology and life sciences venture capital firm. From 1997 to 2004, Mr. Davis held various positions, ultimately serving as Vice President, with Vector Fund Management, a healthcare and life sciences focused venture capital fund. Early in his career, Mr. Davis worked in the healthcare management consulting and pharmaceutical industries. Mr. Davis received a B.E. degree in Biomedical Engineering from Vanderbilt University and an M.B.A. from the J.L. Kellogg Graduate School of Management at Northwestern University. We believe Mr. Davis' experience in the industry and his knowledge of our company enable him to make valuable contributions to our board of directors.

John G. Freund, M.D. has served as a member of our board of directors since January 2013. Dr. Freund founded Skyline Ventures, a venture capital firm, in October 1997 and has served as a Managing Director of Skyline since then. Prior to joining Skyline, Dr. Freund served as Managing Director in the private equity group of Chancellor Capital Management, a private capital investment firm. In November 1995, Dr. Freund co-founded Intuitive Surgical, Inc., a medical device company, and served on its board of directors until March 2000. From 1988 to 1994, he held various positions at Acuson Corporation, a maker of ultrasound equipment that is now part of Siemens, most recently as Executive Vice President. Prior to joining Acuson, Dr. Freund was a general partner of Morgan Stanley Venture Partners from 1987 to 1988. From 1982 to 1988, Dr. Freund was at Morgan Stanley & Co., an investment banking company, where he co-founded the Healthcare Group in the Corporate Finance Department in 1983. Dr. Freund has served on the board of directors of Collegium Pharmaceuticals, Inc., a biotechnology company, since 2014, Tetraphase Pharmaceuticals, Inc. since 2012, and Proteon Therapeutics, Inc., a biotechnology company, since 2014. Dr. Freund also serves on the board of directors of six U.S. registered investment funds managed by affiliates of the Capital Group, Inc. He also previously served on the board of directors of four publicly traded companies, Map Pharmaceuticals, Inc., a biopharmaceutical company, MAKO Surgical Corp., a medical device company, Concert Pharmaceuticals, Inc., a biopharmaceutical company and was Chairman of XenoPort, Inc., a biopharmaceutical company. Dr. Freund is a member of the Advisory Board for the Harvard Business School of Healthcare Initiative. Dr. Freund received a B.A. in History from Harvard College, an M.D. from Harvard Medical School, and an M.B.A. from Harvard Business School, where he was a Baker Scholar. We believe Dr. Freund's experience with medical device companies, his role in the venture capital industry, and his knowledge of our company enable him to make valuable contributions to our board of directors.

Gregory K. Hinckley has served as a member of our board of directors since January 2011. Mr. Hinckley has served as President of Mentor Graphics Corporation, an electronic design automation company, since January 1997 and served on the board of directors from January 1999 to June 2016. He has also served as the Chief Financial Officer of Mentor Graphics, first from January 1997 to July 2007 and again from December 2008 to present. Previously, he served on the board of directors of Super Micro Computer, Inc., a manufacturer of servers, from January 2009 to February 2015 and Intermec, Inc., a developer of automated identification and data collection solutions, from July 2004 to September 2013. From August 1992 to January 1997, Mr. Hinckley served as Senior Vice President, Finance of VLSI Technology, Inc., a designer and manufacturer of custom and semi-custom integrated circuits. From January 1989 to November 1991, he served as Senior Vice President and Chief Financial Officer of Crowley Maritime Corporation, a marine solutions, transportation, and logistics company. From February 1983 to January 1989, Mr. Hinckley served as Vice President and Chief Financial Officer, and since April 2017, Mr. Hinckley has served on the board of directors, of Bio-Rad Laboratories, a manufacturer and supplier of products and systems for the life science research and healthcare markets. Previously, Mr. Hinckley held a number of senior officer positions with Raychem Corporation, a developer of products and services for the aerospace, automotive and telecommunications industries. Hinckley received a B.A. in Physics from Claremont McKenna College and was a Fulbright Scholar in applied mathematics at Nottingham University. He received an M.S. in Applied Physics from

the University of California, San Diego and an M.B.A. from Harvard Business School. We believe Mr. Hinckley's financial experience, his familiarity of serving on the boards of public companies, and his knowledge of our company enable him to make valuable contributions to our board of directors.

Karen A. Licitra has served as a member of our board of directors since August 2015. From January 2014 through August 2015, Ms. Licitra served as Corporate Vice President, Worldwide Government Affairs & Policy at Johnson & Johnson, a medical devices, pharmaceutical, and consumer packaged goods manufacturer. From December 2011 to December 2013, Ms. Licitra served as the Worldwide Chairman, Global Medical Solutions at Johnson & Johnson. From July 2002 to November 2011, she served as the Company Group Chairman and Worldwide Franchise Chairman at Ethicon Endo-Surgery, Inc., a Johnson & Johnson medical device company. From January 2001 to June 2002, she served as the President of Ethicon Endo-Surgery. Ms. Licitra currently serves on the board of directors of Novadaq Technologies Inc., a provider of proven comprehensive fluorescence imaging solutions. Ms. Licitra received a B.S. in Commerce from Rider College. We believe Ms. Licitra's experience working for medical device companies and her knowledge of our company enable her to make valuable contributions to our board of directors.

Timothy B. Petersen has served as a member of our board of directors since June 2016. Since April 2002, Mr. Petersen has been employed by Arboretum Ventures, Inc. As a Managing Director of the firm, his investments primarily target capital-efficient medical device, health IT and services companies. Mr. Petersen has led investments and held board seats for Arboretum in more than fifteen companies, including HealthMedia (acquired by Johnson & Johnson), Accuri Cytometers (acquired by BD), IntelliCyt (acquired by Sartorius) and Inogen. Mr. Petersen currently serves on the boards of Advanced ICU Care, Concerto Health, KFx Medical, MyHealthDirect, and Pear Therapeutics in addition to our Company. Mr. Petersen holds a B.A. in Economics from Williams College, an M.S. in Economics from the University of Wisconsin-Madison, and an M.B.A. from the Ross School of Business at the University of Michigan. We believe Mr. Petersen's extensive investment experience in the healthcare industry and his experience as a public company director enable him to make valuable contributions to our board of directors.

Mark A. Reiley, M.D. has served as a member of our board of directors since our inception in April 2008 and as our Chief Medical Officer from inception to September 2016. Dr. Reiley has also served as Chief Medical Officer of Reiley Pharmaceuticals, Inc., a pharmaceutical company, since April 2014. Previously, Dr. Reiley was Chief Medical officer of Fixes-4-Kids, Inc. from March 2009 to October 2010. Prior to joining us, Dr. Reiley was the Chief Medical Officer of INBONE Technologies from December 2004 to April 2008, until its sale to Wright Medical Group in April 2008. From October 1990 to May 2007, Dr. Reiley was Chief Medical Officer of Kyphon Inc., a medical device company focused on the treatment of vertebral compression fractures of the spine, until its sale to Medtronic, Inc. (now Medtronic plc). During that period, from October 2001 to March 2005, Dr. Reiley was Chief Medical officer of Archus Orthopedics Inc., a total facet replacement medical device company. Dr. Reiley was also a founding member of Berkeley Orthopedics Surgical group, where he practiced for over 25 years and trained the students and faculty at the University of California at Berkeley. He has founded and served on the boards of various private companies. Dr. Reiley received a B.A. from Claremont Men's College and an M.D. from George Washington University School of Medicine, and he completed both his orthopedic residency and fellowship at the University of California at San Francisco. We believe Dr. Reiley's experience in the industry, his role as our former Chief Medical Officer, and his knowledge of our company enable him to make valuable contributions to our board of directors.

Keith C. Valentine has served as a member of our board of directors since August 2015. Since June 2015, Mr. Valentine has also served as President, Chief Executive Officer and a member of the board of directors of SeaSpine Holdings Corporation. From January 2007 to January 2015, he served as President and Chief Operating Officer of NuVasive, Inc., a medical device company. From December 2004 to January 2007, he served as President of NuVasive. From January 2001 to December 2004, he held various senior executive roles in marketing, development and operations at NuVasive. Previously, Mr. Valentine served as Vice President of Marketing at ORATEC Interventions, Inc., a medical device company acquired by Smith & Nephew PLC, and

spent eight years in various roles with Medtronic including Vice President of Marketing for the Thoracolumbar Division and Group Director for the BMP Biologics program, Interbody Sales Development, and International Sales and Marketing. Mr. Valentine received a B.B.A. in Management and Biomedical Sciences from Western Michigan University. We believe Mr. Valentine's experience working for medical device companies and his knowledge of our company enable him to make valuable contributions to our board of directors.

Family Relationships

There are no family relationships among any of our directors or executive officers.

Director Independence

We intend to apply to have our common stock listed on the Nasdaq Global Market. The listing rules of this stock exchange generally require that a majority of the members of a listed company's board of directors be independent within 12 months following the closing of an initial public offering. Our board of directors has determined that none of our non-employee directors has a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each of these directors is "independent" as that term is defined under the rules of the Nasdaq Global Market. The independent members of our board of directors will hold separate regularly scheduled executive session meetings at which only independent directors are present.

Audit committee members must also satisfy the independence rules in Securities and Exchange Commission, or SEC, Rule 10A-3 adopted under the Securities Exchange Act of 1934, as amended. In order to be considered independent for purposes of Rule 10A-3, a member of an audit committee of a public company may not, other than in his or her capacity as a member of the audit committee, the board of directors, or any other board committee: accept, directly or indirectly, any consulting, advisory or other compensatory fee from the listed company or any of its subsidiaries; or be an affiliated person of the listed company or any of its subsidiaries. Each of Messrs. Davis, Hinckley and Petersen qualify as an independent director pursuant to Rule 10A-3. We also intend to satisfy the audit committee independence requirement of the Nasdaq Global Market.

Board Composition

Our board of directors currently consists of nine members, who were elected pursuant to the provision of a voting agreement and the related provisions of our amended and restated certificate of incorporation. Under the terms of this voting agreement, the stockholders who are party to the voting agreement have agreed to vote their respective shares to elect: (1) two directors designated by the holders of a majority of the then outstanding shares of Series 2 common, one of which will be our chief executive officer, currently Mr. Dunn and Dr. Reiley; (2) one director designated by Skyline Venture Partners Qualified Purchaser Fund V, L.P., currently Dr. Freund; (3) one director designated by Montreux Equity Partners IV, LP which is currently vacant; (4) four directors approved by a majority of the members of our board of directors and at least one of whom has relevant industry experience relating to our business, currently Mr. Hinckley, Mr. Davis, Ms. Licitra and Mr. Valentine; (5) one director designated by OrbiMed Advisors LLC or OrbiMed Private Investments V, LP, currently Dr. Bonita; and (6) one director designated by Arboretum IV, LP, currently Mr. Petersen.

The provisions of this voting agreement will terminate upon the closing of this offering, after which there will be no further contractual obligations regarding the election of our directors. Our directors hold office until their successors have been elected and qualified or appointed, or the earlier of their death, resignation or removal.

Immediately after this offering, our board of directors will be divided into three classes with staggered three-year terms. At each annual meeting of stockholders, the successors to directors whose terms then expire

will be elected to serve from the time of election and qualification until the third annual meeting following election. Our directors will be divided among the three classes as follows:

- the Class I directors will be Mr. Davis, Dr. Freund and Dr. Reiley their term will expire at the annual meeting of stockholders to be held in 2018;
- the Class II directors will be Dr. Bonita, Mr. Dunn and Mr. Hinckley their terms will expire at the annual meeting of stockholders to be held in 2019; and
- the Class III directors will be Mr. Petersen, Ms. Licitra and Mr. Valentine their terms will expire at the annual meeting of stockholders to be held in 2020.

Directors in a particular class will be elected for three-year terms at the annual meeting of stockholders in the year in which their terms expire. As a result, only one class of directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms. Each director's term continues until the election and qualification of his or her successor, or the earlier of his or her death, resignation or removal.

Our amended and restated certificate of incorporation and amended and restated bylaws that will be in effect upon the closing of this offering provide that only our board of directors can fill vacant directorships, including newly-created seats. Any additional directorships resulting from an increase in the authorized number of directors would be distributed among the three classes so that, as nearly as possible, each class would consist of one-third of the authorized number of directors.

The classification of our board of directors may have the effect of delaying or preventing changes in our control or management. See the section titled "Description of Capital Stock—Anti-Takeover Provisions—Certificate of Incorporation and Bylaws Provisions."

Board Oversight of Risk

One of the key functions of our board of directors is informed oversight of our risk management process. In particular, our board of directors is responsible for monitoring and assessing strategic risk exposure. Our executive officers are responsible for the day-to-day management of the material risks we face. Our board of directors administers its oversight function directly as a whole, as well as through various standing committees of our board of directors that address risks inherent in their respective areas of oversight. For example, our audit committee is responsible for overseeing the management of risks associated with our financial reporting, accounting and auditing matters; our compensation committee oversees the management of risks associated with our compensation policies and programs; and our nominating and corporate governance committee oversees the management of risks associated with director independence, conflicts of interest, composition and organization of our board of directors and director succession planning.

Board Committees

Our board of directors has established an audit committee, a compensation committee and a nominating and corporate governance committee. Our board of directors may establish other committees to facilitate the management of our business. Our board of directors and its committees set schedules for meeting throughout the year and can also hold special meetings and act by written consent from time to time, as appropriate. Our board of directors has delegated various responsibilities and authority to its committees as generally described below. The committees will regularly report on their activities and actions to the full board of directors. Each member of each committee of our board of directors qualifies as an independent director in accordance with the listing standards of the Nasdaq Global Market. Each committee of our board of directors has a written charter approved by our board of directors. Upon the closing of this offering, copies of each charter will be posted on our website at www.si-bone.com under the Investor Relations section. The inclusion of our website address in this prospectus does not include or incorporate by reference the information on our website into this prospectus. Members serve on these committees until their resignation or until otherwise determined by our board of directors.

Audit Committee

Our audit committee consists of Messrs. Davis, Hinckley and Petersen, each of whom satisfies the independence requirements under the Nasdaq Global Market listing standards and Rule 10A-3(b)(1) of the Exchange Act. The chairman of our audit committee is Mr. Hinckley. Our board of directors has determined that each of Messrs. Davis, Hinckley and Petersen is an "audit committee financial expert" within the meaning of SEC regulations. Our board of directors has also determined that each member of our audit committee has the requisite financial expertise required under the applicable requirements of the Nasdaq Global Market. In arriving at this determination, the board of directors has examined each audit committee member's scope of experience and the nature of their employment in the corporate finance sector.

The primary purpose of the audit committee is to discharge the responsibilities of our board of directors with respect to our accounting, financial and other reporting and internal control practices and to oversee our independent registered public accounting firm. Specific responsibilities of our audit committee include:

- selecting a qualified firm to serve as the independent registered public accounting firm to audit our financial statements;
- helping to ensure the independence and performance of the independent registered public accounting firm;
- discussing the scope and results of the audit with the independent registered public accounting firm, and reviewing, with management and the independent accountants, our interim and year-end operating results;
- developing procedures for employees to submit concerns anonymously about questionable accounting or audit matters;
- reviewing our policies on risk assessment and risk management;
- reviewing related party transactions;
- obtaining and reviewing a report by the independent registered public accounting firm at least annually, that describes our internal quality-control procedures, any material issues with such procedures, and any steps taken to deal with such issues when required by applicable law; and
- approving (or, as permitted, pre-approving) all audit and all permissible non-audit service to be performed by the independent registered public accounting firm.

Compensation Committee

Our compensation committee consists of Dr. Bonita, Mr. Davis and Ms. Licitra, each of whom our board of directors has determined to be independent under the Nasdaq Global Market listing standards and the rules and regulations of the SEC, a "non-employee director" as defined in Rule 16b-3 promulgated under the Exchange Act and an "outside director" as that term is defined in Section 162(m) of the Internal Revenue Code of 1986, as amended, or the Code. The chairman of our compensation committee is Mr. Davis.

The primary purpose of our compensation committee is to discharge the responsibilities of our board of directors to oversee our compensation policies, plans and programs and to review and determine the compensation to be paid to our executive officers, directors and other senior management, as appropriate. Specific responsibilities of our compensation committee include:

- reviewing and approving, or recommending that our board of directors approve, the compensation of our executive officers;
- reviewing and recommending to our board of directors the compensation of our directors;
- reviewing and approving, or recommending that our board of directors approve, the terms of compensatory arrangements with our executive officers;

- administering our stock and equity incentive plans;
- selecting independent compensation consultants and assessing whether there are any conflicts of interest with any of the committee's compensation advisors;
- reviewing and approving, or recommending that our board of directors approve, incentive compensation and equity plans, severance agreements, change-of-control protections and any other compensatory arrangements for our executive officers and other senior management, as appropriate;
- reviewing and establishing general policies relating to compensation and benefits of our employees; and
- reviewing our overall compensation philosophy.

Nominating and Corporate Governance Committee

Our nominating and corporate governance committee consists of Dr. Freund and Mr. Valentine, each of whom our board of directors has determined to be independent under the Nasdaq Global Market listing standards. The chairman of our nominating and corporate governance committee is Mr. Valentine.

Specific responsibilities of our nominating and corporate governance committee include:

- identifying, evaluating and selecting, or recommending that our board of directors approve, nominees for election to our board of directors;
- evaluating the performance of our board of directors and of individual directors;
- reviewing developments in corporate governance practices;
- evaluating the adequacy of our corporate governance practices and reporting;
- reviewing management succession plans; and
- developing and making recommendations to our board of directors regarding corporate governance guidelines and matters.

Code of Conduct

Our board of directors has adopted a Code of Conduct. The Code applies to all of our employees, officers, directors, contractors, consultants, suppliers, and agents. Upon the closing of this offering, the full text of our code of conduct will be posted on our website at www.si-bone.com under the Investor Relations section. We intend to disclose future amendments to, or waivers of, our Code, as and to the extent required by SEC regulations, at the same location on our website identified above and in public filings. Information contained on our website is not incorporated by reference into this prospectus, and you should not consider information contained on our website to be part of this prospectus or in deciding whether to purchase shares of our common stock.

Compensation Committee Interlocks and Insider Participation

As noted above, the compensation committee of our board of directors consists of Dr. Bonita, Mr. Davis, and Ms. Licitra. During 2016, our compensation committee consisted of Dr. Bonita, Mr. Davis and Ms. Licitra. None of our executive officers serves, or served during 2016, as a member of the board of directors or compensation committee of any other entity that has or has had one or more executive officers serving as a member of our board of directors or our compensation committee.

Non-Employee Director Compensation

Currently, we pay our non-employee directors who are not representatives of our stockholders a fee of $2,000 per month as compensation for their service on our board of directors. We also have a policy of

reimbursing all of our non-employee directors for their reasonable out-of-pocket expenses in connection with attending board of directors and committee meetings. From time to time we have granted stock options to certain of our non-employee directors, typically in connection with a non-employee director's initial appointment to our board of directors.

In March 2017, we granted options to purchase 400,000 shares to each of Dr. Bonita, Mr. Davis, Dr. Freund, Mr. Hinckley, Ms. Licitra, Mr. Petersen and Mr. Valentine, with an exercise price of $0.33 per share. Upon the closing of this offering, the shares subject to these options will begin to vest in equal monthly installments over three years provided that such director continues to provide services to us. Following the closing of this offering, the shares subject to these options will be early exercisable and will fully vest in the event of a change of control before such directors' service terminates.

2016 Non-Employee Director Compensation Table

The following table sets forth information regarding the compensation paid to our non-employee directors during 2016.

Name	Fees Earned or Paid in Cash	Option Awards(1)(2)	All Other Compensation	Total
David P. Bonita, M.D.	—	—	—	—
Timothy E. Davis, Jr.	$ 24,000	$ 22,610	—	$ 46,610
John G. Freund, M.D.	—	—	—	—
Gregory K. Hinckley	24,000	22,610	—	46,610
Karen A. Licitra	24,000	28,256	—	52,256
Timothy B. Petersen	—	—	—	—
Mark A. Reiley, M.D.(3)	78,779	66,199	$ 7,041	152,019
Keith C. Valentine	24,000	28,256	—	52,256

(1) The amount shown in this column does not reflect dollar amount actually received by the director. Instead, this amount represents the aggregate grant date fair value of option awards granted to the director in 2016, as computed in accordance with FASB ASC Topic 718 and the incremental fair value of stock options repriced in July 2016. Assumptions used in the calculation of these amounts are included in Note 10 to our audited consolidated financial statements included elsewhere in this prospectus. As required by SEC rules, the amounts shown exclude the impact of estimated forfeitures related to service-based vesting conditions. Our directors will only realize compensation to the extent the trading price of our common stock is greater than the exercise price of this stock option.

(2) In July 2016, we granted options to purchase (a) 217,163 shares to each of Mr. Davis and Mr. Hinckley, (b) 185,349 shares to each of Ms. Licitra and Mr. Valentine, and (c) 635,820 shares to Dr. Reiley, each with an exercise price of $0.24 per share. The shares subject to these options vests in equal monthly installments over four years of service and are early exercisable. The options granted to Mr. Davis, Mr. Hinckley, Ms. Licitra and Mr. Valentine will fully vest in the event of a change in control before such directors' service terminates. The option granted to Dr. Reiley will fully vest in the event of a change in control before Dr. Reiley's service terminates, provided Dr. Reiley agrees to provide services to the surviving entity for a period not to exceed six months. The table below lists the aggregate number of shares subject to outstanding stock options held by each of our non-employee directors.

Name	Number of Shares Subject to Outstanding Options as of December 31, 2016
David P. Bonita, M.D.	—
Timothy E. Davis, Jr.	597,163
John G. Freund, M.D.	—
Gregory K. Hinckley	—
Karen A. Licitra	385,349
Timothy B. Petersen	—
Mark A. Reiley, M.D.	2,665,104
Keith C. Valentine	385,349

(3) Reflects salary and severance payments received as an employee. Dr. Reiley did not receive any additional compensation for service on our board of directors.

EXECUTIVE COMPENSATION

Summary Compensation Table

The following table sets forth information regarding the compensation of our chief executive officer and our two other most highly compensated executive officers during the year ended December 31, 2016. We refer to these individuals as our "named executive officers."

Name and Principal Position	Year	Salary	Incentive Compensation	Option Award(1)	Total
Jeffrey W. Dunn *President and Chief Executive Officer*	2016	$434,563	$ 175,924(2)	$ 292,912	$825,823
Laura A. Francis *Chief Financial Officer*	2016	299,237	84,298(2)	186,407	424,547
W. Carlton Reckling, M.D. *Chief Medical Officer*	2016	269,102	64,750(2)	33,490	358,477

(1) Represents the aggregate grant date fair value of option awards granted to the officer in 2016 and the incremental fair value of stock options repriced in July 2016, computed in accordance with FASB ASC Topic 718. For a discussion of the assumptions made in determining the grant date fair value of our equity awards, see Note 2 to our audited consolidated financial statements included elsewhere in this prospectus.

(2) Represents semi-annual incentive compensation payments pursuant to our 2016 corporate goals, which were paid in July 2016 and January 2017. Our executive officers received incentive compensation for the achievement of certain goals including revenue growth, cash flow, expense, profitability management, reimbursement progress and clinical milestones. Our executive officers achieved 85% and 75% of goals for the first and second halves of 2016, respectively.

Emerging Growth Company Status

We are an "emerging growth company," as defined in the Jumpstart Our Business Startups Act of 2012, or JOBS Act. As an emerging growth company we will be exempt from certain requirements related to executive compensation, including, but not limited to, the requirements to hold a nonbinding advisory vote on executive compensation and to provide information relating to the ratio of total compensation of our Chief Executive Officer to the median of the annual total compensation of all of our employees, each as required by the Investor Protection and Securities Reform Act of 2010, which is part of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010.

Outstanding Equity Awards as of December 31, 2016

The following table sets forth information regarding each unexercised stock option and all unvested stock held by each of our named executive officers as of December 31, 2016. Unless otherwise indicated below, all of these awards were made pursuant to our 2008 Stock Plan.

The vesting schedule applicable to each outstanding award is described in the footnotes to the table below. For information regarding the vesting acceleration provisions applicable to our named executive officers' equity awards, see the section titled "Employment Arrangements—Severance and Change in Control Agreements" below.

Many of the options granted to our named executive officers are immediately exercisable with respect to all of the option shares, subject to our repurchase right in the event the officer's service terminates prior to vesting in the shares. We refer to option shares that are subject to our right of repurchase as "unvested shares" and those that are no longer subject to our right of repurchase as "vested" shares.

	Option Awards						Stock Awards	
Name	Grant Date	Vesting Commencement Date	Number of Securities Underlying Unexercised Options Vested (#)	Number of Securities Underlying Unexercised Options Unvested (#)	Option Exercise Price ($)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested (#)	Market Value of Shares or Units of Stock That Have Not Vested ($)(1)
Jeffrey W. Dunn	10/24/11	09/21/11	480,175	—	0.12	10/23/21	—	—
	07/21/14	04/22/14	2,966,195	1,943,369(2)	0.19	07/20/24	—	—
	05/26/15	04/15/15	760,804	1,065,126(2)	0.24(4)	05/25/25	—	—
	07/26/16	06/02/16	258,529	1,809,707(2)	0.24	07/25/26	—	—
	01/16/14	01/01/14	—	—	—	—	300,578(3)	—
Laura A. Francis	05/26/15	05/26/15	1,357,198	2,071,513(2)	0.24(4)	05/25/25	—	—
	07/26/16	06/02/16	49,238	344,669(2)	0.24	07/25/26	—	—
W. Carlton Reckling, Ph.D.	09/02/10	07/01/10	20,000	—	0.05	09/02/20	—	—
	03/18/13	03/05/12	1,250,000	—	0.22	03/17/23	—	—
	01/16/14	01/01/14	109,595	40,707(2)	0.18	01/15/24	—	—
	07/21/14	04/22/14	286,391	143,196(2)	0.19	07/20/24	—	—
	05/26/15	04/15/15	87,002	121,802(2)	0.24(4)	05/25/25	—	—
	07/26/16	06/02/16	29,564	206,948(2)	0.24	07/25/26	—	—

(1) Pursuant to SEC rules, market value is based on the fair market value of our common stock on December 31, 2016. As there was no public market for our common stock on December 31, 2016, we have assumed that the fair market value on December 31, 2016 was $ per share, which represents the midpoint of the range set forth on the cover page of this prospectus.

(2) Option vests over four years of service from the vesting commencement date specified above, with 1/48th of the option shares vesting monthly.

(3) Represents the unvested portion of shares of our common stock purchased upon early exercise of options. The option vests over 4 years of service from the vesting commencement date specified above.

(4) This stock option was repriced in July 2016.

Pension Benefits

Our named executive officers did not participate in, or otherwise, receive any benefits under, any pension or retirement plan sponsored by us in 2016.

Nonqualified Deferred Compensation

Our named executive officers did not participate in, or earn any benefits under, a non-qualified deferred compensation plan sponsored by us in 2016.

Employment Arrangements

We have entered into employment agreements with each of our named executive officers setting forth the initial terms of the officer's employment with us and providing that the officer's employment will be "at will" and may be terminated at any time. The severance benefits for our named executive officers are described in "Severance and Change in Control Agreements" below.

Employment Agreements

Jeffrey W. Dunn

In December 2009, we entered into an offer letter with Jeffrey W. Dunn, our President and Chief Executive Officer. Mr. Dunn's annual base salary as of January 1, 2017 was $437,750. Under the terms of Mr. Dunn's offer letter, if he is subject to an "involuntary termination," then we will continue to pay his base salary and reimburse his COBRA premiums for up to 12 months. An involuntary termination occurs if Mr. Dunn's employment is terminated by us without "cause" at any time or if he resigns for "good reason" within 12 months after a "change in control" (as such terms are defined in the offer letter). These severance benefits are contingent on Mr. Dunn's return of all of our property, execution of a release of claims, and resignation from our board of directors, if applicable.

Upon the closing of this offering, Mr. Dunn's annual base salary will be increased to $445,000 and Mr. Dunn will be eligible for annual variable compensation up to 65% of his base salary. In addition, in March 2017, Mr. Dunn was granted a stock option for 2,272,700 shares of common stock with an exercise price of $0.33 per share. This option will vest in 48 equal monthly amounts commencing on the closing of this offering.

Laura A. Francis

In April 2015, we entered into an offer letter with Laura A. Francis, our Chief Financial Officer. Ms. Francis' annual base salary as of January 1, 2017 was $302,315. Under the terms of her offer letter, Ms. Francis was granted an option to purchase a number of shares of common stock equal to 1.25% of the fully-diluted capitalization as of her first day of employment, or 3,328,711 shares, with an exercise price of $0.44 per share. The shares subject to this option vest as to 25% on the 12-month anniversary of May 26, 2015 and 1/36th of the balance of the shares vest each month thereafter, subject to Ms. Francis' continued service with us through each relevant vesting date. Ms. Francis' offer letter provides that she will vest in 50% of the unvested option shares if (a) we are subject to a change in control (as defined in the offer letter) before her service with us terminates and (b) she is subject to an involuntary termination (as defined in the offer letter) within 12 months after the change in control. In addition, in the event of Ms. Francis' termination for any reason other than for cause (as defined in the offer letter) we will make a lump sum payment to her equal to three months of her then-current base salary. These severance benefits are contingent on Ms. Francis' return of all of our property and execution of a release of claims.

In March 2017, we entered into an amended and restated letter agreement with Ms. Francis that provides that she will be eligible to receive a bonus of $200,000 if we complete a qualified IPO (as defined in the letter agreement) and she remains an employee in good standing through the date that is 30 trading days after such qualified IPO, which will be paid 60 days thereafter.

Upon the closing of this offering, Ms. Francis's annual base salary will be increased to $320,000 and Ms. Francis will be eligible for annual variable compensation up to 40% of her base salary. In addition, in March 2017, Ms. Francis was granted a stock option for 696,150 shares of common stock with an exercise price of $0.33 per share. This option will vest in 48 equal monthly amounts commencing on the closing of this offering.

W. Carlton Reckling, M.D.

In February 2012, we entered into an offer letter with W. Carlton Reckling, our Chief Medical Officer. Dr. Reckling's annual base salary as of February 1, 2017 was $300,000. Under the terms of his offer letter, we will reimburse Dr. Reckling for (i) all reasonable subscriptions, dues and continuing medical education in order for him to maintain his medical certifications, (b) his attainment of an M.B.A that is mutually agreed upon and (c) insurance "tail" coverage for his past medical practice.

In March 2017, Dr. Reckling was granted a stock option for 402,550 shares of common stock with an exercise price of $0.33 per share. This option will vest in 48 equal monthly amounts commencing on the closing of this offering.

Severance and Change in Control Agreements

In March 2016, we entered into severance letter agreements with each of Ms. Francis and Dr. Reckling. These agreements provide that in the event we terminate such officer for any reason other than for cause (as defined in the letter agreement), we will provide the officer the following benefits within 60 calendar days of the officer's termination date:

- A lump-sum payment equal to three months of the officer's then-current base salary; and
- A lump sum payment in the amount of $5,700.

These agreements further provide that in the event we terminate such officer for any reason other than for cause or if the officer resigns for good reason (as defined in the letter agreement) either three months prior to or twelve months following the consummation of a change in control (as defined in the letter agreement), we will provide the officer the following benefits within 60 calendar days of the officer's termination date:

- A lump-sum payment equal to six months of the officer's then-current base salary;
- A lump sum payment in the amount of $11,300;
- Accelerated vesting of any unvested option shares such that 100% of the unvested option shares shall vest as of the officer's termination date; and
- A lump-sum equal to the officer's target annual bonus, prorated for partial months of service prior to the officer's termination date.

These severance benefits are contingent on the officer returning all of our property, continued adherence to the terms and condition of the proprietary information and inventions agreement between us and the officer, (c) resignation from our board of directors, if applicable, and (d) execution and non-revocation of a release of claims. The severance letter agreement for Ms. Francis supersede the acceleration provisions set forth in her offer letter.

Equity Acceleration

Mr. Dunn's options for 4,909,546 shares granted in July 2014 and for 2,068,236 shares granted in July 2016 will fully vest if we are subject to a change in control before Mr. Dunn's service terminates, provided he agrees to provide services to the acquiring company for a period not to exceed six months. Mr. Dunn's option for 1,825,930 shares granted in May 2015, will vest as to 50% of the option shares if we are subject to a change in control.

In the case of all the options granted to Ms. Francis and Dr. Reckling, the accelerated vesting of any unvested option shares will occur as set forth above in "Severance and Change in Control Agreements."

Equity Plans

The principal features of our equity plans are summarized below. These summaries are qualified in their entirety by reference to the actual verbiage of the plans, which are filed as exhibits to the registration statement of which this prospectus is a part.

2017 Equity Incentive Plan

Our board of directors adopted our 2017 Equity Incentive Plan, or the 2017 Plan, in March 2017, and our stockholders subsequently approved the 2017 Plan in 2017. The 2017 Plan will become effective on the date the registration statement of which this prospectus forms a part is declared effective by the SEC. Once the 2017 Plan becomes effective, no further grants will be made under our 2008 Stock Plan, which is described below.

Our 2017 Plan provides for the grant of incentive stock options, or ISOs, within the meaning of Section 422 of the Code, to our employees and our parent and subsidiary corporations' employees, and for the grant of nonstatutory stock options, or NSOs, stock appreciation rights, restricted stock awards, restricted stock unit awards, performance-based stock awards, and other forms of equity compensation to our employees, directors and consultants. Addition, our 2017 Plan provides for the grant of performance cash awards to our employees, directors and consultants.

Share Reserve. The maximum number of shares of our common stock that may be issued under our 2017 Plan is 42,502,151. The number of shares of our common stock reserved for issuance under our 2017 Plan will automatically increase on January 1 of each year, beginning on January 1, 2018, and continuing through and including January 1, 2027, by 5% of the total number of shares of our capital stock outstanding on December 31 of the preceding calendar year, or a lesser number of shares determined by our board of directors. The maximum number of shares that may be issued upon the exercise of ISOs under our 2017 Plan is three times the share reserve.

Shares issued under our 2017 Plan will be authorized but unissued or reacquired shares of our common stock. Shares subject to stock awards granted under our 2017 Plan that expire or terminate without being exercised in full, or that are paid out in cash rather than in shares, will not reduce the number of shares available for issuance under our 2017 Plan. Additionally, shares issued pursuant to stock awards under our 2017 Plan that we repurchase or that are forfeited, as well as shares used to pay the exercise price of a stock award or to satisfy the tax withholding obligations related to a stock award, will become available for future grant under our 2017 Plan.

Plan Administration. Our board of directors, or a duly authorized committee of our board of directors, will administer our 2017 Plan. Our board of directors may also delegate to one or more of our officers the authority to (1) designate employees (other than officers) to receive specified stock awards, and (2) determine the number of shares subject to such stock awards. Subject to the terms of our 2017 Plan, the board of directors has the authority to determine the terms of awards, including recipients, the exercise, purchase or strike price of stock awards, if any, the number of shares subject to each stock award, the fair market value of a share of our common stock, the vesting schedule applicable to the awards, together with any vesting acceleration, and the form of consideration, if any, payable upon exercise or settlement of the award and the terms of the award agreements for use under our 2017 Plan.

Our board of directors has the power to modify outstanding awards under our 2017 Plan. Our board of directors has the authority to reprice any outstanding option or stock appreciation right, cancel any outstanding stock award in exchange for new stock awards, cash or other consideration, or take any other action that is treated as a repricing under generally accepted accounting principles, with the consent of any adversely affected participant.

Section 162(m) Limits. At such time as necessary for compliance with Section 162(m) of the Code, no participant may be granted stock awards covering more than 1,000,000 shares of our common stock under our 2017 Plan during any calendar year pursuant to stock options, stock appreciation rights and other stock awards whose value is determined by reference to an increase over an exercise price or strike price of at least 100% of the fair market value of our common stock on the date of grant. Additionally, no participant may be granted in a calendar year a performance stock award covering more than 1,000,000 shares of our common stock or a performance cash award having a maximum value in excess of $1 million under our 2017 Plan. These limitations are designed to allow us to grant compensation that will not be subject to the $1,000,000 annual limitation on the income tax deductibility of compensation paid to a covered executive officer imposed by Section 162(m) of the Code.

Stock Options. Incentive stock options and nonstatutory stock options are granted pursuant to stock option agreements adopted by the plan administrator. The plan administrator determines the exercise price for stock

options, within the terms and conditions of the 2017 Plan, provided that the exercise price of a stock option generally cannot be less than 100% of the fair market value of our common stock on the date of grant. Options granted under the 2017 Plan vest at the rate specified in the stock option agreement as determined by the plan administrator.

Restricted Stock Unit Awards. Restricted stock unit awards are granted pursuant to restricted stock unit award agreements adopted by the plan administrator. Restricted stock unit awards may be granted in consideration for any form of legal consideration that may be acceptable to our board of directors and permissible under applicable law. A restricted stock unit award may be settled by cash, delivery of stock, a combination of cash and stock as deemed appropriate by the plan administrator or in any other form of consideration set forth in the restricted stock unit award agreement. Additionally, dividend equivalents may be credited in respect of shares covered by a restricted stock unit award. Except as otherwise provided in the applicable award agreement, restricted stock units that have not vested will be forfeited upon the participant's cessation of continuous service for any reason.

Restricted Stock Awards. Restricted stock awards are granted pursuant to restricted stock award agreements adopted by the plan administrator. A restricted stock award may be awarded in consideration for cash, check, bank draft or money order, past services to us or any other form of legal consideration (including future services) that may be acceptable to our board of directors and permissible under applicable law. The plan administrator determines the terms and conditions of restricted stock awards, including vesting and forfeiture terms. If a participant's service relationship with us ceases for any reason, we may receive through a forfeiture condition or a repurchase right any or all of the shares of common stock held by the participant that have not vested as of the date the participant terminates service with us.

Stock Appreciation Rights. Stock appreciation rights are granted pursuant to stock appreciation grant agreements adopted by the plan administrator. The plan administrator determines the purchase price or strike price for a stock appreciation right, which generally cannot be less than 100% of the fair market value of our common stock on the date of grant. A stock appreciation right granted under the 2017 Plan vests at the rate specified in the stock appreciation right agreement as determined by the plan administrator.

Performance Awards. Our 2017 Plan permits the grant of performance-based stock and cash awards that may qualify as performance-based compensation that is not subject to the $1,000,000 limitation on the income tax deductibility of compensation paid to a covered executive officer imposed by Section 162(m) of the Code. Our compensation committee can structure such awards so that the stock or cash will be issued or paid pursuant to such award only following the achievement of certain pre-established performance goals during a designated performance period.

Our compensation committee may establish performance goals by selecting from one or more of the following performance criteria: (1) earnings (including earnings per share and net earnings); (2) earnings before interest, taxes and depreciation; (3) earnings before interest, taxes, depreciation and amortization; (4) total stockholder return; (5) return on equity or average stockholder's equity; (6) return on assets, investment, or capital employed; (7) stock price; (8) margin (including gross margin); (9) income (before or after taxes); (10) operating income; (11) operating income after taxes; (12) pre-tax profit; (13) operating cash flow; (14) sales or revenue targets; (15) increases in revenue or product revenue; (16) expenses and cost reduction goals; (17) improvement in or attainment of working capital levels; (18) economic value added (or an equivalent metric); (19) market share; (20) cash flow; (21) cash flow per share; (22) share price performance; (23) debt reduction; (24) customer satisfaction; (25) stockholders' equity; (26) capital expenditures; (27) debt levels; (28) operating profit or net operating profit; (29) workforce diversity; (30) growth of net income or operating income; (31) billings; (32) pre-clinical development related compound goals; (33) financing; (34) regulatory milestones, including approval of a compound; (35) stockholder liquidity; (36) corporate governance and compliance; (37) product commercialization; (38) intellectual property; (39) personnel matters; (40) progress of internal research or clinical programs; (41) progress of partnered programs; (42) partner satisfaction; (43) budget

management; (44) clinical achievements; (45) completing phases of a clinical study (including the treatment phase); (46) announcing or presenting preliminary or final data from clinical studies; in each case, whether on particular timelines or generally; (47) timely completion of clinical trials; (48) submission of INDs and NDAs and other regulatory achievements; (49) partner or collaborator achievements; (50) internal controls, including those related to the Sarbanes-Oxley Act of 2002; (51) research progress, including the development of programs; (52) investor relations, analysts and communication; (53) manufacturing achievements (including obtaining particular yields from manufacturing runs and other measurable objectives related to process development activities); (54) strategic partnerships or transactions (including in-licensing and out-licensing of intellectual property; (55) establishing relationships with commercial entities with respect to the marketing, distribution and sale of the Company's products (including with group purchasing organizations, distributors and other vendors); (56) supply chain achievements (including establishing relationships with manufacturers or suppliers of active pharmaceutical ingredients and other component materials and manufacturers of the Company's products); (57) co-development, co-marketing, profit sharing, joint venture or other similar arrangements; and (58) to the extent that an award is not intended to comply with Section 162(m) of the Code, other measures of performance selected by our board or compensation committee (as applicable)not intended to comply with Section 162(m) of the Code, other measures of performance selected by our board.

Our compensation committee may establish performance goals on a company-wide basis, with respect to one or more business units, divisions, affiliates, or business segments, and in either absolute terms or relative to the performance of one or more comparable companies or the performance of one or more relevant indices. Unless specified otherwise (1) in the award agreement at the time the award is granted or (2) in such other document setting forth the performance goals at the time the goals are established, our compensation committee (or, to the extent that an award is not intended to qualify as "performance-based compensation" under Section 162(m) of the Code, our board) will appropriately make adjustments in the method of calculating the attainment of the performance goals as follows; *provided*, *however*, that to the extent that an award is intended to qualify as "performance-based compensation" under Section 162(m) of the Code, any such adjustment may be made only if such adjustment is objectively determinable and specified in the award agreement at the time the award is granted or in such other document setting forth the performance goals for the award at the time the performance goals are established: (a) to exclude restructuring and/or other nonrecurring charges; (b) to exclude exchange rate effects; (c) to exclude the effects of changes to generally accepted accounting principles; (d) to exclude the effects of any statutory adjustments to corporate tax rates; and (e) to exclude the effects of any items that are "unusual" in nature or occur "infrequently" as determined under generally accepted accounting principles; (f) to exclude the dilutive effects of acquisitions or joint ventures; (g) to assume that any business divested by us achieved performance objectives at targeted levels during the balance of a Performance Period following such divestiture; (h) to exclude the effect of any change in the outstanding shares of our common stock by reason of any stock dividend or split, stock repurchase, reorganization, recapitalization, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to common stockholders other than regular cash dividends; (i) to exclude the effects of stock based compensation and the award of bonuses under our bonus plans; (j) to exclude costs incurred in connection with potential acquisitions or divestitures that are required to be expensed under generally accepted accounting principles; (k) to exclude the goodwill and intangible asset impairment charges that are required to be recorded under generally accepted accounting principles; and (l) to exclude the effect of any other unusual, non-recurring item of gain or loss.

Other Stock Awards. The plan administrator may grant other awards based in whole or in part by reference to our common stock. The plan administrator will set the number of shares under the stock award and all other terms and conditions of such awards.

Changes to Capital Structure. In the event there is a specified type of change in our capital structure, such as a stock split, reverse stock split or recapitalization, appropriate adjustments will be made to (1) the class and maximum number of shares reserved for issuance under the 2017 Plan, (2) the class and maximum number of shares by which the share reserve may increase automatically each year, (3) the class and maximum number of shares that may be issued upon the exercise of incentive stock options, (4) the class and maximum number of

shares subject to stock awards that can be granted in a calendar year (as established under the 2017 Plan pursuant to Section 162(m) of the Code) and (5) the class and number of shares and exercise price, strike price or purchase price, if applicable, of all outstanding stock awards.

Corporate Transactions. Our 2017 Plan provides that in the event of certain specified significant corporate transactions including: (1) a sale of all or substantially all of our assets, (2) the sale or disposition of more than 50% of our outstanding securities, (3) the consummation of a merger or consolidation where we do not survive the transaction and (4) the consummation of a merger or consolidation where we do survive the transaction but the shares of our common stock outstanding prior to such transaction are converted or exchanged into other property by virtue of the transaction, each outstanding award will be treated as the plan administrator determines unless otherwise provided in an award agreement or other written agreement between us and the award holder. The administrator will take one of the following actions with respect to such awards (1) arrange for the assumption, continuation or substitution of a stock award by a successor corporation; (2) arrange for the assignment of any reacquisition or repurchase rights held by us to a successor corporation; (3) accelerate the vesting, in whole or in part, of the stock award and provide for its termination prior to the transaction; (4) arrange for the lapse, in whole or in part, of any reacquisition or repurchase rights held by us; or (6) cancel or arrange for the cancellation of the stock award in exchange for a payment, in the form determined by the board, equal to the excess, if any, of the per share amount (or value of property per share) payable to holders of our common stock in connection with the transaction over any exercise price payable by the participant in connection with the exercise, multiplied by the number of shares subject to the stock award. Such payment may be subject to vesting based on the participant's continuing service, provided that the vesting schedule shall be no less favorable to the holder than the schedule under which the stock award would have become vested and/or exercisable. Any escrow, holdback, earnout or similar provisions in the definitive agreement for the transaction may apply to such payment to the holder of a stock award to the same extent and in the same manner as such provisions apply to holders of our common stock. The plan administrator is not obligated to treat all stock awards or portions of stock awards, even those that are of the same type, in the same manner.

In the event of a change in control, awards granted under the 2017 Plan will not receive automatic acceleration of vesting and/or exercisability, although this treatment may be provided for in an award agreement. Under the 2017 Plan, a change in control generally will be deemed to occur in the event: (i) a person, entity or group acquires, directly or indirectly, our securities representing more than 50% of the combined voting power of our then outstanding securities, other than by virtue of a merger, consolidation, or similar transaction; (ii) there is consummated a merger, consolidation, or similar transaction and, immediately after the consummation of such transaction, our stockholders immediately prior thereto do not own, directly or indirectly, more than 50% of the combined outstanding voting power of the surviving entity or the parent of the surviving entity in substantially the same proportions as their ownership of our outstanding voting securities immediately prior to such transaction; (iii) there is consummated a sale or other disposition of all or substantially all of our consolidated assets, other than a sale or other disposition to an entity in which more than 50% of the entity's combined voting power is owned by our stockholders in substantially the same proportions as their ownership of our outstanding voting securities immediately prior to such sale or other disposition; or (iv) a majority of our Board becomes comprised of individuals whose nomination, appointment, or election was not approved by a majority of the Board members or their approved successors.

Transferability. A participant may not transfer stock awards under our 2017 Plan other than by will, the laws of descent and distribution or as otherwise provided under our 2017 Plan.

Plan Amendment or Termination. Our board of directors has the authority to amend, suspend, or terminate our 2017 Plan, provided that such action does not materially impair the existing rights of any participant without such participant's written consent. Certain material amendments also require the approval of our stockholders. No ISOs may be granted after the tenth anniversary of the date our board of directors adopted our 2017 Plan. No stock awards may be granted under our 2017 Plan while it is suspended or after it is terminated.

2017 Employee Stock Purchase Plan

Our board of directors adopted our 2017 Employee Stock Purchase Plan, or the ESPP, in March 2017, and our stockholders subsequently approved the ESPP in 2017. The ESPP will become effective immediately upon the execution and delivery of the underwriting agreement related to this offering. The purpose of the ESPP is to secure the services of new employees, to retain the services of existing employees and to provide incentives for such individuals to exert maximum efforts toward our success and that of our affiliates. The ESPP is intended to qualify as an "employee stock purchase plan" within the meaning of Section 423 of the Code.

Share Reserve. The maximum aggregate number of shares of our common stock that may be issued pursuant to the exercise of purchase rights under our ESPP that are granted to our employees or to employees of any of our designated affiliates is 9,444,922 shares. Additionally, the number of shares of our common stock reserved for issuance under our ESPP will increase automatically each year, beginning on January 1, 2018, and continuing through and including January 1, 2027, by the lesser of (1) 1% of the total number of shares of our common stock outstanding on December 31 of the preceding calendar year, (2) 10,000,000 shares or (3) a lesser number of shares as determined by our board of directors. Shares subject to purchase rights granted under our ESPP that terminate without having been exercised in full will not reduce the number of shares available for issuance under our ESPP.

Administration. Our board of directors, or a duly authorized committee thereof, will administer our ESPP. Our board of directors has delegated concurrent authority to administer our ESPP to our compensation committee under the terms of the compensation committee's charter. The ESPP is implemented through a series of offerings under which eligible employees are granted purchase rights to purchase shares of our common stock on specified dates during such offerings. Under the ESPP, we may specify offerings with durations of not more than 27 months, and may specify shorter purchase periods within each offering. Each offering will have one or more purchase dates on which shares of our common stock will be purchased for employees participating in the offering. An offering under the ESPP may be terminated under certain circumstances.

Payroll Deductions. Generally, all regular employees, including executive officers, employed by us or by any of our designated affiliates, may participate in the ESPP and may contribute, normally through payroll deductions, up to 15% of their earnings (as defined in the ESPP) for the purchase of our common stock under the ESPP. Unless otherwise determined by our board of directors, common stock will be purchased for the accounts of employees participating in the ESPP at a price per share equal to the lower of (a) 85% of the fair market value of a share of our common stock on the first date of an offering or (b) 85% of the fair market value of a share of our common stock on the date of purchase. For the initial offering, which will commence upon the execution and delivery of the underwriting agreement relating to this offering, the fair market value on the first day of the initial offering will be the price at which shares are first sold to the public.

Limitations. Our employees, including executive officers, or any of our designated affiliates may have to satisfy one or more of the following service requirements before participating in our ESPP, as determined by the administrator: (1) customary employment with us or one of our affiliates for more than 20 hours per week and more than five months per calendar year, or (2) continuous employment with us or one of our affiliates for a minimum period of time, not to exceed two years, prior to the first date of an offering. An employee may not be granted rights to purchase stock under our ESPP if such employee (1) immediately after the grant would own stock possessing 5% or more of the total combined voting power or value of our common stock, or (2) holds rights to purchase stock under our ESPP that would accrue at a rate that exceeds $25,000 worth of our common stock based on the fair market value per share of our common stock at the beginning of an offering for each calendar year that the purchase rights remain outstanding.

Changes to Capital Structure. In the event that there occurs a change in our capital structure through such actions as a stock split, merger, consolidation, reorganization, recapitalization, reincorporation, stock dividend,

dividend in property other than cash, large nonrecurring cash dividend, liquidating dividend, combination of shares, exchange of shares, change in corporate structure or similar transaction, the board of directors will make appropriate adjustments to (1) the number of shares reserved under the ESPP, (2) the maximum number of shares by which the share reserve may increase automatically each year, (3) the number of shares and purchase price of all outstanding purchase rights and (4) the number of shares that are subject to purchase limits under an offering.

Corporate Transactions. In the event of certain significant corporate transactions including: (1) a sale of all or substantially all of our assets, (2) the sale or disposition of more than 50% of our outstanding securities, (3) the consummation of a merger or consolidation where we do not survive the transaction and (4) the consummation of a merger or consolidation where we do survive the transaction but the shares of our common stock outstanding immediately prior to such transaction are converted or exchanged into other property by virtue of the transaction, any then-outstanding rights to purchase our stock under the ESPP may be assumed, continued or substituted for by any surviving or acquiring entity (or its parent company). If the surviving or acquiring entity (or its parent company) elects not to assume, continue or substitute for such purchase rights, then the participants' accumulated payroll contributions will be used to purchase shares of our common stock within 10 business days prior to such corporate transaction, and such purchase rights will terminate immediately after such purchase.

ESPP Amendments, Termination. Our board of directors has the authority to amend or terminate our ESPP, provided that except in certain circumstances such amendment or termination may not materially impair any outstanding purchase rights without the holder's consent. We will obtain stockholder approval of any amendment to our ESPP as required by applicable law or listing requirements.

2008 Stock Plan

General. Our board of directors adopted the 2008 Stock Plan in April 2008, and it was approved by our stockholders in February 2009. We have subsequently amended the 2008 Stock Plan, with the most recent amendment occurring in March 2017, the purpose of which was to increase the number of shares available for issuance under the 2008 Stock Plan. Our stockholders approved this recent amendment in 2017. No further awards will be made under the 2008 Stock Plan following this offering; however, awards outstanding under the 2008 Stock Plan will continue in full effect in accordance with their existing terms.

Share Reserve. As of March 31, 2017, we have reserved 96,301,442 shares of our common stock for issuance under the 2008 Stock Plan. As of March 31, 2017, options to purchase 55,294,071 shares of common stock, at exercise prices ranging from $0.015 to $0.54 per share, or a weighted-average exercise price of $0.23 per share, were outstanding under the 2008 Stock Plan, and 1,712,363 shares of common stock remained available for future issuance under the 2008 Stock Plan. Unissued shares subject to awards that expire or are cancelled, award shares reacquired by us and shares withheld in payment of the purchase price or exercise price of an award or in satisfaction of withholding taxes will again become available for issuance under the 2008 Stock Plan until the expiration date of the 2008 Stock Plan, as described above.

Administration. Our board of directors has administered the 2008 Stock Plan since its adoption, however, following this offering, the compensation committee of our board of directors will generally administer the 2008 Stock Plan. The administrator has complete discretion to make all decisions relating to the 2008 Stock Plan and the outstanding awards, including the authority to accept the cancellation of outstanding options (whether granted by us or another issuer) in return for the grant of new options for the same or a different number of shares and at the same or a different exercise price

Types of Awards. The 2008 Stock Plan provides for both the direct grant or sale of shares of our common stock and for the grant of options to purchase shares of our common stock. The 2008 Stock Plan allows for the grant of both incentive and nonstatutory stock options.

Eligibility. Employees, non-employee members of our board of directors and consultants are eligible to participate in the 2008 Stock Plan. However, only employees are eligible to receive incentive stock options.

Options. The exercise price of options granted under the 2008 Stock Plan may not be less than 100% of the fair market value of our common stock on the grant date. Options expire at the time determined by the administrator, but in no event more than ten years after they are granted, and generally expire earlier if the optionee's service terminates.

Corporate Transactions. In the event that we are a party to a merger or consolidation, shares acquired under the 2008 Stock Plan will be subject to the agreement of merger or consolidation, which agreement need not treat all options in an identical manner. Such agreement will provide for one or more of the following with respect to outstanding options:

- The continuation, assumption or substitution of the option by the surviving entity or its parent;
- Full vesting and exercisability of the option, followed by cancellation of the option if not exercised prior to the transaction; or
- Cancellation of the option in exchange for a payment equal to the excess, if any, of the fair market value of the shares subject to the option over the exercise price per share of the option. Such payment may be subject to vesting based on the optionee's continuing service, generally in accordance with the original vesting schedule applicable to the option.

Changes in Capitalization. In the event of certain specified changes in the capital structure of our common stock, such as a stock split, reverse stock split, stock dividend, reclassification or any other increase or decrease in the number of issued shares of stock effective without receipt of consideration by us, proportionate adjustments will automatically be made in each of (i) the number of shares available for future grants under the 2008 Stock Plan, (ii) the number of shares covered by each outstanding option, and (iii) the exercise price per share subject to each outstanding option. In the event of an extraordinary cash dividend that has a material effect on the fair market value of our common stock, a recapitalization, spin-off, or other similar occurrence, the administrator at its sole discretion may make appropriate adjustments to one or more of the foregoing.

Amendments or Termination. The administrator may at any time amend, suspend or terminate the 2008 Stock Plan, subject to stockholder approval in the case of certain amendments. The 2008 Stock Plan will terminate upon the closing of this offering.

401(k) Plan

We maintain a 401(k) plan for employees. The 401(k) is intended to be qualified under Section 401(k) of the Code (as defined below), with the related trust intended to be tax exempt under Section 501(a) of the Code. As a tax-qualified retirement plan, contributions to the 401(k) plan by eligible U.S. employees or by us, and the investment earnings thereon, are not taxable to the employees until withdrawn, and so that contributions by us, if any, will be deductible by us when made. Employees may elect to reduce their current compensation by up to the statutorily prescribed annual limits and to have the amount of such reduction contributed to the 401(k) plan. The 401(k) plan permits us to make contributions up to the limits allowed by law on behalf of all eligible employees. We have not made any company contributions to the 401(k) plan to date.

Health and Welfare Benefits

All our named executive officers are eligible to participate in our employee benefit plans, including our medical, dental and vision insurance plan, in each case on the same basis as all of our other employees.

Limitation on Liability and Indemnification of Directors and Officers

Upon the closing of this offering, our amended and restated certificate of incorporation will contain provisions that limit the liability of our current and former executive officers and directors for monetary damages

to the fullest extent permitted by Delaware law. Delaware law provides that directors of a corporation will not be personally liable for monetary damages for any breach of fiduciary duties as directors, except liability:

- for any transaction from which the director derives an improper personal benefit;
- for any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- under Section 174 of the Delaware General Corporation Law (unlawful payment of dividends or redemption of shares); or
- for any breach of a director's duty of loyalty to the corporation or its stockholders.

Such limitation of liability does not apply to liabilities arising under federal securities laws and does not affect the availability of equitable remedies, such as injunctive relief or rescission.

Our amended and restated certificate of incorporation and our amended and restated bylaws will provide that we are required to indemnify our executive officers and directors to the fullest extent permitted by Delaware law. Our amended and restated bylaws will also provide that, upon satisfaction of certain conditions, we shall advance expenses incurred by an executive officer and director in advance of the final disposition of any action or proceeding, and permit us to secure insurance on behalf of any officer, director, employee or other agent for any liability arising out of his or her actions in that capacity regardless of whether we would otherwise be permitted to indemnify him or her under the provisions of Delaware law. Our amended and restated certificate of incorporation and amended and restated bylaws will also provide our board of directors with discretion to indemnify our other officers, employees and other agents when determined appropriate by the board. We have entered and expect to continue to enter into agreements to indemnify our directors and executive officers. With certain exceptions, these agreements provide for indemnification for related expenses including, among other things, attorneys' fees, judgments, fines and settlement amounts incurred by any of these individuals in any action or proceeding. We believe that these bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers. We also maintain customary directors' and officers' liability insurance.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and bylaws may discourage stockholders from bringing a lawsuit against our directors for breach of their fiduciary duty. They may also reduce the likelihood of derivative litigation against our directors and officers, even though an action, if successful, might benefit us and other stockholders. Furthermore, a stockholder's investment may be adversely affected to the extent that we pay the costs of settlement and damage awards against directors and officers as required by these indemnification provisions. At present, there is no pending litigation or proceeding involving any of our directors, officers or employees for which indemnification is sought and we are not aware of any threatened litigation that may result in claims for indemnification.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The following is a description of transactions since January 1, 2014 to which we have been a party in which the amount involved exceeded $120,000 and in which any of our executive officers, directors, promoters or beneficial holders of more than 5% of our capital stock had or will have a direct or indirect material interest, other than compensation arrangements which are described in "Management—Non-Employee Director Compensation" and "Executive Compensation."

Sale of Series 5 Preferred Stock

In April 2014, in connection with the conversion of convertible notes payable and interest, we issued 4,501,808 shares of Series 5 preferred stock at a purchase price of $0.51 per share for an aggregate purchase price of $2,274,764.

The following table summarizes purchases of shares of Series 5 preferred stock by our executive officers, directors and holders of more than 5% of our capital stock.

Purchaser	Number of Shares	Aggregate Consideration
Skyline Venture Partners V, L.P.(1)	3,231,526	$ 1,632,890
Montreux Equity Partners IV, L.P.(2)	1,270,282	641,874
Total	4,501,808	$ 2,274,764

(1) John G. Freund, M.D., a member of our board of directors, is a Managing Director at Skyline Venture Partners.
(2) John J. Savarese, M.D., a former member of our board of directors, was a Managing Director at Montreux Equity Partners.

Sale of Series 6 Preferred Stock

In April 2014, we issued and sold 36,061,625 shares of Series 6 preferred stock at a purchase price of $0.92 per share for an aggregate purchase price of $32,999,993. In April and June 2015, we completed additional sales of 23,685,652 shares of Series 6 preferred stock at a purchase price of $0.92 per share for an aggregate purchase price of $21,674,741.

The following table summarizes purchases of shares of Series 6 preferred stock by our executive officers, directors and holders of more than 5% of our capital stock.

Purchaser	Number of Shares	Aggregate Consideration
Redline Capital Management S.A.	14,206,097	$ 12,999,999
Skyline Venture Partners V, L.P.(1)	11,742,252	10,745,335
Entities affiliated with Montreux Equity Partners(2)	11,031,787	10,095,188
OrbiMed Private Investments V, LP(3)	10,301,872	9,427,243
Gregory K. Hinckley(4)	382,471	350,000
Timothy E. Davis, Jr.(5)	109,277	100,000
Total	47,773,756	$ 43,717,765

(1) John G. Freund, M.D., a member of our board of directors, is a Managing Director at Skyline Venture Partners.
(2) Includes (a) 10,150,680 shares of Series 6 preferred stock held by Montreux Equity Partners IV, L.P., and (b) 887,107 shares of Series 6 preferred stock held by Montreux IV Associates, L.L.C.

(3) David P. Bonita, a member of our board of directors, is a Private Equity Partner at OrbiMed Advisors LLC.
(4) Includes 163,916 shares held by Gregory K. Hinckley and Mary C. Hinckley As Community Property with the Right of Survivorship. Mr. Hinckley is a member of our board of directors.
(5) Mr. Davis is a member of our board of directors.

Sale of Series 7 Preferred Stock

In June and July 2016, we issued and sold an aggregate of 36,711,701 shares of Series 7 preferred stock at a purchase price of $0.56 per share for an aggregate purchase price of $20,463,102. In February and March 2017, we issued and sold an aggregate of 9,735,767 shares of Series 7 preferred stock at a purchase price of $0.56 per share for an aggregate purchase price of $5,426,717.

The following table summarizes purchases of shares of Series 7 preferred stock by our executive officers, directors and holders of more than 5% of our capital stock.

	Shares of Series 7 Preferred Stock	
Purchaser	Number of Shares	Aggregate Gross Consideration
Arboretum Ventures IV, LP(1)	26,910,656	$ 15,000,000
Skyline Venture Partners V, L.P.(2)	7,176,175	4,000,000
Entities affiliated with Montreux Equity Partners(3)	3,588,087	2,000,000
OrbiMed Private Investments V, LP(4)	3,229,278	1,800,000
Redline Capital Management S.A.	1,973,448	1,100,000
Gregory K. Hinckley(5)	807,319	450,000
Keith C. Valentine(6)	179,404	100,000
Total	43,864,367	$ 24,450,000

(1) Timothy B. Petersen, a member of our board of directors, is a Managing Director at Arboretum Ventures, Inc.
(2) John G. Freund, M.D., a member of our board of directors, is a Managing Director at Skyline Venture Partners.
(3) Includes (a) 493,362 shares of Series 7 preferred stock held by Montreux Equity Partners IV, L.P. and (b) 3,094,725 shares of Series 7 preferred stock held by Montreux IV Associates IV, L.L.C.
(4) David P. Bonita, a member of our board of directors, is a Private Equity Partner at OrbiMed Advisors LLC.
(5) Represents shares held by Gregory K. Hinckley and Mary C. Hinckley As Community Property with the Right of Survivorship. Mr. Hinckley is a member of our board of directors.
(6) Mr. Valentine is a member of our board of directors.

Bridge Financings

In July 2012, we completed a bridge financing with our existing investors, Montreux Equity Partners and Skyline Ventures, through which we issued convertible promissory notes in the aggregate principal amount of approximately $2.0 million and warrants to purchase an aggregate of 988,522 shares of Series 5 preferred stock at an exercise price of $0.51 per share. All of the convertible promissory notes issued in connection with this financing converted into shares of Series 5 preferred stock in April 2014. These warrants terminate upon the earliest to occur of (i) July 25, 2019, (ii) an initial public offering, or (iii) a “corporate transaction” as defined in the Note and Warrant Purchase Agreement dated July 25, 2012.

Loans

In March 2013, we loaned Daniel P. Murray, our then current Chief Financial Officer, $200,000 in connection with the exercise of options to purchase 2,737,921 shares of our common stock, or the Murray

Purchased Shares. The loan was evidenced by a full recourse promissory note, accrued interest on the outstanding principal amount at the rate of 1.09% per annum and was secured by a pledge of the Murray Purchased Shares. In November 2016, the loan amount was partially repaid in the amount of $116,000 (including principal of $113,000 and interest of $3,000). The remainder of the principal balance of this loan, together with all interest accrued and unpaid to date is due in March 2018.

In February 2014, we loaned Jeffrey W. Dunn, $437,000 in connection with the exercise of options to purchase 3,133,983 shares of our common stock, or the 2014 Exercised Options. The loan was evidenced by a full recourse promissory note, accrued interest on the outstanding principal amount at the rate of 1.97% per annum and was secured by a pledge of the 2014 Exercised Options. As of December 31, 2016, the outstanding balance of this loan was $450,730, including principal of $437,000. On March 1, 2017, we forgave $231,000 (including principal of $218,000 and interest of $13,000) of this loan. The remainder of the principal balance of this loan, together with all interest accrued and unpaid, will be forgiven upon the earlier of (i) our public filing of a registration statement with the Securities and Exchange Commission, (ii) a change in control or (iii) January 2018, provided Mr. Dunn provides continued service through such date.

Amended and Restated Investors' Rights Agreement

We are party to an investor rights agreement that provides holders of our preferred stock, including certain holders of 5% of our capital stock and entities affiliated with certain of our directors, with certain registration rights, including the right to demand that we file a registration statement or request that their shares be covered by a registration statement that we are otherwise filing. The investor rights agreement also provides for a right of first refusal in favor of certain holders of our stock with regard to certain issuances of our capital stock. The rights of first refusal will not apply to, and will terminate upon, closing of this offering. For a more detailed description of these registration rights, see the section titled "Description of Capital Stock—Registration Rights."

Employment Arrangements

We have entered into offer letters and severance and change in control agreements with our executive officers. For more information regarding these arranges, see the section titled "Executive Compensation—Employment Arrangements."

Equity Grants

We have granted stock options to our executive officers and members of our board of directors. For a description of these stock options, see the sections titled "Executive Compensation" and "Management—"Non-Employee Director Compensation."

Indemnification Agreements

Our amended and restated certificate of incorporation, which will be effective upon the closing of this offering, will contain provisions limiting the liability of directors, and our amended and restated bylaws, which will be effective upon the closing of this offering, will provide that we will indemnify each of our directors to the fullest extent permitted under Delaware law. Our amended and restated certificate of incorporation and amended and restated bylaws will also provide our board of directors with discretion to indemnify our officers and employees when determined appropriate by our board of directors.

We intend to enter into indemnification agreements with each of our directors and executive officers and certain other key employees. The indemnification agreements will provide that we will indemnify each of our directors, executive officers and such other key employees against any and all expenses incurred by that director, executive officer, or other key employee because of his or her status as one of our directors, executive officers, or other key employees, to the fullest extent permitted by Delaware law, our amended and restated certificate of

incorporation and our amended and restated bylaws. In addition, the indemnification agreements will provide that, to the fullest extent permitted by Delaware law, we will advance all expenses incurred by our directors, executive officers and other key employees in connection with a legal proceeding involving his or her status as a director, executive officer or employee.

Policies and Procedures for Related Party Transactions

Our audit committee has the primary responsibility for the review, approval and oversight of any "related party transaction," which is any transaction, arrangement, or relationship (or series of similar transactions, arrangements, or relationships) in which we are, were, or will be a participant and the amount involved exceeds $120,000, and in which the related person has, had, or will have a direct or indirect material interest. We intend to adopt a written related party transaction policy to be effective upon the closing of this offering. Under our related party transaction policy, our management will be required to submit any related person transaction not previously approved or ratified by our audit committee to our audit committee. In approving or rejecting the proposed transactions, our audit committee will take into account all of the relevant facts and circumstances available. Our audit committee will approve only those transactions that, as determined by our audit committee, are in, or are not inconsistent with, our best interests and the best interests of our stockholders.

Although we have not had a written policy prior to this offering for the review and approval of transactions with related persons, our board of directors has historically reviewed and approved any transaction where a director or officer had a financial interest, including the transactions described above. Prior to approving such a transaction, the material facts as to a director's or officer's relationship or interest as to the agreement or transaction were disclosed to our board of directors. Our board of directors would take this information into account when evaluating the transaction and in determining whether such transaction was fair to us and in the best interests of all of our stockholders.

PRINCIPAL STOCKHOLDERS

The following table sets forth certain information with respect to the beneficial ownership of our common stock as of March 31, 2017, and as adjusted to reflect the sale of common stock offered by us in this offering, for:

- each of our named executive officers;
- each of our directors;
- all of our executive officers and directors as a group; and
- each stockholder known by us to be the beneficial owner of more than 5% of our outstanding shares of common stock.

We have determined beneficial ownership in accordance with the rules of the Securities and Exchange Commission. Except as indicated in the footnotes below, we believe, based on the information furnished to us, that the persons and entities named in the table below have sole voting and investment power with respect to all shares of common stock that they beneficially own, subject to applicable community property laws.

Applicable percentage ownership is based on 280,020,764 shares of common stock outstanding at March 31, 2017, after giving effect to the conversion of all outstanding shares of preferred stock as of that date into an aggregate of 217,201,525 shares of our common stock and the conversion of all outstanding shares of series 1 common stock and series 2 common stock into an aggregate of 62,819,239 shares of our common stock, which will occur immediately prior to the closing of this offering. For purposes of computing percentage ownership after this offering, we have assumed that (i) shares of common stock will be issued by us in this offering; (ii) shares of common stock will be issued upon the net exercise of outstanding warrants with an exercise price of $0.51 per share, immediately prior to the closing of this offering, assuming an initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus; and (iii) that the underwriters will not exercise their right to purchase additional shares. In computing the number of shares of common stock beneficially owned by a person and the percentage ownership of that person, we deemed to be outstanding all shares of common stock subject to stock options and warrants held by that person or entity that are currently exercisable or that will become exercisable within 60 days of March 31, 2017. We did not deem these shares outstanding; however, for the purpose of computing the percentage ownership of any other person or entity. Unless otherwise indicated, the address of each beneficial owner listed in the table below is c/o SI-BONE, Inc., 3055 Olin Avenue, Suite 2200, San Jose, California 95128.

Name of Beneficial Owner	Number of Shares Beneficially Owned	Percent of Shares Beneficially Owned: Before the Offering	Percent of Shares Beneficially Owned: After the Offering
Named Executive Officers and Directors:			
David P. Bonita, M.D.(1)	14,136,651		
Timothy E. Davis, Jr.(2)	712,862		
Jeffrey W. Dunn(3)	24,545,764		
Laura A. Francis(4)	3,822,618		
John G. Freund, M.D.(5)	74,140,054		
Gregory K. Hinckley(6)	2,095,146		
Karen A. Licitra(7)	385,349		
Timothy B. Petersen(8)	26,910,656		
W. Carlton Reckling, M.D.(9)	2,295,205		
Mark A. Reiley, M.D.(10)	9,982,664		
Keith C. Valentine(11)	564,753		
All executive officers and directors as a group (20 persons)(12)	173,852,869		
5% Stockholders:			
Skyline Venture Partners V, L.P.(13)	74,140,054		
Entities affiliated with Montreux Equity Partners(14)	36,704,062		
Arboretum Ventures IV, LP(15)	26,910,656		
Redline Capital Management S.A.(16)	17,014,520		
OrbiMed Private Investments V, LP(17)	14,136,651		

* Less than 1 percent.

(1) Consists of shares of common stock held by OrbiMed Private Investments V, LP. (“OPI V”). OrbiMed Capital GP V LLC (“GP V”) is the general partner of OPI V and OrbiMed Advisors LLC (“OrbiMed Advisors”) is the managing member of GP V. Samuel D. Isaly is the managing member of and owner of a controlling interest in OrbiMed Advisors and may be deemed to have voting and investment power over the securities held by OPI V. Dr. Bonita, a member of our board of directors, is an employee of OrbiMed Advisors. Each of GP V, OrbiMed Advisors, Mr. Isaly, and Dr. Bonita disclaims beneficial ownership of such shares, except to the extent of its or his pecuniary interest therein, if any.

(2) Includes 597,163 shares of common stock issuable to Mr. Davis pursuant to options exercisable within 60 days of March 31, 2017, of which 206,979 of the shares would be unvested as of such date.

(3) Consists of (i) 9,935,734 shares of common stock held by Jeffrey W. Dunn as Trustee of the Jeffrey W. Dunn Living Trust Dated May 17, 2012, of which 184,971 shares are subject to repurchase by us as of May 30, 2017, (ii) 5,326,125 shares of common stock held by Susan McElroy, Trustee, or any successor Trustee(s) Thereto, of the Susan McElroy 2014 Separate Property Trust dated August 19, 2014, as amended (“McElroy Trust”), (iii) 8,803,730 shares of common stock issuable to Mr. Dunn pursuant to options exercisable within 60 days of March 31, 2017, of which 3,901,146 of the shares would be unvested as of such date, and (iv) 480,175 shares of common stock issuable to Susan McElroy pursuant to options exercisable within 60 days of March 31, 2017. Mr. Dunn has voting and investment power over the shares held by the Ms. McElroy and the McElroy Trust for which Mr. Dunn disclaims beneficial ownership of such shares.

(4) Consists of 3,822,618 shares of common stock issuable to Ms. Francis pursuant to options exercisable within 60 days of March 31, 2017, of which 2,017,993 of the shares would be unvested as of such date.

(5) Consists of (i) 73,430,465 shares of common stock held by Skyline Venture Partners V, L.P. (“SVP V”) and (ii) 709,589 shares of common stock issuable to SVP V upon the deemed conversion of shares of our preferred stock, which are issuable upon the exercise of warrants, as reflected in footnote 13 below. Skyline Venture Management V, LLC (“LLC”) is the general partners of SVP V and as such may be deemed to have voting and investment power with respect to the securities of SVP V. Dr. Freund, a member of our board of directors, is the Managing Director of LLC and may be deemed to have voting and investment power with respect to the securities held by SVP V. Dr. Freund disclaims beneficial ownership of such securities, except to the extent of his pecuniary interest therein.

(6) Consists of (i) 734,277 shares of common stock held by Mr. Hinckley and (ii) 1,360,869 shares of common stock held by Gregory K. Hinckley and Mary C. Hinckley as Community Property with the Right of Survivorship.

(7) Consists of 385,349 shares of common stock issuable to Ms. Licitra pursuant to options exercisable within 60 days of March 31, 2017, of which 255,373 of the shares would be unvested as of such date.

(8) Consists of shares of common stock held by Arboretum Ventures IV, LP ("AV IV"). Arboretum Investment Manager IV, LLC ("AIM IV") serves as the general partner of AV IV. Jan Garfinkle, Timothy B. Petersen, a member of our board of directors, and Paul McCreadie are managing directors of AIM IV and share voting and dispositive power with regard to these shares and therefore each of the foregoing managing members may be deemed to have the same powers with respect to such shares. Mr. Petersen disclaims beneficial ownership of such shares except to the extent of his proportionate pecuniary interest, if any.

(9) Consists of 2,295,205 shares of common stock issuable to Dr. Reckling pursuant to options exercisable within 60 days of March 31, 2017, of which 405,860 of the shares would be unvested as of such date.

(10) Consists of (i) 6,967,560 shares of common stock held by Dr. Reiley, (ii) 350,000 shares of common stock held by The Mark and Muriel Reiley Charitable Remainder Unitrust and (iii) 2,665,104 shares of common stock issuable to Dr. Reiley pursuant to options exercisable within 60 days of March 31, 2017, of which 1,177,037 of the shares would be unvested as of such date.

(11) Includes of 385,349 shares of common stock issuable to Mr. Valentine pursuant to options exercisable within 60 days of March 31, 2017, of which 255,373 of the shares would be unvested as of such date.

(12) Includes (i) 139,447,440 shares of common stock beneficially owned by the directors and named executive officers, (ii) 4,604,313 shares of common stock beneficially owned by other executive officers, (iii) 29,801,116 shares issuable pursuant to options exercisable within 60 days of March 31, 2017, of which 13,227,614 of the shares would be unvested as of such date and (iv) 709,589 shares of common stock issuable upon the deemed conversion of shares of our preferred stock, which are issuable upon the exercise of warrants.

(13) Consists of (i) 73,430,465 shares of common stock held by Skyline Venture Partners V, L.P. ("SVP V") and (ii) 709,589 shares of common stock issuable to SVP V upon the deemed conversion of shares of our preferred stock, which are issuable upon the exercise of warrants. Skyline Venture Management V, LLC ("LLC") is the general partners of SVP V and as such may be deemed to have voting and investment power with respect to the securities of SVP V. Dr. Freund, a member of our board of directors, is the Managing Director of LLC and may be deemed to have voting and investment power with respect to the securities held by SVP V. Dr. Freund disclaims beneficial ownership of such securities, except to the extent of his pecurniary interest therein. The address of each of the entities and individual listed above is 525 University Avenue, Suite 1350, Palo Alto, California 94301.

(14) Consists of (i) 30,983,354 shares of common stock held by Montreux Equity Partners IV, L.P. ("MEP IV"), (ii) 278,933 shares of common stock issuable to MEP IV upon the deemed conversion of shares of our preferred stock, which are issuable upon the exercise of warrants, (iii) 3,094,725 shares of common stock held by Montreux IV Associates IV, L.L.C. ("Associates IV"), and (iv) 2,347,050 shares of common stock held by Montreux IV Associates, L.L.C. ("Associates"). Daniel K. Turner III is the Managing Director of Montreux Equity Management IV, L.L.C., the general partner of each of MEP IV, Associates IV and Associates, and may be deemed to have voting and investment power over the shares held by each of these entities. Mr. Turner disclaims beneficial ownership of such shares, except to the extent of his proportionate pecuniary interest, if any. The address of the principal place of business of each of the entities and individuals listed above is One Ferry Building, Suite 255, San Francisco, California 94111.

(15) Arboretum Investment Manager IV, LLC ("AIM IV") serves as the general partner of Arboretum Ventures IV, LP ("AV IV"). Jan Garfinkle, Timothy B. Petersen, a member of our board of directors, and Paul McCreadie are managing directors of AIM IV and share the power to vote or dispose of these shares and therefore each of the foregoing managing members may be deemed to have voting and investment power with respect to such shares. Each of these individuals disclaims beneficial ownership of such shares except to the extent of their respective proportionate pecuniary interest therein. The address of the principal place of business of each of the entities and individuals listed above is 303 Detroit Street, Suite 301, Ann Arbor, Michigan 48104.

(16) Tatiana Evtushenkova and Sabine Teske are the managing directors of Redline Capital Management S.A. (“Redline”) and may be deemed to have voting and investment power over the shares held by Redline. Ms. Evtushenkova and Ms. Teske disclaim beneficial ownership of these shares except to the extent of their respective proportionate pecuniary interest therein, if any. The address of the principal place of business of each of Redline and individuals listed above is 26 Avenue Monterey, L-2163 Luxemborg, G.D. Luxemborg.

(17) OrbiMed Capital GP V LLC (“GP V”) is the general partner of OPI V and OrbiMed Advisors LLC (“OrbiMed Advisors”) is the managing member of GP V. Samuel D. Isaly is the managing member of and owner of a controlling interest in OrbiMed Advisors and may be deemed to have voting and investment power over the securities held by OPI V. Dr. Bonita, a member of our board of directors, is an employee of OrbiMed Advisors. Each of GP V, OrbiMed Advisors, Mr. Isaly, and Dr. Bonita disclaims beneficial ownership of such shares, except to the extent of its or his pecuniary interest therein, if any. The address of the principal place of business of each of the entities and individuals listed above is 601 Lexington Avenue, 54th Floor, New York, New York 10022.

DESCRIPTION OF CAPITAL STOCK

A description of our capital stock and the material terms and provisions of our amended and restated certificate of incorporation and amended and restated bylaws that will be in effect upon the closing of this offering and affecting the rights of holders of our capital stock is set forth below. The forms of our amended and restated certificate of incorporation and our amended and restated bylaws to be adopted in connection with this offering will be filed as exhibits to the registration statement relating to this prospectus.

Upon the closing of this offering, our amended and restated certificate of incorporation will authorize shares of undesignated preferred stock, the rights, preferences and privileges of which may be designated from time to time by our board of directors.

Upon the closing of this offering, our authorized capital stock will consist of 105,000,000 shares, all with a par value of $0.0001 per share, of which:

- 100,000,000 shares are designated common stock; and
- 5,000,000 shares are designated preferred stock.

As of March 31, 2017, and after giving effect to (i) the conversion of all of our outstanding preferred stock into common stock immediately prior to the closing of this offering and (ii) the issuance of shares of common stock upon the net exercise of outstanding warrants, with an exercise price of $0.51 per share, immediately prior to the closing of this offering, assuming an initial public offering price of $ per share, which is the midpoint of the price range set forth on the cover page of this prospectus, there were outstanding:

- shares of common stock held of record by stockholders;
- 55,294,071 shares of common stock issuable upon exercise of outstanding stock options; and
- 4,141,369 shares of common stock, as converted, issuable upon exercise of the outstanding warrants.

Common Stock

Dividend Rights

Subject to preferences that may apply to shares of preferred stock outstanding at the time, the holders of outstanding shares of our common stock are entitled to receive dividends out of funds legally available if our board of directors, in its discretion, determines to issue dividends and only then at the times and in the amounts that our board of directors may determine. See the section title “Dividend Policy” for more information.

Voting Rights

The holders of our common stock are entitled to one vote per share. Stockholders do not have the ability to cumulate votes for the election of directors. Our amended and restated certificate of incorporation and amended and restated bylaws that will be in effect upon the closing of this offering will provide for a classified board of directors consisting of three classes of approximately equal size, each serving staggered three-year terms. Only one class of directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective three-year terms.

No Preemptive or Similar Rights

Our common stock is not entitled to preemptive rights and is not subject to conversion, redemption or sinking fund provisions.

Right to Receive Liquidation Distributions

Upon our dissolution, liquidation or winding-up, the assets legally available for distribution to our stockholders are distributable ratably among the holders of our common stock, subject to prior satisfaction of all outstanding debt and liabilities and the preferential rights and payment of liquidation preferences, if any, on any outstanding shares of preferred stock.

Reclassification of Common Stock

Prior to this offering, we had two classes of common stock outstanding: Series 1 common stock and Series 2 common stock. The holders of our Series 2 common stock are entitled to one vote per share and the holders of our Series 1 common stock do not have voting rights, except as required by applicable law. Immediately prior to the closing of this offering, we will reclassify all outstanding shares of our Series 1 common stock and Series 2 common stock into a single class of common stock named "common stock," which shall have the same voting powers, preferences, rights and qualifications, limitations and restrictions as the current Series 2 common stock.

Preferred Stock

Upon the closing of this offering, no shares of preferred stock will be outstanding, but we will be authorized, subject to limitations prescribed by Delaware law, to issue preferred stock in one or more series, to establish from time to time the number of shares to be included in each series and to fix the designation, powers, preferences and rights of the shares of each series and any of its qualifications, limitations or restrictions. Our board of directors also can increase or decrease the number of shares of any series, but not below the number of shares of that series then outstanding, without any further vote or action by our stockholders. Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of the common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in control of our company and may adversely affect the market price of our common stock and the voting and other rights of the holders of common stock. We have no current plan to issue any shares of preferred stock.

Options

As of March 31, 2017, we had options to purchase 55,294,071 shares of common stock outstanding, with a weighted-average exercise price of $0.23 per share, under the 2008 Stock Plan.

For additional information regarding the terms of the 2008 Stock Plan, see the section titled "Executive Compensation—Equity Plans."

Warrants

As of March 31, 2017, we had outstanding warrants to purchase up to an aggregate of 5,055,906 shares of common stock and preferred stock with a weighted-average exercise price of $0.48 per share. Immediately prior to the closing of this offering, warrants to purchase up to an aggregate of 988,522 shares will be deemed to be net exercised. Upon the closing of this offering, the balance of the warrants will become exercisable for up to an aggregate of 4,141,369 shares of our common stock with a weighted-average exercise price of $0.48 per share.

Common Stock Warrants

As of March 31, 2017, we had outstanding warrants to purchase up to an aggregate of 2,237,918 shares of our common stock with a weighted-average exercise price of $0.22. Unless earlier exercised, these warrants will expire between July 2023 and March 2027.

Preferred Stock Warrants

As of March 31, 2017, we had outstanding warrants to purchase up to an aggregate of 1,384,326 shares of our Series 5 preferred stock with an exercise price of $0.51. Immediately prior to the closing of this offering, outstanding warrants to purchase 988,522 shares will be deemed to be net exercised. Upon the closing of this offering, the remaining warrant will become exercisable for 395,804 shares of our common stock with an exercise price of $0.51 per share and, unless exercised earlier, will expire in July 2023.

As of March 31, 2017, we had outstanding warrants to purchase up to an aggregate of 1,258,818 shares of our Series 6 preferred stock with an exercise price of $0.92 per share. Upon the closing of this offering, these warrants will become exercisable for up to an aggregate of 1,332,803 shares of our common stock with an exercise price of $0.92 per share. Unless earlier exercised, these warrants will expire between November 2024 and November 2025.

As of March 31, 2017, we had outstanding warrants to purchase up to an aggregate of 174,844 shares of our Series 7 preferred stock with an exercise price of $0.56 per share. Upon the closing of this offering, these warrants will become exercisable for up to an aggregate of 174,844 shares of our common stock with an exercise price of $0.56 per share. Unless earlier exercised, these warrants will expire in November 2026.

The warrants contain provision for the adjustment of the exercise price and the number of shares issuable upon the exercise of the applicable warrant in the event of certain stock dividends, stock splits, reorganizations, reclassifications and consolidations.

Registration Rights

After this offering, the holders of 217,201,525 shares of common stock issued upon the conversion of our preferred stock will be entitled to contractual rights to require us to register those shares under the Securities Act of 1933, as amended, or the Securities Act. These rights are provided under the terms of our amended and restated investors' rights agreement. If we propose to register any of our securities under the Securities Act for our own account, holders of shares having registration rights are entitled to include their shares in our registration statement, provided, among other conditions, that the underwriters of any such offering have the right to limit the number of shares included in the registration.

We will pay all expenses relating to any demand, piggyback or Form S-3 registration described below, other than underwriting discounts and commissions. The registration rights terminate upon the earliest to occur of: (i) the fourth anniversary of the closing of this offering; (ii) a liquidation event; or (iii) with respect to the registration rights of an individual holder, the earlier of the date that all shares held by the holder can be sold in compliance with Rule 144 or if the holder holds one percent or less or our outstanding common stock and all such shares can be sold in any three-month period in compliance with Rule 144.

Demand Registration Rights

The holders of the registrable securities will be entitled to certain demand registration rights. At any time beginning on the earlier of June 2021 or 180 days following the effectiveness of this offering, the holders of 40% or more of the registrable securities then outstanding, may make a written request that we register at least 20% of the registrable securities, subject to certain specified conditions and exceptions. Such request for registration must cover securities the aggregate offering price of at least $10,000,000, net of underwriting discounts and commissions if the proposed number of securities to be registered is less than 20% of the total number of registrable securities. We not obligated to effect more than two of these registrations.

Piggyback Registration Rights

If we propose to register any of our securities under the Securities Act either for our own account or for the account of other stockholders, the holders of shares having registration rights will, subject to certain exceptions,

be entitled to include their shares in our registration statement. These registration rights are subject to specified conditions and limitations, including but not limited to the right of the underwriters to limit the number of shares included in any such offering under certain circumstances, but not below 15% of the total amount of securities included in such offering.

Form S-3 Registration Rights

At any time after we are qualified to file a registration statement on Form S-3, and subject to limitations and conditions specified in the amended and restated investors' rights agreement, the holders of at least 5,000,000 of the registrable securities may make a written request that we prepare and file a registration statement on Form S-3 under the Securities Act covering their shares, so long as the aggregate price to the public, net of any underwriters' discounts and commissions, is at least $3,000,000. We are not obligated to effect more than one of these Form S-3 registrations in any 12-month period.

Anti-Takeover Provisions

Delaware Law

Upon the closing of this offering, we will be governed by the provisions of Section 203 of the Delaware General Corporation Law regulating corporate takeovers. This section prevents some Delaware corporations from engaging, under some circumstances, in a business combination, which includes a merger or sale of at least 10% of the corporation's assets with any interested stockholder, meaning a stockholder who, together with affiliates and associates, owns or, within three years prior to the determination of interested stockholder status, did own 15% or more of the corporation's outstanding voting stock, unless:

- the transaction is approved by the board of directors prior to the time that the interested stockholder became an interested stockholder; or
- subsequent to such time that the stockholder became an interested stockholder the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders by at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

A Delaware corporation may "opt out" of these provisions with an express provision in its original certificate of incorporation or an express provision in its certificate of incorporation or amended and restated bylaws resulting from a stockholders' amendment approved by at least a majority of the outstanding voting shares. We have not opted out of these provisions. As a result, mergers or other takeover or change in control attempts of us may be discouraged or prevented.

Certificate of Incorporation and Bylaws Provisions

Upon the closing of this offering, our amended and restated certificate of incorporation and our amended and restated bylaws will include a number of provisions that may have the effect of deterring hostile takeovers or delaying or preventing changes in control of our management team, including the following:

- ***Board of Directors Vacancies***. Our amended and restated certificate of incorporation and amended and restated bylaws will authorize our board of directors to fill vacant directorships, including newly- created seats. In addition, the number of directors constituting our board of directors will be set only by resolution adopted by a majority vote of our entire board of directors. These provisions will prevent a stockholder from increasing the size of our board of directors and gaining control of our board of directors by filling the resulting vacancies with its own nominees.
- ***Classified Board***. Our amended and restated certificate of incorporation and amended and restated bylaws will provide that our board of directors will be classified into three classes of directors, each of

whom will hold office for a three-year term. In addition, directors may only be removed from the board of directors for cause and only by the approval of % of our then-outstanding shares of our common stock. The existence of a classified board could delay a successful tender offeror from obtaining majority control of our board of directors, and the prospect of that delay might deter a potential offeror.

- ***Stockholder Action; Special Meeting of Stockholders***. Our amended and restated certificate of incorporation will provide that stockholders will not be able to take action by written consent, and will only be able to take action at annual or special meetings of our stockholders. Stockholders will not be permitted to cumulate their votes for the election of directors. Our amended and restated bylaws will further provide that special meetings of our stockholders may be called only by a majority vote of our entire board of directors, the chairman of our board of directors or our chief executive officer.
- ***Advance Notice Requirements for Stockholder Proposals and Director Nominations***. Our amended and restated bylaws will provide advance notice procedures for stockholders seeking to bring business before our annual meeting of stockholders, or to nominate candidates for election as directors at any meeting of stockholders. Our amended and restated bylaws will also specify certain requirements regarding the form and content of a stockholder's notice. These provisions may preclude our stockholders from bringing matters before our annual meeting of stockholders or from making nominations for directors at our meetings of stockholders.
- ***Issuance of Undesignated Preferred Stock***. Our board of directors will have the authority, without further action by the holders of common stock, to issue up to shares of undesignated preferred stock with rights and preferences, including voting rights, designated from time to time by the board of directors. The existence of authorized but unissued shares of preferred stock will enable our board of directors to render more difficult or to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise.

Choice of Forum

Upon the closing of this offering, our amended and restated certificate of incorporation will provide that the Court of Chancery of the State of Delaware will be the exclusive forum for any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty; any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our amended and restated certificate of incorporation or our amended and restated bylaws or any action asserting a claim against us that is governed by the internal affairs doctrine. The enforceability of similar choice of forum provisions in other companies' certificates of incorporation has been challenged in legal proceedings, and it is possible that a court could find these types of provisions to be inapplicable or unenforceable. Our amended and restated certificate of incorporation further provides that the federal district courts of the United States of America will be the exclusive forum for resolving any complaint asserting a cause of action arising under the Securities Act.

Transfer Agent and Registrar

Upon the closing of this offering the transfer agent and registrar for our common stock will be American Stock Transfer & Trust Company, LLC. The transfer agent's address is 6201 15th Avenue, Brooklyn, New York 11219, and the telephone number is (800) 937-5449.

Listing

We intend to apply to list our common stock on the Nasdaq Global Market under the symbol "SIBN."

SHARES ELIGIBLE FOR FUTURE SALE

Before this offering, there has not been a public market for shares of common stock. Future sales of substantial amounts of shares of our common stock, including shares issued upon the exercise of outstanding options, in the public market following this offering or the possibility of these sales occurring, could cause the prevailing market price for our common stock to fall or impair our ability to raise equity capital in the future.

Following this offering, we will have outstanding shares of our common stock, based on the number of shares outstanding as of March 31, 2017. This includes shares of common stock that we are selling in this offering, which shares may be resold in the public market immediately unless purchased by our affiliates, and assumes no additional exercise of outstanding options other than as described elsewhere in this prospectus.

The remaining shares of common stock that are not sold in this offering will be "restricted securities," as that term is defined in Rule 144 under the Securities Act of 1933, as amended, or the Securities Act. These restricted securities are eligible for public sale only if they are registered under the Securities Act or if they qualify for an exemption from registration under Rule 144 or Rule 701 under the Securities Act, which are summarized below.

In addition, we, our executive officers and directors, and substantially all of our security holders have entered into market standoff agreements with us or lock-up agreements with the underwriters under which they have agreed, subject to specific exceptions, not to sell any of our capital stock until at least 181 days after the date of this prospectus, as described below. As a result of these agreements and the provisions of our investors' rights agreement disclosed in "Description of Capital Stock—Registration Rights," subject to the provisions of Rule 144 or Rule 701, the shares will generally become available for sale in the public market as follows:

- beginning on the date of this prospectus, the shares sold in this offering will be immediately available for sale in the public market, unless purchased by our affiliates;
- beginning 181 days after the date of this prospectus, additional shares will become eligible for sale in the public market, of which shares will be held by affiliates and subject to the volume and other restrictions of Rule 144, as described below; and
- the remainder of the shares will be eligible for sale in the public market from time to time thereafter, subject in some cases to the volume and other restrictions of Rule 144, as described below.

Rule 144

In general, under Rule 144 as currently in effect, a person who has beneficially owned shares of our restricted common stock for at least six months would be entitled to sell their securities provided that such person is not deemed to have been one of our affiliates at the time of, or at any time during the 90 days preceding, a sale, and we are subject to the periodic reporting requirements of the Securities Exchange Act of 1934, as amended, or the Exchange Act, for at least 90 days before the sale. In addition, under Rule 144, any person who is not an affiliate of ours and has held their shares for at least one year, including the holding period of any prior owner other than one of our affiliates, would be entitled to sell an unlimited number of shares immediately upon the closing of this offering without regard to whether current public information about us is available. Persons who have beneficially owned shares of our restricted common stock for at least six months but who are our affiliates at the time of, or any time during the 90 days preceding, a sale, would be subject to additional restrictions, by which such person would be entitled to sell within any three-month period only a number of securities that does not exceed the greater of either of the following:

- 1% of the number of common shares then outstanding, which will equal approximately shares immediately after this offering assuming no exercise of the underwriters' option to purchase additional shares, based on the number of common shares outstanding as of March 31, 2017; or

- the average weekly trading volume of our common shares during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale;

provided, in each case, that we have been subject to the Exchange Act periodic reporting requirements for at least 90 days before the sale. Such sales both by affiliates and by non-affiliates must also comply with the manner of sale, current public information and notice provisions of Rule 144.

Rule 701

Any of our service providers who purchased shares under a written compensatory plan or contract prior to this offering may be entitled to rely on the resale provisions of Rule 701. Rule 701, as currently in effect, permits resales of shares, including by affiliates, in reliance upon Rule 144 but without compliance with certain restrictions, including the holding period requirement, of Rule 144. Rule 701 further provides that non-affiliates may sell such shares in reliance on Rule 144 without having to comply with the public information, volume limitation or notice provisions of Rule 144. All holders of Rule 701 shares are required to wait until 90 days after the date of this prospectus before selling such shares if such resale is pursuant to Rule 701. All Rule 701 shares are, however, subject to lock-up agreements and will only become eligible for sale upon the expiration of these lock-up agreements.

Lock-Up Agreements

In connection with this offering, we and all directors and officers and the holders of substantially all of our outstanding capital stock, warrants and stock options have agreed with the underwriters, subject to certain exceptions, not to offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, shares of our common stock or any securities convertible into or exchangeable for shares of our common stock or enter into any swap or other arrangement that transfers to another any of the economic consequences of ownership of our common stock during the period from the date of this prospectus continuing through the date 180 days after the date of this prospectus, except with the prior written consent of Morgan Stanley & Co. LLC and Merrill Lynch, Pierce, Fenner & Smith Incorporated. These agreements are subject to certain exceptions, as set forth in “Underwriting.”

Certain of our employees, including our executive officers, and directors may enter into written trading plans that are intended to comply with Rule 10b5-1 under the Securities Exchange Act of 1934. Sales under these trading plans would not be permitted until the expiration of the lock-up agreements relating to our initial public offering described above.

Registration Rights

Upon the closing of this offering, the holders of 217,201,525 shares of common stock will be entitled to rights with respect to the registration of the sale of such shares of common stock under the Securities Act. See the section titled “Description of Capital Stock—Registration Rights.” All such shares are covered by lock-up agreements. Following the expiration of the lock-up period, registration of these shares under the Securities Act would result in the shares becoming freely tradable without restriction under the Securities Act immediately upon the effectiveness of the registration.

Equity Plans

We intend to file a registration statement on Form S-8 under the Securities Act covering all of the shares of our common stock subject to options outstanding or reserved for issuance under our equity plans. We expect to file this registration statement as soon as practicable after the closing of this offering. This registration statement will become effective immediately upon filing, and shares covered by this registration statement will thereupon be eligible for sale in the public markets, subject to vesting restrictions, the lock-up agreements described above and Rule 144 limitations applicable to affiliates. For a more complete discussion of our stock plans, see the section titled “Executive Compensation—Equity Plans.”

MATERIAL U.S. FEDERAL INCOME AND ESTATE TAX CONSEQUENCES TO NON-U.S. HOLDERS OF OUR COMMON STOCK

The following summary describes the material U.S. federal income and estate tax consequences of the acquisition, ownership and disposition of our common stock acquired in this offering by Non-U.S. Holders (as defined below). This discussion does not address all aspects of U.S. federal income and estate taxes and does not deal with foreign, state and local consequences that may be relevant to Non-U.S. Holders in light of their particular circumstances, nor does it address U.S. federal tax consequences other than income and estate taxes. Special rules different from those described below may apply to certain Non-U.S. Holders that are subject to special treatment under the Code, such as financial institutions, insurance companies, tax-exempt organizations, broker-dealers and traders in securities, U.S. expatriates, "controlled foreign corporations," "passive foreign investment companies," corporations that accumulate earnings to avoid U.S. federal income tax, persons that hold our common stock as part of a "straddle," "hedge," "conversion transaction," "synthetic security" or integrated investment or other risk reduction strategy, persons subject to the alternative minimum tax or federal Medicare contribution tax on net investment income, partnerships and other pass-through entities, and investors in such pass-through entities. Such Non-U.S. Holders are urged to consult their own tax advisors to determine the U.S. federal, state, local and other tax consequences that may be relevant to them. Furthermore, the discussion below is based upon the provisions of the Code, and Treasury regulations, rulings and judicial decisions thereunder as of the date hereof, and such authorities may be repealed, revoked or modified, perhaps retroactively, so as to result in U.S. federal income and estate tax consequences different from those discussed below. We have not requested a ruling from the U.S. Internal Revenue Service, or IRS, with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS will agree with such statements and conclusions. This discussion assumes that the Non-U.S. Holder holds our common stock as a "capital asset" within the meaning of Section 1221 of the Code (generally, property held for investment).

Persons considering the purchase of our common stock pursuant to this offering should consult their own tax advisors concerning the U.S. federal income and estate tax consequences of acquiring, owning and disposing of our common stock in light of their particular situations, as well as any consequences arising under the laws of any other taxing jurisdiction, including any state, local or foreign tax consequences.

For the purposes of this discussion, a "Non-U.S. Holder" is, for U.S. federal income tax purposes, a beneficial owner of common stock that is neither a U.S. Holder, nor a partnership (or other entity treated as a partnership for U.S. federal income tax purposes regardless of its place of organization or formation). A "U.S. Holder" means a beneficial owner of our common stock that is for U.S. federal income tax purposes (1) an individual who is a citizen or resident of the U.S., (2) a corporation or other entity treated as a corporation created or organized in or under the laws of the U.S., any state thereof or the District of Columbia, (3) an estate the income of which is subject to U.S. federal income taxation regardless of its source or (4) a trust if it (a) is subject to the primary supervision of a court within the U.S. and one or more U.S. persons have the authority to control all substantial decisions of the trust or (b) has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person.

Distributions

Subject to the discussion below, distributions, if any, made on our common stock to a Non-U.S. Holder of our common stock to the extent made out of our current or accumulated earnings and profits (as determined under U.S. federal income tax principles) generally will constitute dividends for U.S. tax purposes and will be subject to withholding tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. To obtain a reduced rate of withholding under a treaty, a Non-U.S. Holder generally will be required to provide us with a properly executed IRS Form W-8BEN (in the case of individuals), IRS Form W-8BEN-E (in the case of entities), or other appropriate form, certifying the Non-U.S. Holder's entitlement to benefits under that treaty. This certification must be provided to us or our paying agent prior to the payment of dividends and

must be updated periodically. In the case of a Non-U.S. Holder that is an entity, Treasury Regulations and the relevant tax treaty provide rules to determine whether, for purposes of determining the applicability of a tax treaty, dividends will be treated as paid to the entity or to those holding an interest in that entity. If a Non-U.S. Holder holds stock through a financial institution or other agent acting on the holder's behalf, the holder will be required to provide appropriate documentation to such agent. The holder's agent will then be required to provide certification to us or our paying agent, either directly or through other intermediaries. If you are eligible for a reduced rate of U.S. federal withholding tax under an income tax treaty and you do not timely provide the required certification, you may be able to obtain a refund or credit of any excess amounts withheld by timely filing an appropriate claim for a refund with the IRS.

We generally are not required to withhold tax on dividends paid to a Non-U.S. Holder that are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the U.S. (and, if required by an applicable income tax treaty, are attributable to a permanent establishment that such holder maintains in the U.S.) if a properly executed IRS Form W-8ECI, stating that the dividends are so connected, is furnished to us (or, if stock is held through a financial institution or other agent, to such agent). In general, such effectively connected dividends will be subject to U.S. federal income tax, on a net income basis at the regular graduated rates. A corporate Non-U.S. Holder receiving effectively connected dividends may also be subject to an additional "branch profits tax," which is imposed, under certain circumstances, at a rate of 30% (or such lower rate as may be specified by an applicable treaty) on the corporate Non-U.S. Holder's effectively connected earnings and profits, subject to certain adjustments.

To the extent distributions on our common stock, if any, exceed our current and accumulated earnings and profits, they will first reduce the Non-U.S. Holder's adjusted basis in our common stock, but not below zero, and then will be treated as gain to the extent of any excess, and taxed in the same manner as gain realized from a sale or other disposition of common stock as described in the next section.

Gain on Disposition of Our Common Stock

Subject to the discussion below regarding backup withholding and foreign accounts, a Non-U.S. Holder generally will not be subject to U.S. federal income tax with respect to gain realized on a sale or other disposition of our common stock unless (1) the gain is effectively connected with a trade or business of such holder in the U.S. (and, if required by an applicable income tax treaty, is attributable to a permanent establishment that such holder maintains in the U.S.), (2) the Non-U.S. Holder is a nonresident alien individual and is present in the U.S. for 183 or more days in the taxable year of the disposition and certain other conditions are met or (3) we are or have been a "United States real property holding corporation" within the meaning of Code Section 897(c)(2) at any time within the shorter of the five-year period preceding such disposition or such holder's holding period. In general, we would be a U.S. real property holding corporation if interests in U.S. real estate comprised (by fair market value) at least half of our business assets. We believe that we are not, and do not anticipate becoming, a U.S. real property holding corporation. However, because the determination of whether we are a U.S. real property holding corporation depends on the fair market value of our U.S. real property relative to the fair market value of our other business assets, there can be no assurance that we will not become a U.S. real property holding corporation in the future. Even if we are treated as a U.S. real property holding corporation, gain realized by a Non-U.S. Holder on a disposition of our common stock will not be subject to U.S. federal income tax so long as (a) the Non-U.S. Holder owned, directly, indirectly and constructively, no more than five percent of our common stock at all times within the shorter of (i) the five-year period preceding the disposition or (ii) the holder's holding period and (b) our common stock is regularly traded on an established securities market. There can be no assurance that our common stock will qualify as regularly traded on an established securities market.

If you are a Non-U.S. Holder described in (1) above, you will be required to pay tax on the net gain derived from the sale at regular graduated U.S. federal income tax rates, and corporate Non-U.S. Holders may be subject to the additional branch profits tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. If you are an individual Non-U.S. Holder described in (2) above, you will be required to pay a flat

30% tax on the gain derived from the sale, which gain may be offset by U.S. source capital losses if you timely file U.S. tax returns reporting the losses (even though you are not considered a resident of the U.S.).

Information Reporting Requirements and Backup Withholding

Generally, we must report information to the IRS with respect to any dividends we pay on our common stock including the amount of any such dividends, the name and address of the recipient, and the amount, if any, of tax withheld. A similar report is sent to the holder to whom any such dividends are paid. Pursuant to tax treaties or certain other agreements, the IRS may make its reports available to tax authorities in the recipient's country of residence.

Dividends paid by us (or our paying agents) to a Non-U.S. Holder may also be subject to U.S. backup withholding. U.S. backup withholding generally will not apply to a Non-U.S. Holder who provides a properly executed IRS Form W-8BEN (in the case of individuals) or IRS Form W-8BEN-E (in the case of entities) or otherwise establishes an exemption.

Under current U.S. federal income tax law, U.S. information reporting and backup withholding requirements generally will apply to the proceeds of a disposition of our common stock effected by or through a U.S. office of any broker, U.S. or foreign, except that information reporting and such requirements may be avoided if the holder provides a properly executed IRS Form W-8BEN (in the case of individuals) or IRS Form W-8BEN-E (in the case of entities) or otherwise meets documentary evidence requirements for establishing Non-U.S. Holder status or otherwise establishes an exemption. Generally, U.S. information reporting and backup withholding requirements will not apply to a payment of disposition proceeds to a Non-U.S. Holder where the transaction is effected outside the U.S. through a non-U.S. office of a non-U.S. broker. Information reporting and backup withholding requirements may, however, apply to a payment of disposition proceeds if the broker has actual knowledge, or reason to know, that the holder is, in fact, a U.S. person. For information reporting purposes, certain brokers with substantial U.S. ownership or operations will generally be treated in a manner similar to U.S. brokers.

Any amounts of tax withheld under the backup withholding rules may be credited against the tax liability of persons subject to backup withholding, provided that the required information is timely furnished to the IRS.

Foreign Accounts

A U.S. federal withholding tax of 30% may apply to dividends on and the gross proceeds of a disposition of our common stock paid to a foreign financial institution (as specifically defined by applicable rules) unless such institution enters into an agreement with the U.S. government to withhold on certain payments and to collect and provide to the U.S. tax authorities substantial information regarding U.S. account holders of such institution (which includes certain equity holders of such institution, as well as certain account holders that are foreign entities with U.S. owners). This U.S. federal withholding tax of 30% will also apply to dividends on and the gross proceeds of a disposition of our common stock to a non-financial foreign entity unless such entity provides the withholding agent with either a certification that it does not have any substantial direct or indirect U.S. owners or provides information regarding substantial direct and indirect U.S. owners of the entity. The withholding tax described above will not apply if the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from the rules. Under certain circumstances, a Non-U.S. Holder might be eligible for refunds or credits of such taxes. Holders are encouraged to consult with their own tax advisors regarding the possible implications of these rules to their investment in our common stock.

The withholding provisions described above apply currently to payments of dividends and, pursuant to IRS guidance, is expected to apply to payments of gross proceeds from a sale or other disposition of common stock on or after January 1, 2019.

Federal Estate Tax

If an individual Non-U.S. Holder is treated as the owner of, or has made certain lifetime transfers of, an interest in our common stock, that person's gross estate will include the value thereof for U.S. federal estate tax purposes, and may be subject to U.S. federal estate tax unless an applicable estate tax treaty provides otherwise, even though such individual was not a citizen or resident of the U.S. at the time of his or her death.

UNDERWRITING

Under the terms and subject to the conditions in an underwriting agreement dated the date of this prospectus, the underwriters named below, for whom Morgan Stanley & Co. LLC and Merrill Lynch, Pierce, Fenner & Smith Incorporated are acting as representatives, have severally agreed to purchase, and we have agreed to sell to them the number of shares indicated below:

Name	Number of Shares
Morgan Stanley & Co. LLC	
Merrill Lynch, Pierce, Fenner & Smith Incorporated	
Canaccord Genuity Inc.	
JMP Securities LLC	
Total:	

The underwriters and the representatives are collectively referred to as the "underwriters" and the "representatives," respectively. The underwriters are offering the shares of common stock subject to their acceptance of the shares from us and subject to prior sale. The underwriting agreement provides that the obligations of the several underwriters to pay for and accept delivery of the shares of common stock offered by this prospectus are subject to the approval of certain legal matters by their counsel and to certain other conditions. The underwriters are obligated to take and pay for all of the shares of common stock offered by this prospectus if any such shares are taken. However, the underwriters are not required to take or pay for the shares covered by the underwriters' over-allotment option to purchase additional shares described below.

The underwriters initially propose to offer part of the shares of common stock directly to the public at the offering price listed on the cover page of this prospectus and part to certain dealers at a price that represents a concession not in excess of $ a share under the public offering price. After the initial public offering of the shares of common stock, the offering price and other selling terms may from time to time be varied by the representatives.

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase up to additional shares of common stock at the public offering price listed on the cover page of this prospectus, less underwriting discounts and commissions. The underwriters may exercise this option solely for the purpose of covering over-allotments, if any, made in connection with the offering of the shares of common stock offered by this prospectus. To the extent the option is exercised, each underwriter will become obligated, subject to certain conditions, to purchase about the same percentage of the additional shares of common stock as the number listed next to the underwriter's name in the preceding table bears to the total number of shares of common stock listed next to the names of all underwriters in the preceding table.

The following table shows the per share and total public offering price, underwriting discounts and commissions, and proceeds before expenses to us. These amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase up to an additional shares of common stock.

		Total	
	Per Share	No Exercise	Full Exercise
Public offering price	$	$	$
Underwriting discounts and commissions to be paid by us.	$	$	$
Proceeds, before expenses	$	$	$

The estimated offering expenses payable by us, exclusive of the underwriting discounts and commissions, are approximately $ million. We have agreed to reimburse the underwriters for expense relating to clearance of this offering with the Financial Industry Regulatory Authority up to $.

The underwriters have informed us that they do not intend sales to discretionary accounts to exceed 5% of the total number of shares of common stock offered by them.

We intend to apply to list our common stock on the Nasdaq Global Market under the symbol “SIBN.”

We and all directors and officers and the holders of all of our outstanding capital stock, warrants and stock options have agreed that, without the prior written consent of Morgan Stanley & Co. LLC and Merrill Lynch, Pierce, Fenner & Smith Incorporated on behalf of the underwriters, we and they will not, during the period ending 180 days after the date of this prospectus (the “restricted period”):

- offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of common stock or any securities convertible into or exercisable or exchangeable for shares of common stock;
- file any registration statement with the Securities and Exchange Commission relating to the offering of any shares of common stock or any securities convertible into or exercisable or exchangeable for common stock; or
- enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock.

whether any such transaction described above is to be settled by delivery of common stock or such other securities, in cash or otherwise. In addition, we and each such person agrees that, without the prior written consent of Morgan Stanley & Co. LLC and Merrill Lynch, Pierce, Fenner & Smith Incorporated on behalf of the underwriters, we or such other person will not, during the restricted period, make any demand for, or exercise any right with respect to, the registration of any shares of common stock or any security convertible into or exercisable or exchangeable for common stock.

The restrictions described in the immediately preceding paragraph to do not apply to:

- transactions by a securityholder relating to shares of common stock or other securities acquired (i) in open market transactions after the closing of this offering or (ii) except in the case where the securityholder is an officer or director of ours, in this offering; provided that, in each case (i) and (ii), no filing under Section 16(a) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, is required or voluntarily made during the restricted period in connection with subsequent sales of common stock or other securities acquired in such open market transactions or in this offering;
- transfers of shares of common stock or any security convertible into or exercisable or exchangeable for common stock (i) as a bona fide gift, (ii) to an immediate family member or a trust for the direct or indirect benefit of the transferor or such immediate family member of the transferor, (iii) to any corporation, partnership, limited liability company, investment fund or other entity controlled or managed, or under common control or management by the transferor or the immediate family of the transferor, or (iv) by will, other testamentary document or intestate succession to the legal representative, heir, beneficiary or a member of the immediate family of the transferor, provided in each case that (a) each distributee or transferee signs and delivers a lock-up letter and (b) no filing under Section 16(a) of the Exchange Act reporting a reduction in beneficial ownership of shares shall be required or voluntarily made during the restricted period (other than a filing on a Form 5);
- distributions or transfers of shares of common stock or any security convertible into or exercisable or exchangeable for common stock to general or limited partners, members or stockholders of the transferor, provided that (i) each distributee or transferee shall sign and deliver a lock-up letter and (ii) no filing under Section 16(a) of the Exchange Act, reporting a reduction in beneficial ownership of shares of common stock, shall be required or shall be voluntarily made during the restricted period (other than a filing on a Form 5);

- the establishment of a trading plan pursuant to Rule 10b5-1 under the Exchange Act for the transfer of shares of common stock, provided that (i) such plan does not provide for the transfer of common stock during the restricted period and (ii) to the extent a public announcement or filing under the Exchange Act, if any, is required of or voluntarily made by or on behalf of the person or us regarding the establishment of such plan, such announcement or filing shall include a statement to the effect that no transfer of common stock may be made under such plan during the restricted period;
- the exercise of options to purchase shares of common stock granted under any stock incentive plan or stock purchase plan described in this prospectus, provided that (i) the underlying shares shall continue to be subject to the restrictions on transfer set forth in the lock-up agreement and (ii) any filing under Section 16 of the Exchange Act made during the restricted period shall clearly indicate that (A) the filing relates to the circumstances described above and (B) no securities were sold by the person, and (iii) the person does not otherwise voluntarily effect any other public filing or report regarding such transfers during the restricted period;
- the receipt from us of shares of common stock upon (A) the exercise or settlement of options or restricted stock units granted under a stock incentive plan or other equity award plan, which plan is described in this prospectus or (B) the exercise of warrants outstanding and which are described in the this prospectus, or (ii) the transfer of shares of common stock or any securities convertible into common stock to us upon a vesting or settlement event of our securities or upon the exercise of options or warrants to purchase our securities on a “cashless” or “net exercise” basis to the extent permitted by the instruments representing such options or warrants (and any transfer to us necessary to generate such amount of cash needed for the payment of taxes, including estimated taxes, due as a result of such vesting or exercise whether by means of a “net settlement” or otherwise) so long as such “cashless exercise” or “net exercise” is effected solely by the surrender of outstanding options or warrants (or the common stock issuable upon the exercise thereof) to us and our cancellation of all or a portion thereof to pay the exercise price and/or withholding tax and remittance obligations, provided that (1) in the case of (i), the shares received upon exercise or settlement of the option, restricted stock unit, or warrant are subject to the terms of the lock-up agreement and (2) to the extent a filing under Section 16 of the Exchange Act is required to made during the restricted period as a result of transfers, it shall clearly indicate that (A) the filing relates to the circumstances described above and (B) no securities were sold by the transferor in the open market, and (3) the transferor does not otherwise voluntarily effect any other public filing or report regarding such transfers during the restricted period;
- the transfer of shares of common stock or any security convertible into or exercisable or exchangeable for common stock to us pursuant to agreements under which we have the option to repurchase such shares or a right of first refusal with respect to transfers of such shares, provided that (1) to the extent a filing under Section 16 of the Exchange Act is required to made during the restricted period as a result of such transfers, it shall clearly indicate that (A) the filing relates to the circumstances described above and (B) no securities were sold by the transferor in the open market, and (2) the transferor does not otherwise voluntarily effect any other public filing or report regarding such transfers during the restricted period;
- the transfer of shares of common stock or any security convertible into or exercisable or exchangeable for common stock that occurs pursuant to a qualified domestic order or in connection with a divorce settlement, provided that (i) each transferee shall sign and deliver a lock-up agreement, (ii) any filing under Section 16 of the Exchange Act made during the restricted period shall clearly indicate in the footnotes thereto that (A) the filing relates to the circumstances described above and (B) no securities were sold by the transferor, and (iii) the transferor does not otherwise voluntarily effect any other public filing or report regarding such transfers during the restricted period;
- the conversion of the outstanding preferred stock into shares of our common stock, provided that such shares of common stock remain subject to the terms of the lock-up agreement; or
- the sale of shares of common stock to the underwriters pursuant to the underwriting agreement.

Morgan Stanley & Co. LLC and Merrill Lynch, Pierce, Fenner & Smith Incorporated, in their sole discretion, may release the common stock and other securities subject to the lock-up agreements described above in whole or in part at any time.

In order to facilitate the offering of the common stock, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the common stock. Specifically, the underwriters may sell more shares than they are obligated to purchase under the underwriting agreement, creating a short position. A short sale is covered if the short position is no greater than the number of shares available for purchase by the underwriters under the over-allotment option. The underwriters can close out a covered short sale by exercising the over-allotment option or purchasing shares in the open market. In determining the source of shares to close out a covered short sale, the underwriters will consider, among other things, the open market price of shares compared to the price available under the over-allotment option. The underwriters may also sell shares in excess of the over-allotment option, creating a naked short position. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in this offering. As an additional means of facilitating this offering, the underwriters may bid for, and purchase, shares of common stock in the open market to stabilize the price of the common stock. These activities may raise or maintain the market price of the common stock above independent market levels or prevent or retard a decline in the market price of the common stock. The underwriters are not required to engage in these activities and may end any of these activities at any time.

We and the underwriters have agreed to indemnify each other against certain liabilities, including liabilities under the Securities Act of 1933, as amended.

A prospectus in electronic format may be made available on websites maintained by one or more underwriters, or selling group members, if any, participating in this offering. The representatives may agree to allocate a number of shares of common stock to underwriters for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters that may make Internet distributions on the same basis as other allocations.

The underwriters and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. Certain of the underwriters and their respective affiliates have performed and may in the future perform various financial advisory and investment banking services for us, for which they will receive customary fees and expenses.

In addition, in the ordinary course of their various business activities, the underwriters and their respective affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers and may at any time hold long and short positions in such securities and instruments. Such investment and securities activities may involve our securities and instruments. The underwriters and their respective affiliates may also make investment recommendations or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long or short positions in such securities and instruments.

Pricing of the Offering

Prior to this offering, there has been no public market for our common stock. The initial public offering price will be determined by negotiations between us and the representatives. Among the factors to be considered in determining the initial public offering price are our future prospects and those of our industry in general, our

results from operations and certain other financial and operating information in recent periods, and the price- earnings ratios, price-sales ratios, market prices of securities, and certain financial and operating information of companies engaged in activities similar to ours.

Selling Restrictions

European Economic Area

In relation to each Member State of the European Economic Area, an offer to the public of any shares of our common stock may not be made in that Member State, except that an offer to the public in that Member State of any shares of our common stock may be made at any time under the following exemptions under the Prospectus Directive, if they have been implemented in that Member State:

(i) to any legal entity which is a qualified investor as defined in the Prospectus Directive;

(ii) 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the representatives for any such offer; or

(iii) in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of shares of our common stock shall result in a requirement for the publication by us or any underwriter of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an "offer to the public" in relation to any shares of our common stock in any Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares of our common stock to be offered so as to enable an investor to decide to purchase or subscribe any shares of our common stock, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State, the expression "Prospectus Directive" means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive) and includes any relevant implementing measure in each Member State and the expression "2010 PD Amending Directive" means Directive 2010/73/EU.

United Kingdom

Each underwriter has represented and agreed that:

(a) it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000 ("FSMA")) received by it in connection with the issue or sale of the shares of our common stock in circumstances in which Section 21(1) of the FSMA does not apply to us; and

(b) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the shares of our common stock in, from or otherwise involving the United Kingdom.

Notice to Prospective Investors in Canada

The shares may be sold only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 *Prospectus Exemptions* or subsection 73.3(1) of the *Securities Act* (Ontario), and are permitted clients, as defined in National Instrument 31-103 *Registration Requirements, Exemptions and Ongoing Registrant Obligations*. Any resale of the shares must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33-105 *Underwriting Conflicts* (NI 33-105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriter conflicts of interest in connection with this offering.

Notice to Prospective Investors in Switzerland

The shares of common stock may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange ("SIX") or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, us, or the shares have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA ("FINMA"), and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes ("CISA"). The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of shares.

Notice to Prospective Investors in the Dubai International Financial Centre

This prospectus relates to an Exempt Offer in accordance with the Offered Securities Rules of the Dubai Financial Services Authority ("DFSA"). This prospectus is intended for distribution only to persons of a type specified in the Offered Securities Rules of the DFSA. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus nor taken steps to verify the information set forth herein and has no responsibility for the prospectus. The shares to which this prospectus relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the shares offered should conduct their own due diligence on the shares. If you do not understand the contents of this prospectus you should consult an authorized financial advisor.

Notice to Prospective Investors in Australia

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission ("ASIC"), in relation to the offering. This prospectus does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001 (the "Corporations Act"), and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the shares may only be made to persons (the "Exempt Investors") who are "sophisticated investors" (within the meaning of section 708(8) of the Corporations Act), "professional investors" (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the shares without disclosure to investors under Chapter 6D of the Corporations Act.

The shares applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring shares must observe such Australian on-sale restrictions.

This prospectus contains general information only and does not take account of the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this prospectus is appropriate to their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

Notice to Prospective Investors in Hong Kong

The shares of common stock have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (a) to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance; or (b) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions) Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance. No advertisement, invitation or document relating to the shares of common stock has been or may be issued or has been or may be in the possession of any person for the purposes of issue, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares of common stock which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the Securities and Futures Ordinance and any rules made under that Ordinance.

Notice to Prospective Investors in Japan

The shares of common stock have not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948, as amended) and, accordingly, will not be offered or sold, directly or indirectly, in Japan, or for the benefit of any Japanese Person or to others for re-offering or resale, directly or indirectly, in Japan or to any Japanese Person, except in compliance with all applicable laws, regulations and ministerial guidelines promulgated by relevant Japanese governmental or regulatory authorities in effect at the relevant time. For the purposes of this paragraph, "Japanese Person" shall mean any person resident in Japan, including any corporation or other entity organized under the laws of Japan.

Notice to Prospective Investors in Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares of common stock may not be circulated or distributed, nor may the shares of common stock be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore (the "SFA"), (ii) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275, of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares of common stock are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

(a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

(b) a trust (where the trustee is not an accredited investor) the sole purpose of which is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares of common stock pursuant to an offer made under Section 275 of the SFA except:

(a) to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;

(b) where no consideration is or will be given for the transfer;

(c) where the transfer is by operation of law;

(d) as specified in Section 276(7) of the SFA; or

(e) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

LEGAL MATTERS

The validity of the shares of common stock offered by this prospectus will be passed upon for us by Cooley LLP, Palo Alto, California. Latham & Watkins LLP, New York, New York is representing the underwriters in this offering.

EXPERTS

The financial statements as of December 31, 2015 and December 31, 2016 and for each of the two years in the period ended December 31, 2016 included in this prospectus have been so included in reliance on the report (which contains an explanatory paragraph relating to the Company's ability to continue as a going concern as described in Note 2 to the financial statements) of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have submitted with the Securities and Exchange Commission, or SEC, a registration statement on Form S-1 under the Securities Act of 1933, as amended, with respect to the shares of common stock offered by this prospectus. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement or the exhibits and schedules to the registration statement. Please refer to the registration statement, exhibits and schedules for further information with respect to the common stock offered by this prospectus. Statements contained in this prospectus regarding the contents of any contract or other document are only summaries. With respect to any contract or document that is filed as an exhibit to the registration statement, you should refer to the exhibit for a copy of the contract or document, and each statement in this prospectus regarding that contract or document is qualified by reference to the exhibit. You may read and copy the registration statement and its exhibits and schedules at the SEC's public reference room, located at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You may obtain information on the operation of the public reference room by calling the SEC at 1-800-SEC-0330. The SEC also maintains a website that contains reports, proxy and information statements and other information regarding issuers, like us, that file documents electronically with the SEC. The address of that website is www.sec.gov. The information on the SEC's web site is not part of this prospectus, and any references to this web site or any other web site are inactive textual references only.

Upon closing of this offering, we will become subject to the information and reporting requirements of the Securities Exchange Act of 1934 and, in accordance with this law, will be required to file periodic reports, proxy statements and other information with the SEC. These periodic reports, proxy statements and other information will be available for inspection and copying at the SEC's public reference facilities and the website of the SEC referred to above. We also maintain a website at www.si-bone.com, at which you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. The information contained on, or that can be accessed through, our website is not a part of this prospectus. Investors should not rely on any such information in deciding whether to purchase our common stock. We have included our website address in this prospectus solely as an inactive textual reference.

SI-BONE, INC.
Index to Consolidated Financial Statements

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors
of SI-BONE, Inc.

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of operations and comprehensive loss, of changes in convertible preferred stock and stockholders' deficit, and of cash flows present fairly, in all material respects, the financial position of SI-BONE, Inc. and its subsidiaries as of December 31, 2016 and 2015, and the results of their operations and their cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States) and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

The accompanying consolidated financial statements have been prepared assuming the Company will continue as a going concern. As discussed in Note 2 to the financial statements, the Company has suffered recurring losses from operations and negative cash flows from operating activities that raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 2. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ PricewaterhouseCoopers LLP
San Jose, California
March 24, 2017

SI-BONE, INC.
CONSOLIDATED BALANCE SHEETS
(In thousands, except share and per share amounts)

	December 31, 2015	December 31, 2016	March 31, 2017 (unaudited)	Pro Forma Stockholders' Equity March 31, 2017 (unaudited)
ASSETS				
CURRENT ASSETS				
Cash and cash equivalents	$ 20,272	$ 27,900	$ 28,732	
Accounts receivable, net of allowance for doubtful accounts of $482, $316, and $282 (unaudited) at December 31, 2015 and 2016 and March 31, 2017, respectively	5,769	5,951	5,908	
Inventory	2,700	1,514	1,577	
Prepaid expenses and other current assets	1,157	959	1,161	
Total current assets	29,898	36,324	37,378	
Property and equipment, net	3,534	2,608	2,332	
Intangible assets, net	55	47	46	
Other non-current assets	1,934	457	1,224	
TOTAL ASSETS	$ 35,421	$ 39,436	$ 40,980	
LIABILITIES, CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT				
CURRENT LIABILITIES				
Accounts payable	$ 2,494	$ 1,025	$ 1,849	
Accrued liabilities and other	4,315	4,125	4,919	
Short term borrowings	—	8,236	6,711	
Total current liabilities	6,809	13,386	13,479	
Convertible preferred stock warrants	957	588	681	
Long term borrowings	25,056	21,074	22,678	
TOTAL LIABILITIES	32,822	35,048	36,838	
Commitments and contingencies (Note 5)				
Convertible preferred stock, $0.0001 par value; Authorized: 176,328,941, 207,953,835 and 217,885,520 (unaudited) shares at December 31, 2015 and 2016 and March 31, 2017, respectively; issued and outstanding: 167,242,376, 203,954,077 and 213,689,844 (unaudited) shares at December 31, 2015 and 2016 and March 31, 2017, respectively; (Liquidation preference of $113,767 at December 31, 2016 and $119,194 (unaudited) at March 31, 2017)	92,796	113,121	118,548	$
STOCKHOLDERS' DEFICIT				
Common stock, $0.0001 par value; Authorized: 290,000,000, 338,000,000 and 348,000,000 (unaudited) shares at December 31, 2015 and 2016 and March 31, 2017, respectively; issued and outstanding: 59,998,663, 62,032,796 and 62,819,239 (unaudited) shares, at December 31, 2015 and 2016 and March 31, 2017, respectively	7	7	7	
Additional paid-in capital	6,121	7,994	8,468	
Stockholders' notes receivable	(634)	(521)	(84)	
Accumulated other comprehensive income	405	472	477	
Accumulated deficit	(96,096)	(116,685)	(123,274)	
TOTAL STOCKHOLDERS' DEFICIT	(90,197)	(108,733)	(114,406)	$
TOTAL LIABILITIES, CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT	$ 35,421	$ 39,436	$ 40,980	

The accompanying notes are an integral part of these consolidated financial statements.

SI-BONE, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(In thousands, except share and per share amounts)

	Year Ended December 31,		Three Months Ended March 31,	
	2015	2016	2016	2017
			(unaudited)	
Revenue	$ 41,173	$ 42,101	$ 9,589	$ 11,426
Cost of goods sold	5,398	5,165	1,153	1,434
Gross profit	35,775	36,936	8,436	9,992
Operating expenses:				
Sales and marketing	39,799	35,215	8,854	10,273
Research and development	8,606	6,380	1,625	1,419
General and administrative	13,793	12,906	4,439	3,855
Total operating expenses	62,198	54,501	14,918	15,547
Loss from operations	(26,423)	(17,565)	(6,482)	(5,555)
Interest and other income (expense), net:				
Interest income	22	71	11	33
Interest expense	(1,686)	(3,308)	(817)	(945)
Other income (expense), net	(67)	213	647	(122)
Net loss	(28,154)	(20,589)	(6,641)	(6,589)
Other comprehensive income:				
Changes in foreign currency translation	247	67	(178)	5
Comprehensive loss	$ (27,907)	$ (20,522)	$ (6,819)	$ (6,584)
Net loss, basic and diluted (Note 14)	$ (0.51)	$ (0.35)	$ (0.11)	$ (0.11)
Weighted-average number of common shares used to compute basic and diluted net loss per share (Note 14)	55,292,845	59,659,307	58,782,930	61,735,139
Pro forma net loss per common share, basic and diluted (unaudited) (Note 14)		$		$
Pro forma weighted-average number of common shares used to compute basic and diluted net loss per share (unaudited) (Note 14)				

The accompanying notes are an integral part of these consolidated financial statements.

SI-BONE, INC.

CONSOLIDATED STATEMENTS OF CHANGES IN CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT

(In thousands, except share and per share amounts)

	Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Stockholders' Notes Receivable	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount					
Balances at December 31, 2014	143,556,724	$ 71,200	53,367,688	$ 5	3,802	$ (656)	$ 158	$ (67,942)	$ (64,633)
Issuance of common stock upon exercise of stock options for cash, net of unvested early exercises	—	—	6,693,475	1	834	—	—	—	835
Stock-based compensation	—	—	—	—	1,233	—	—	—	1,233
Issuance of convertible preferred stock, net of issuance costs	23,685,652	21,596	—	—	—	—	—	—	—
Repurchase of unvested early exercised stock options	—	—	(62,500)	—	—	2	—	—	2
Repayment of stockholders' note receivable	—	—	—	—	—	20	—	—	20
Vesting of early exercised stock options	—	—	—	1	252	—	—	—	253
Foreign currency translation	—	—	—	—	—	—	247	—	247
Net loss	—	—	—	—	—	—	—	(28,154)	(28,154)
Balances at December 31, 2015	167,242,376	92,796	59,998,663	7	6,121	(634)	405	(96,096)	(90,197)
Issuance of common stock upon exercise of stock options for cash, net of unvested early exercises	—	—	2,193,125	—	320	—	—	—	320
Stock-based compensation	—	—	—	—	1,398	—	—	—	1,398
Issuance of convertible preferred stock, net of issuance costs	36,711,701	20,325	—	—	—	—	—	—	—
Repurchase of unvested early exercised stock options	—	—	(153,992)	—	—	—	—	—	—
Repurchase of common stock	—	—	(5,000)	—	(3)	—	—	—	(3)
Repayment of stockholders' notes receivable	—	—	—	—	—	113	—	—	113
Vesting of early exercised stock options	—	—	—	—	158	—	—	—	158
Foreign currency translation	—	—	—	—	—	—	67	—	67
Net loss	—	—	—	—	—	—	—	(20,589)	(20,589)
Balances at December 31, 2016	203,954,077	113,121	62,032,796	7	7,994	(521)	472	(116,685)	(108,733)
Issuance of common stock upon exercise of stock options for cash, net of unvested early exercises (unaudited)	—	—	786,443	—	105	—	—	—	105
Stock-based compensation (unaudited)	—	—	—	—	340	—	—	—	340
Issuance of convertible preferred stock, net of issuance costs (unaudited)	9,735,767	5,427	—	—	—	—	—	—	—
Forgiveness of stockholders' notes receivable (unaudited)	—	—	—	—	—	437	—	—	437
Vesting of early exercised stock options (unaudited)	—	—	—	—	29	—	—	—	29
Foreign currency translation (unaudited)	—	—	—	—	—	—	5	—	5
Net loss (unaudited)	—	—	—	—	—	—	—	(6,589)	(6,589)
Balances at March 31, 2017 (unaudited)	213,689,844	$ 118,548	62,819,239	$ 7	$ 8,468	$ (84)	$ 477	$ (123,274)	$ (114,406)

The accompanying notes are an integral part of these consolidated financial statements.

SI-BONE, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Year Ended December 31,		Three Months Ended March 31,	
	2015	2016	2016	2017
			(unaudited)	
Cash flows from operating activities				
Net loss	$(28,154)	$(20,589)	$ (6,641)	$ (6,589)
Adjustments to reconcile net loss to net cash used in operating activities				
Depreciation and amortization	786	1,038	231	283
Change in allowance for doubtful accounts	123	(84)	(9)	(34)
Stock-based compensation	1,231	1,398	286	340
Change in fair value of convertible preferred stock warrants	(8)	(414)	(498)	93
Loss on write-off of property and equipment	527	337	—	63
Amortization of debt discount	155	299	75	78
Write-off of deferred offering costs	—	1,460	1,460	—
Forgiveness of notes receivable	—	—	—	437
Changes in operating assets and liabilities				
Accounts receivable	(15)	(98)	779	78
Inventory	(1,015)	1,186	257	(63)
Prepaid expenses and other assets	(481)	215	38	(173)
Accounts payable	(499)	(1,469)	(794)	796
Accrued liabilities and other	632	(32)	(408)	26
Net cash used in operating activities	(26,718)	(16,753)	(5,224)	(4,665)
Cash flows from investing activities				
Purchase of property and equipment	(2,238)	(441)	(58)	(40)
Net cash used in investing activities	(2,238)	(441)	(58)	(40)
Cash flows from financing activities				
Proceeds from the exercise of common stock options, net	835	320	147	105
Repurchase of common stock	—	(3)	—	—
Repayment of stockholders' notes receivable	20	113	29	—
Proceeds from debt financing	10,000	4,000	—	—
Proceeds from the issuance of convertible preferred stock, net	21,596	20,325	—	5,427
Payments of offering costs	(1,068)	—	—	—
Net cash provided by financing activities	31,383	24,755	176	5,532
Effect of exchange rate changes on cash and cash equivalents	247	67	(178)	5
Net increase in cash and cash equivalents	2,674	7,628	(5,284)	832
Cash and cash equivalents at				
Beginning of year	17,598	20,272	20,272	27,900
End of year	$ 20,272	$ 27,900	$ 14,988	$ 28,732
Supplemental disclosure of cash flow information				
Cash paid for interest	$ 1,480	$ 2,994	$ 740	$ 835
Supplemental disclosure of noncash information				
Vesting of early exercised stock options	$ 253	$ 158	$ 38	$ 29
Purchase of property and equipment included in accounts payable and accrued liabilities	6	—	53	29
Issuance of convertible preferred stock warrants	640	45	—	—
Repurchase of unvested early exercised stock options	2	—	—	—
Offering costs in accounts payable and accrued liabilities	392	—	—	796

The accompanying notes are an integral part of these consolidated financial statements.

SI-BONE, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. The Company and Basis of Presentation

SI-BONE, Inc. (the "Company") was incorporated in the state of Delaware on March 18, 2008 and is headquartered in San Jose, California. The Company is a medical device company that has pioneered a proprietary minimally invasive surgical implant system to fuse the sacroiliac joint for treatment of the most common types of sacroiliac joint disorders that cause lower back pain. The Company introduced its iFuse Implant System, or iFuse, in 2009 in the United States, in 2010 in certain countries in the European Union, and in 2015 in certain countries in the rest of the world.

2. Summary of Significant Accounting Policies

Basis of Presentation and Principles of Consolidation

The accompanying consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States (U.S. GAAP). The consolidated financial statements include the Company's accounts, as well as those of the Company's three wholly-owned international subsidiaries. All inter-company accounts and transactions have been eliminated.

Unaudited Interim Financial Information

The accompanying interim consolidated financial statements as of March 31, 2017 and for the three months ended March 31, 2016 and 2017, and the related interim information contained within the notes to the financial statements, are unaudited. The unaudited interim consolidated financial statements have been prepared in accordance with generally accepted accounting principles for interim financial information and on the same basis as the audited financial statements. In the opinion of management, the accompanying unaudited interim consolidated financial statements contain all adjustments consisting of only normal recurring adjustments necessary for a fair statement of the Company's financial position as of March 31, 2017, and the results of its operations and cash flows for the three months ended March 31, 2016 and 2017. Such adjustments are of a normal and recurring nature. The results for the three months ended March 31, 2017 are not necessarily indicative of the results to be expected for the year ending December 31, 2017, or for any future period.

Unaudited Pro Forma Stockholders' Equity

The March 31, 2017 unaudited pro forma stockholders' equity has been prepared assuming immediately prior to the completion of the Company's initial public offering: (i) the automatic conversion of all outstanding shares of preferred stock into shares of common stock; (ii) the net exercise of certain preferred stock warrants, assuming an initial public offering price of $ per share, that will expire upon the completion of the Company's initial public offering, if not exercised, and the related reclassification of the warrant liability to common stock and additional paid-in-capital; and (ii) the automatic conversion of certain preferred stock warrants into common stock warrants.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Significant accounting estimates and management judgments reflected in the consolidated financial statements include: fair value of assets and liabilities; analysis of the allowance for doubtful accounts; inventory valuation; valuation of deferred

tax assets, including related valuation allowances; fair value of common stock and convertible preferred stock warrants; stock-based compensation; and depreciation and amortization lives of long lived assets. Estimates are based on historical experience, where applicable and other assumptions believed to be reasonable by the management. Actual results could differ from those estimates.

Segments

The chief operating decision makers for the Company are the Chief Executive Officer and Chief Financial Officer. The Chief Executive Officer and the Chief Financial Officer review financial information presented on a consolidated basis, accompanied by information about revenue by geographic region, for purposes of evaluating financial performance. The Company has one business activity and there are no segment managers who are held accountable for operations, operating results or plans for levels or components below the consolidated unit level. Accordingly, the Company has determined that it has a single reportable and operating segment structure. The Company and its Chief Executive Officer and Chief Financial Officer evaluate performance based primarily on revenue in the geographic locations in which the Company operates.

The Company derives substantially all of its revenue from sales to customers in the United States. Revenue by geography is based on billing address of the customer. No single country outside the United States accounts for more than 10% of the total revenue during the periods presented. Long-lived assets held outside the United States are immaterial.

	Year Ended December 31,		Three Months Ended March 31,	
	2015	2016	2016	2017
			(unaudited)	
Domestic	$38,441	$38,791	$8,808	$ 10,257
International	2,732	3,310	781	1,169
	$41,173	$42,101	$9,589	$ 11,426

Foreign Currency

The Company's foreign subsidiaries use local currency as their functional currency. Assets and liabilities are translated at exchange rates prevailing at the balance sheet dates. Revenue, costs and expenses are translated into U.S. dollars using average exchange rates for the period. Gains and losses resulting from the translation of the Company's consolidated balance sheets are recorded as a component of accumulated other comprehensive income. Gains and losses from foreign currency transactions are recognized as a component of other income (expense), net.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to a concentration of credit risk consist of cash and cash equivalents. The Company's cash and cash equivalents are deposited with financial institutions in the United States and in Europe; the majority of the Company's cash and cash equivalents are deposited with a single financial institution in the United States. Deposits in this institution exceed the amount of insurance provided on such deposits. The Company has not experienced any losses on its deposits of cash and cash equivalents.

The Company's revenue and accounts receivable are spread across a large number of customers, primarily in the United States, and no one customer accounts for more than 10% of total revenue or gross accounts receivable in any period presented.

SI-BONE, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Other Risks and Uncertainties

The Company is subject to risks common to early-stage medical device companies including, but not limited to, new technological innovations, dependence on key personnel, protection of proprietary technology, compliance with government regulations, product liability, the ability to obtain adequate coverage and reimbursement from third party payors, uncertainty of market acceptance of products, and the need to obtain additional financing.

The Company is dependent on third party manufacturers and suppliers, in some cases single source suppliers. The Company currently has limited long term contracts with its key suppliers and is subject to risks such as manufacturing failures, non-compliance with regulatory requirements, price fluctuations, inability to properly meet demand and third party supplier discontinuation of operations.

Liquidity

As of and for the year ended December 31, 2016, the Company had an accumulated deficit of $116.7 million and used $16.8 million of cash in operations, respectively. As of and for the three months ended March 31, 2017, the Company had an accumulated deficit of $123.3 million (unaudited) and used $4.7 million (unaudited) of cash in operations, respectively. The Company has not achieved positive cash flow from operations to date. The Company held cash and cash equivalents of $27.9 million and $28.7 million (unaudited) as of December 31, 2016 and March 31, 2017, respectively. The Company continues to face challenges and uncertainties and, as a result, the Company's available capital resources may be consumed more rapidly than currently expected due to (a) decreases in sales of the Company's products and the uncertainty of future revenues from new products; (b) changes the Company may make to the business that affect ongoing operating expenses; (c) changes the Company may make in its business strategy; (d) regulatory developments affecting the Company's existing products; (e) changes the Company may make in its research and development spending plans; and (f) other items affecting the Company's forecasted level of expenditures and use of cash resources. Accordingly, the Company may need to raise additional funds to support its operating and capital needs in the first quarter of 2018 and beyond. These factors raise substantial doubt about the Company's ability to continue as a going concern within one year after the date that the financial statements are issued.

The Company intends to obtain additional funding through public or private financing or through additional credit lines or other debt financing sources to increase the funds available to fund operations. However, the Company may not be able to secure such financing in a timely manner or on favorable terms, if at all. Without additional funds, the Company may be forced to delay, scale back or eliminate some of its sales and marketing efforts, research and development activities, or other operations in an effort to provide sufficient funds to continue its operations.

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern and therefore, the financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amount and classifications of liabilities that may result from the outcome of this uncertainty.

Fair Value of Financial Instruments

Carrying amounts of certain of the Company's financial instruments, including cash and cash equivalents, accounts receivable, accounts payable, and accrued liabilities approximate fair value due to their relatively short maturities and market interest rates, if applicable. The carrying value of the Company's long-term debt also approximates fair value based on management's estimation that a current interest rate would not differ materially

from the stated rate. The carrying amount of the convertible preferred stock warrants has been marked-to-market such that the carrying amount represents its estimated fair value.

The Company discloses and recognizes the fair value of its assets and liabilities using a hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. Fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. As a basis for considering such assumptions, a three-tier value hierarchy has been established, which prioritizes the inputs used in measuring fair value as follows:

Level 1: Quoted prices (unadjusted) in active market that are accessible at measurement date for assets or liabilities. The fair value hierarchy gives the highest priority to Level 1 inputs.

Level 2: Observable prices that are based on inputs not quoted on active markets, but corroborated by market data.

Level 3: Unobservable inputs are used when little or no market data is available. The fair value hierarchy gives the lowest priority to Level 3 inputs.

Assets and liabilities measured at fair value are classified in their entirety based on the lowest level of input that is significant to the fair value measurement. The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires management to make judgments and considers factors specific to the asset or liability.

The Company's cash equivalents consist primarily of money market funds as of December 31, 2015. The Company did not have any cash equivalents as of December 31, 2016 and March 31, 2017 (unaudited). The Company's cash equivalents are comprised of investments in money market funds that are classified as Level 1 of the fair value hierarchy. The Company's convertible preferred stock warrants are classified within Level 3 of the fair value hierarchy. The convertible preferred stock warrants have been valued using a Black-Scholes valuation model and are subsequently marked to fair value each reporting period. The related input assumptions are discussed in Note 9.

Cash and Cash Equivalents

The Company considers all highly liquid investments with remaining maturities at the date of purchase of three months or less to be cash equivalents.

Accounts Receivable and Allowance for Doubtful Accounts

Accounts receivable are recorded at the invoiced amount and do not bear interest. The Company generally does not require collateral or other security in support of accounts receivable. Allowances are provided for individual accounts receivable when the Company becomes aware of a customer's inability to meet its financial obligations, such as in the case of bankruptcy, deterioration in the customer's operating results or change in financial position. If circumstances related to customers change, estimates of the recoverability of receivables would be further adjusted. The Company also considers broad factors in evaluating the sufficiency of its allowance for doubtful accounts, including the length of time receivables are past due, significant one-time events, creditworthiness of customers and historical experience. Account balances are charged off against the allowance after all means of collection have been exhausted and the potential for recovery is considered remote.

SI-BONE, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Inventory

Inventory is stated at lower of cost or market value. Market value is determined as the lower of replacement cost or net realizable value. The company establishes the inventory basis by determining the cost based on standard costs approximating the purchase costs on a first-in, first-out basis. The excess and obsolete inventory is estimated based on future demand and market conditions. Inventory write-downs are charged to cost of goods sold. As of December 31, 2015 and 2016 and March 31, 2017 (unaudited), inventory consisted entirely of finished goods.

Property and Equipment

Property and equipment are stated at cost less accumulated depreciation and amortization. All property and equipment is depreciated on a straight-line basis over the estimated useful lives of the assets, which are as follows:

Computer and office equipment	3 – 5 years
Machinery and equipment	3 – 5 years
Furniture and fixtures	7 years

Leasehold improvements are amortized over the lesser of their useful lives or the life of the lease. Upon sale or retirement of the assets, the cost and related accumulated depreciation are removed from the balance sheet and the resulting gain or loss is recognized in the statement of operations. Maintenance and repairs are charged to operations as incurred.

Intangible assets

Intangible assets consist of intellectual property related to the SI-joint developed technologies acquired by the Company in March 2008. Intangible assets are amortized over the period of estimated benefit using the straight-line method and estimated useful lives of approximately 15 years. No residual value is estimated for intangible assets.

Impairment of Long-Lived Assets

The Company reviews long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset might not be recoverable. When such an event occurs, management determines whether there has been an impairment by comparing the anticipated undiscounted future net cash flows to the related asset's carrying value. If an asset is considered impaired, the asset is written down to fair value, which is determined based either on discounted cash flows or appraised value, depending on the nature of the asset. Through December 31, 2016 and March 31, 2017 (unaudited), the Company has not experienced impairment losses on its long-lived assets.

Offering Costs

Specific incremental costs (i.e. consisting of legal, accounting and other fees and costs) directly attributable to a proposed or actual offering of securities may properly be deferred and charged against the gross proceeds of the offering. In the event a planned IPO does not occur or is significantly delayed, all of the costs will be expensed. There were $1.5 million, $0 and $0.8 million (unaudited) of offering costs capitalized as of December 31, 2015 and 2016 and March 31, 2017, respectively. The $1.5 million of offering costs incurred in 2015 were expensed to General and Administrative expenses in the first quarter of 2016 when IPO plans were delayed.

SI-BONE, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Common Stock Warrants

The Company accounts for warrants for shares of common stock as equity in accordance with the accounting guidance for derivatives. The accounting guidance provides a scope exception from classifying and measuring as a financial liability a contract that would otherwise meet the definition of a derivative if the contract is both (i) indexed to the entity's own stock and (ii) classified in the stockholders' deficit section of the balance sheet. The Company determined that the warrants for shares of common stock issued in connection with the debt arrangement are required to be classified in equity. Warrants classified as equity are recorded as additional paid- in capital on the consolidated balance sheet and no further adjustments to their valuation are made.

Convertible Preferred Stock Warrants

Warrants and other similar instruments related to shares that are contingently redeemable are classified as liabilities on the balance sheet at their estimated fair value because the shares underlying the warrants may obligate the Company to transfer assets to the holders at a future date under certain circumstances such as a deemed liquidation event. The warrants are exercisable into the Company's convertible preferred stock and are classified as liabilities on the balance sheet. The warrants, measured at fair value, are subject to re-measurement at each balance sheet date and the change in fair value, if any, is recognized as other income (expense), net. The Company will continue to adjust the liability for changes in fair value until the earlier of (i) exercise of the warrants, (ii) conversion into equity classified warrants to purchase common stock, or (iii) expiration of the warrants. The remaining value of the convertible preferred stock warrants will be reclassified to common stock with no further remeasurement required upon exercise of the warrants or conversion into equity classified warrants to purchase common stock.

The Company estimates the fair value of these liabilities using option pricing models and assumptions that are based on the individual characteristics of the warrants on the valuation date, as well as assumptions for future financings, expected volatility, expected life, yield, and risk-free interest rate.

Revenue Recognition

The Company's revenue is derived from the sale of its products to medical groups and hospitals through its direct sales force and distributors throughout the United States and Europe.

The Company recognizes revenue when persuasive evidence of an arrangement exists, title and risk of loss has transferred to the customer, the sales price is fixed or determinable, and collectability is reasonably assured. For the majority of product sales where the Company's sales representative delivers the product at the point of implantation at hospitals or other medical facilities, the Company recognizes revenue related to product sales upon delivery of the product and receipt of a purchase agreement or agreement on pricing terms with the customer. For the remaining sales to distributors, where the product is ordered in advance of implantation and a valid purchase order has been received, the Company recognizes revenue upon the delivery of product and when all other revenue recognition criteria are met.

Medical Device Excise Tax

In accordance with the Patient Protection and Affordable Care Act, effective January 1, 2013, the Company began to incur an excise tax on sales of medical devices in the United States. The medical device excise tax is included in cost of goods sold in the consolidated statements of operations and comprehensive loss for all the periods presented. Effective December 2015, the Act was amended to include a provision to suspend the sales tax on medical devices through 2017.

SI-BONE, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Shipping and Handling Costs

Shipping and handling costs are expensed as incurred and are included in cost of goods sold.

Research and Development

Research and development costs are charged to operations as incurred and consist of costs incurred by the Company for the development of the Company's product which include (1) employee-related expenses, including salaries, benefits, travel and non-cash stock-based compensation expense (2) external research and development expenses (3) other expenses, which include direct and allocated expenses for facilities and other costs.

Advertising Expenditures

The cost of advertising is expensed as incurred. Advertising costs totaled $1.0 million for each of the years ended December 31, 2015 and 2016, and $0.3 million (unaudited) and $0.2 million (unaudited) for the three months ended March 31, 2016 and 2017, respectively.

Stock-Based Compensation

The Company measures its stock-based awards made to employees based on the estimated fair values of the awards as of the grant date using the Black-Scholes option-pricing model. The model requires management to make a number of assumptions including expected volatility, expected life, risk-free interest rate and expected dividends. Stock-based compensation expense is recognized over the requisite service period using the straight- line method and is based on the value of the portion of stock-based payment awards that is ultimately expected to vest. As such, the Company's stock-based compensation is reduced for the estimated forfeitures at the date of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

Equity instruments issued to nonemployees are recorded at their fair value on the measurement date and are subject to periodic adjustments as the underlying equity instruments vest. The Company believes that the estimated fair value of the stock options is more readily measurable than the fair value of the services received. Stock based compensation related to stock options granted to nonemployees is recognized as the stock options are earned.

Income Taxes

The Company accounts for income taxes under the asset and liability method, whereby deferred tax assets and liabilities are determined based on the difference between the financial statement and tax bases of assets and liabilities using the enacted tax rates in effect for the year in which the differences are expected to affect taxable income. A valuation allowance is established when necessary to reduce deferred tax assets to the amounts expected to be realized.

The Company adopted the accounting guidance for uncertainties in income taxes, which prescribes a recognition threshold and measurement process for recording uncertain tax positions taken, or expected to be taken, in a tax return in the financial statements. The guidance also prescribes treatment for derecognition, classification, accounting in interim periods and disclosure requirements for uncertain tax positions. The Company accrues for the estimated amount of taxes for uncertain tax positions if it is more likely than not that the Company would be required to pay such additional taxes. An uncertain tax position will not be recognized if it has a less than 50% likelihood of being sustained.

SI-BONE, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Net Loss per Share of Common Stock

Basic net loss per common share is calculated by dividing the net loss by the weighted-average number of common shares outstanding during the period, without consideration for potentially dilutive securities. Diluted net loss per share is computed by dividing the net loss by the weighted- average number of common shares and potentially dilutive securities outstanding for the period. For purposes of the diluted net loss per share calculation, convertible preferred stock and common stock options and warrants are considered to be potentially dilutive securities. Because the Company has reported a net loss in all periods presented, the convertible preferred stock and common stock options and warrants are anti-dilutive and therefore diluted net loss per common share is the same as basic net loss per common share for those periods.

Comprehensive Loss

Comprehensive loss represents all changes in the stockholders' deficit except those resulting from distributions to stockholders. The Company's unrealized foreign currency translation income (losses) represents the only component of other comprehensive income that is excluded from the reported net loss for each of the reporting periods and has been presented in the consolidated statements of operations and comprehensive loss.

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2014-09, Revenue from Contracts with Customers, which required an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. ASU 2014-09 will replace most existing revenue recognition guidance in U.S. GAAP when it becomes effective. The new standard is effective January 1, 2018 for public companies. Early application is permitted as of January 1, 2017. The standard permits the use of either the retrospective or cumulative effect transition method. In March 2016, the FASB issued ASU 2016-08, Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations (Reporting Revenue Gross versus Net), which clarifies the implementation guidance on principal versus agent considerations in ASU 2014-09. In April 2016, the FASB issued ASU 2016-10, Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing, which clarifies certain aspects of identifying performance obligations and licensing implementation guidance. In May 2016, the FASB issued ASU 2016-12, Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients, which relates to disclosures of remaining performance obligations, as well as other amendments to guidance on collectability, non-cash consideration and the presentation of sales and other similar taxes collected from customers. These standards have the same effective date and transition date of January 1, 2018. Management continues to assess the new standard, which includes the review of contracts and revenue channels. The Company expects that, as a result of the adoption of this ASU, the timing of recognizing revenue for implants sold by our direct sales force to over half of the hospitals, may be generally earlier than under the existing revenue recognition guidance. Currently, revenue for these transactions is recognized upon receipt of a purchase order agreement after surgery, when the evidence of arrangement criterion is met. However, under Topic 606, the Company may be required to recognize revenue upon the delivery of the product on the date of surgery if there is an agreement that creates enforceable rights and obligations. Historically, the time between the surgery and the receipt of the purchase order for these transactions was, on average, six days which represents an immaterial amount of revenue. The Company continues to evaluate the effects that Topic 606 will have on its financial statements and related disclosures, and preliminary assessments are subject to change.

In August 2014, the FASB issued ASU 2014-15, Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern. The ASU requires management to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern and to provide related footnote disclosures. In doing so, companies will have reduced diversity in the timing and content of footnote disclosures than under today's

guidance. The Company has adopted ASU 2014-15 as of the year ended December 31, 2016. The adoption of the ASU did not have a material impact on the Company's consolidated financial statements and related disclosures.

In July 2015, the FASB issued ASU 2015-11, Inventory (Topic 330): Simplifying the Measurement of Inventory. ASU 2015-11 simplifies the guidance on the subsequent measurement of inventory, excluding inventory measured using last-in, first out or the retail inventory method. Under the new standard, in scope inventory should be measured at the lower of cost and net realizable value. The Company has adopted this new standard for the first quarter of the fiscal year 2017 and the adoption of this guidance does not have a material impact on the Company's consolidated financial statements (unaudited).

In November 2015, the FASB issued ASU 2015-17, Balance Sheet Classification of Deferred Taxes. ASU 2015-17 specifies that deferred tax assets and liabilities shall be classified as noncurrent, or long-term, in a classified statement of financial position. The ASU is effective for public entities for annual periods beginning after December 15, 2016, and interim periods within those annual periods. Earlier application is permitted for all entities as of the beginning of an interim or an annual reporting period. The Company has adopted this new standard for the first quarter of the fiscal year 2017 and the adoption of this guidance is not expected to have a material impact on the Company's consolidated financial statements (unaudited).

In February 2016, the FASB issued its new lease accounting guidance. Under the new guidance, ASU 2016-02, Leases, lessor accounting is largely unchanged. The new lease guidance simplifies the accounting for sale and leaseback transactions primarily because lessees must recognize lease assets and lease liabilities. Under the new guidance, lessees will be required to recognize a lease liability, which is a lessor's obligation to make lease payments arising from a lease, measured on a discounted basis; and a right-of-use asset, which is an asset that represents the lessee's right to use, or control use of, a specified asset for the lease term for all leases (with the exception of short-term leases) at the adoption date. The new guidance is effective for fiscal years, and for interim periods within those fiscal years, beginning after December 15, 2018. Early adoption is permitted for any interim or annual financial statements net yet issued. Lessees (for capital and operating leases) and lessors (for sales-type, direct financing and operating leases) must apply a modified retrospective approach for all leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements. The Company is currently evaluating the impact of this standard on its consolidated financial statements.

In March 2016, the FASB issued ASU 2016-09, which simplified several aspects of accounting for stock-based compensation transactions. The areas for simplification in this update involve several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. The new guidance is effective for public entities in years beginning after December 15, 2016 and in interim periods within those years. Other entities must apply the new guidance in years beginning after December 15, 2017 and in interim periods within years beginning after December 15, 2018. The Company has adopted this standard in the first quarter of 2017. The adoption did not have a material effect on our financial statements because our deferred tax assets are subject to a full valuation allowance and we will maintain our current forfeiture policy to estimate forfeitures expected to occur to determine stock-based compensation expense.

In August 2016, the FASB issued ASU 2016-15 "Statement of Cash Flows (Topic 230), Classification of Certain Cash Receipts and Cash Payments" ("ASU 2016-15"). ASU 2016-15 provides guidance on the following eight specific cash flow classification issues: (1) debt prepayment or debt extinguishment costs; (2) settlement of zero-coupon debt instruments or other debt instruments with coupon interest rates that are insignificant in relation to the effective interest rate of the borrowing; (3) contingent consideration payments made after a business combination; (4) proceeds from the settlement of insurance claims; (5) proceeds from the settlement of

corporate-owned life insurance policies, including bank-owned life insurance policies; (6) distributions received from equity method investees; (7) beneficial interests in securitization transactions; and (8) separately identifiable cash flows and application of the predominance principle. Current GAAP does not include specific guidance on these eight cash flow classification issues. The amendments of this ASU are effective for reporting periods beginning after December 15, 2017, with early adoption permitted. The Company is currently evaluating the impact of adopting ASU 2014-15 on our consolidated financial statements and related disclosures.

3. Fair Value Measurement

The following table sets forth the fair value of the Company's financial assets and liabilities measured at fair value on a recurring basis based on the three-tier fair value hierarchy (in thousands):

	Balance as of December 31, 2015			
	Level 1	Level 2	Level 3	Total
Assets				
Money Market funds[1]	$17,762	$ —	$ —	$17,762
Liabilities				
Convertible preferred stock warrants	$ —	$ —	$ 957	$ 957

	Balance as of December 31, 2016			
	Level 1	Level 2	Level 3	Total
Liabilities				
Convertible preferred stock warrants	$ —	$ —	$ 588	$ 588

	Balance as of March 31, 2017			
	Level 1	Level 2	Level 3	Total
			(unaudited)	
Liabilities				
Convertible preferred stock warrants	$ —	$ —	$ 681	$ 681

[1] Included in cash and cash equivalents on the consolidated balance sheet

The following table sets forth a summary of the changes in the fair value of the convertible preferred stock warrants, the Company's Level 3 financial liability, which is measured on a recurring basis (in thousands):

Balances at January 1, 2015	$ 325
Fair value of convertible preferred stock warrants issued	640
Change in fair value recorded in other (income) expense, net	(8)
Balances at December 31, 2015	957
Fair value of convertible preferred stock warrants issued	45
Change in fair value recorded in other (income) expense, net	(414)
Balances at December 31, 2016	588
Change in fair value recorded in other (income) expense, net (unaudited)	93
Balances at March 31, 2017 (unaudited)	$ 681

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4. Balance Sheet Components

Property and Equipment, net (in thousands):

	December 31, 2015	December 31, 2016	March 31, 2017 (unaudited)
Machinery and equipment	$ 2,128	$ 2,942	$ 2,992
Construction in progress	1,629	1,131	1,059
Computer and office equipment	634	275	277
Leasehold improvements	254	272	272
Furniture and fixtures	25	25	25
	4,670	4,645	4,625
Less: Accumulated depreciation and amortization	(1,136)	(2,037)	(2,293)
	$ 3,534	$ 2,608	$ 2,332

Accrued Liabilities and Other (in thousands):

	December 31, 2015	December 31, 2016	March 31, 2017 (unaudited)
Accrued compensation, travel and related expenses	$2,787	$2,737	$ 2,297
Sales tax payable	423	448	481
Stock repurchase rights	311	168	139
Accrued professional services	267	203	1,361
Accrued clinical services	180	69	68
Accrued interest	85	86	100
Deferred rent	70	89	85
Others	192	325	388
	$4,315	$4,125	$ 4,919

5. Commitments and Contingencies

Operating Leases

In August 2012, the Company entered into a new four year non-cancelable operating lease for its existing office building space in San Jose, California which commenced in January 2013. In February 2014, the Company expanded the existing lease space and extended the lease terms through June 2017. In May 2016, the Company entered into another extension of the lease with its lessor for additional 12 months beginning in July 2017. There is no renewal option under the operating lease.

In January 2011, the Company entered into a five year non-cancelable operating lease for its office building space in Milan, Italy. Unless sufficient notice has been provided to terminate the lease twelve months prior to expiration, the lease will automatically extend for another six-year term. In January 2016, the terms of the lease were extended for another five years under the same agreement. In September 2015, the Company entered into an additional five year non-cancelable operating lease for additional floor space in its office building in Milan, Italy.

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In November 2014, the Company entered into a five year non-cancelable operating lease for its office building space in Mannheim, Germany.

In December, 2015, the Company entered into a three year non-cancelable operating lease for its office building space in Knaresborough, United Kingdom.

The Company also leases vehicles under operating lease arrangement for the Company's sales personnel in Europe. Operating leases under such arrangements expire during various times in 2019.

Rent expense is recorded over the lease terms on a straight-line basis. Rent expense charged to operations under operating leases for years ended December 31, 2015 and 2016 totaled approximately $0.9 million and $1.0 million, respectively and $0.2 million (unaudited) for each of the three months ended March 31, 2016 and 2017.

The aggregate future minimum lease payments under all leases as of December 31, 2016 are as follows (in thousands):

Year Ending December 31,	
2017	$1,248
2018	665
2019	86
2020	40
2021	40
Thereafter	32
	$2,111

Purchase Commitments and Obligations (unaudited)

In March 2017, the Company amended its agreement with its main inventory supplier, Orchid Orthopedic Solutions LLC, which includes minimum purchase obligations. Consistent with industry practice the Company acquires inventory through open purchase orders based on projected demand information. These purchase obligations are due within 90 days. Although open purchase orders are considered enforceable and legally binding, the terms generally allow us the option to reschedule and adjust our requirements based on our business needs prior to the delivery of goods. As of March 31, 2017, the purchase obligation under the amendment does not have a material impact on the Company's consolidated financial statements.

Contingencies

From time to time, the Company may have certain contingent liabilities that arise in the ordinary course of business activities. The Company accrues a liability for such matters when it is probable that future expenditures will be made and such expenditures can be reasonably estimated.

Legal Proceedings

The Company is subject to claims and assessments from time to time in the ordinary course of business but does not believe that any such matters, individually or in the aggregate, will have a material adverse effect on the Company's financial position, results of operations or cash flows.

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Indemnification

The Company enters into standard indemnification arrangements in the ordinary course of business. Pursuant to these arrangements, the Company indemnifies, holds harmless, and agrees to reimburse the indemnified parties for losses suffered or incurred by the indemnified party, in connection with any trade secret, copyright, patent or other intellectual property infringement claim by any third-party with respect to the Company's technology. The term of these indemnification agreements is generally perpetual. The maximum potential amount of future payments the Company could be required to make under these agreements is not determinable because it involves claims that may be made against the Company in the future, but have not yet been made.

The Company has entered into indemnification agreements with its directors and officers that may require the Company to indemnify its directors and officers against liabilities that may arise by reason of their status or service as directors or officers, other than liabilities arising from willful misconduct of the individual.

The Company has not incurred costs to defend lawsuits or settle claims related to these indemnification agreements. No liability associated with such indemnifications has been recorded to date.

6. Borrowings

The Company has the following outstanding debt, net of debt discounts, as of December 31, 2015 and 2016 and March 31, 2017 (in thousands):

	December 31,		March 31,
	2015	2016	2017
			(unaudited)
Term Loan	$25,056	$29,310	$ 29,389
Total Borrowings	25,056	29,310	29,389
Less: Short-Term Borrowings	—	8,236	6,711
Long-Term Borrowings	$25,056	$21,074	$ 22,678

Term Loan

In October 2015, the Company entered into a Term Loan facility and a revolving line of credit with Silicon Valley Bank, or SVB, and Oxford Finance LLC, or Oxford, for $35.2 million. The first tranche of the Term Loan closed in October 2015 for $16.2 million, of which $15.5 million (including $0.3 million of interest) of the proceeds were used to pay off the existing loans with SVB. The additional $0.7 million relate to the payment of final fees due on previous loans. Prepayment fees on the then existing debt facilities were waived. The loan includes an interest-only period through March 31, 2017 and is then repaid over thirty-three (33) months of equal principal payments plus interest. In November 2015, the Company drew the second tranche of $10.0 million, which is coterminous with the first tranche. Under the Term Loan, the Company also had available a third tranche of $4.0 million through September 30, 2016 and a fourth tranche of $5.0 million through December 31, 2016. Both tranches are contingent upon the achievement of certain goals.

The Company accounted for SVB's, portion of the term loan facility as a modification of its existing debt facility as the change in cash flows was less than 10%. As such, a new effective interest rate was established based on the carrying value of the debt and the revised cash flows. Based on the guidance for loan modification, no gains or losses were recorded on the old debt and new fees paid to or received from existing lenders were

capitalized and amortized as part of the effective yield. As a result, the Company accounted for the portion of the $0.7 million of final fees related to the previous loans, not yet recognized in interest expense, as a debt discount. This amount will be amortized over the remaining period of the Term Loan as part of the new effective interest rate.

In August 2016, the Company amended the agreement to remove the revenue requirement for the third tranche and extended the draw period of the fourth tranche for additional three months. In December 2016, the Company withdrew the third tranche of the Term Loan of $4.0 million. The agreement also provides for the fourth tranche of $5.0 million to be available through March 2017 contingent upon the Company achieving at least $24.0 million in trailing six-month revenues. In February 2017, the Company amended the Term Loan to extend the interest only period by six months to October 1, 2017. After the interest only period, the Term Loan will be repaid over 27 months of equal principal payments plus interest. In addition, the amendment extended the draw period through January 2018 for the fourth tranche of $5.0 million under the Term Loan upon achieving at least $24.0 million in trailing six-months revenue. The maturity date of the term loan is December 1, 2019, and it carries an interest rate equal to the greater of 11% or the WSJ Prime rate plus 7.75%.

As of December 31, 2016 and March 31, 2017, the total loan balance was $30.2 million and $30.2 million (unaudited), respectively, with an effective interest rate of 12.45% and 12.7% (unaudited), respectively. The Term Loan are senior unsecured obligations of the Company, ranking equally and ratably among themselves and with the Company's existing and future unsecured and unsubordinated debt.

All debt facilities continue to be collateralized by all of the Company's assets except intellectual property. The Company agreed not to pledge a security interest in its intellectual property to any other party so long as SVB and Oxford have debt outstanding to the Company. As of December, 31, 2016 and March 31, 2017 (unaudited), the Company was in compliance with all debt covenants.

In conjunction with the above Term Loan agreements, the Company issued convertible preferred stock warrants (Note 9).

Approximate annual future minimum principal payments under the loan agreements as of December 31, 2016 are as follows (in thousands):

Year Ending at December 31,	
2017	$ 8,236
2018	10,982
2019	10,982
2020	—
2021 and thereafter	—
Total future minimum payments	30,200
Less:	
Amount representing debt discount	(890)
Total minimum payments	$29,310

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Approximate annual future minimum principal payments under the loan agreements as of March 31, 2017 (unaudited) are as follows (in thousands):

2017 (nine months remaining)	$ 3,356
2018	13,422
2019	13,422
2020	—
2021 and thereafter	—
Total future minimum payments	30,200
Less:	
Amount representing debt discount	(811)
Total minimum payments	$29,389

Line of Credit

In October 2015, the Company entered into an agreement with its existing lender SVB and Oxford. The amount of the revolving line of credit is $4.0 million (or 80% of the amount of certain customer accounts receivable). It carries an interest rate equal to the WSJ Prime rate plus 3% with a maturity of December 1, 2019. No draws have been made on this facility as of December 31, 2016 and March 31, 2017 (unaudited). Borrowings under this agreement were collateralized by all of the Company's assets, excluding any intellectual properties.

7. Common Stock

The Company's restated certificate of incorporation, as of December 31, 2016, as amended, authorizes the Company to issue 338,000,000 shares of $0.0001 par value common stock, of which 108,000,000 has been designated as Series 1 common stock and 230,000,000 has been designated as Series 2 common stock. As of March 31, 2017, the Company's restated certificate of incorporation, as amended, authorizes the Company to issue 348,000,000 shares (unaudited) of $0.0001 par value common stock, of which 108,000,000 (unaudited) has been designated as Series 1 common stock and 240,000,000 (unaudited) has been designated as Series 2 common stock. The holders of Series 1 common stock shall have no voting rights; the holders of Series 2 common stock shall have the right to one vote for each such share. The holders of common stock are also entitled to receive dividends whenever funds are legally available, as, when, and if declared by the Board of Directors. There have been no dividends declared to date.

The Company has reserved shares of common stock, on an issued and as-converted basis, for future issuance as follows:

	December 31, 2016		March 31, 2017	
	Issued and Outstanding Shares	Common Stock Equivalent Shares	Issued and Outstanding Shares	Common Stock Equivalent Shares
			(unaudited)	
Common stock	62,032,796	62,032,796	62,819,239	62,819,239
Convertible preferred stock	203,954,077	206,835,359	213,689,844	217,201,525
Stock options outstanding	44,322,182	44,322,182	55,294,071	55,294,071
Stock options available for grant	5,670,695	5,670,695	1,712,363	1,712,363
Common stock warrant	2,212,918	2,212,918	2,237,918	2,237,918
Convertible preferred stock warrant	2,817,988	2,878,694	2,817,988	2,891,975
Total	321,010,656	323,952,644	338,571,423	342,157,091

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8. Convertible Preferred Stock

Convertible preferred stock ("preferred stock") at December 31, 2015 consisted of the following:

Series	Shares Issued		Carrying Value	Liquidation Value
	Authorized	Outstanding	(in thousands)	
Series 1	4,411,731	4,411,731	$ 154	$ 154
Series 2	12,773,107	12,773,107	1,489	1,520
Series 3	8,981,250	8,981,250	2,862	2,874
Series 4	45,162,853	45,162,853	15,656	15,807
Series 5	38,000,000	36,166,158	18,127	18,275
Series 6	67,000,000	59,747,277	54,508	54,674
Total	176,328,941	167,242,376	$ 92,796	$ 93,304

Convertible preferred stock ("preferred stock") at December 31, 2016 consisted of the following:

Series	Shares Issued		Carrying Value	Liquidation Value
	Authorized	Outstanding	(in thousands)	
Series 1	4,411,731	4,411,731	$ 154	$ 154
Series 2	12,773,107	12,773,107	1,489	1,520
Series 3	8,981,250	8,981,250	2,862	2,874
Series 4	45,162,853	45,162,853	15,656	15,807
Series 5	37,550,484	36,166,158	18,127	18,275
Series 6	61,006,095	59,747,277	54,508	54,674
Series 7	38,068,315	36,711,701	20,325	20,463
Total	207,953,835	203,954,077	$ 113,121	$ 113,767

Convertible preferred stock ("preferred stock") at March 31, 2017 (unaudited) consisted of the following:

Series	Shares Issued		Carrying Value	Liquidation Value
	Authorized	Outstanding	(in thousands)	
Series 1	4,411,731	4,411,731	$ 154	$ 154
Series 2	12,773,107	12,773,107	1,489	1,520
Series 3	8,981,250	8,981,250	2,862	2,874
Series 4	45,162,853	45,162,853	15,656	15,807
Series 5	37,550,484	36,166,158	18,127	18,275
Series 6	61,006,095	59,747,277	54,508	54,674
Series 7	48,000,000	46,447,468	25,752	25,890
Total	217,885,520	213,689,844	$ 118,548	$ 119,194

The holders of preferred stock have various rights and preferences as follows:

Voting Rights

The holders of Series 1, Series 2, Series 3, Series 4, Series 5, Series 6, and Series 7 convertible preferred stock shares are entitled to vote on all matters on which the common stockholders are entitled to vote. The

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holders of Series 1, Series 2, Series 3 shall have the right to 0.352941 votes for each share of Series 2 common stock into which such preferred stock would convert and the holders of Series 4, Series 5, Series 6 and Series 7 shall have the right to one vote for each share of Series 2 common stock into which such preferred stock would convert. As long as there are any shares of Series 4, Series 5, Series 6, and Series 7 shares are outstanding, the holders of such Series 4, Series 5, Series 6 and Series 7 shall, at each respective series, be entitled to elect one member of the Board of Directors each; the holders of Series 2 common stock shall be entitled to elect two members of the Board of Directors; and the holders of the preferred stock and Series 2 common stock, voting together as a single class shall be entitled to elect the remaining members of the Board of Directors, as determined at each annual meeting of the Board of Directors.

As long as at least 5,000,000 convertible preferred stock shares remain outstanding, the Company must obtain approval from a majority of the holders of the then outstanding shares of convertible preferred stockholders and a majority of the voting power of all outstanding shares of Series 5 preferred stock in order to (i) consummate or agree to consummate a Liquidation Event (as defined in the Company's certificate of incorporation); (ii) amend, alter, restate or repeal any provision of the Company's certificate of incorporation or bylaws so as to adversely alter, affect or change the powers, preferences, rights or privileges of the shares of preferred stock; (iii) increase or decrease (other than by redemption or conversion) the total number of authorized shares of common stock or preferred stock or designated shares of any series of preferred stock; (iv) authorize or issue, or obligate itself to issue, any equity security (including any other security convertible into or exercisable for any such equity security) having a preference over, or being on a parity with, any series of preferred stock with respect to dividends, liquidation or redemption, other than the issuance of any authorized but unissued shares of Series 6 preferred stock designated in the Company's certificate of incorporation (including any security convertible into or exercisable for such shares of preferred stock); (v) redeem, purchase or otherwise acquire (or pay into or set aside for a sinking fund for such purpose) any share or shares of preferred stock or common stock; provided, however, that this restriction shall not apply to the repurchase of shares of common stock from employees, officers, directors, consultants or other persons performing services for the Company or any subsidiary pursuant to agreements under which the Company has the option to repurchase such shares upon the occurrence of certain events, such as the termination of employment or service, or pursuant to an agreement providing for a right of first refusal in favor of the Company, in each case, provided that such agreement has been approved by the Company's board of directors; or (vi) pay or declare any dividend on any shares of capital stock of the Company.

Dividends

The holders of preferred stock are entitled to receive noncumulative dividends, when and if declared by the Board of Directors, out of any assets legally available, prior to and in preference to any declaration or payment of dividends on the common stock of the Company. Dividend rates, on a per annum basis, for Series 1, Series 2, Series 3, Series 4, Series 5, Series 6, and Series 7 preferred stocks are $0.002784, $0.00952, $0.0256, $0.028, $0.04043, $0.073208, and $0.044592, respectively, (adjusted to reflect subsequent stock dividends, stock splits or recapitalization).

After payment of such dividends, any additional dividends shall be distributed to the holders of all preferred stock and common stock on a pro rata basis in proportion to the number of common stock held by each shareholder as if the preferred stock had been converted at the effective conversion rate. No dividends on preferred stock or common stock have been declared as of December 31, 2016 and March 31, 2017 (unaudited).

Liquidation

In the event of (A) the closing of the sale, lease, transfer, exclusive license or other disposition of all or substantially all of the Company's assets, in a single transaction or series of related transactions, by the Company

or any subsidiary or subsidiaries of the Company, of all or substantially all the assets of the Company and its subsidiaries taken as a whole (or, if substantially all of the assets of the Company and its subsidiaries taken as a whole are held by one or more subsidiaries, the sale or disposition (whether by consolidation, merger, conversion or otherwise) of such subsidiaries of the Company or all or substantially all of the assets of such subsidiaries), except where such sale, lease, transfer, exclusive license or other disposition is made the Company or one or more wholly owned subsidiaries of the Company, (B) the consummation of a merger, consolidation or acquisition in which (x) the Company is a constituent party or (y) a subsidiary of the Company is a constituent party and the Company issues shares of its capital stock pursuant to such merger, consolidation or acquisition (except a merger, consolidation or acquisition involving the Company or a subsidiary in which the capital stock of the Company outstanding immediately prior to such merger, consolidation or acquisition continue to represent or are converted or exchanged for shares of capital stock which represent, immediately following such merger, consolidation or acquisition at least a majority of the voting power of the capital stock of (1) the surviving or resulting corporation or (2) if the surviving or resulting corporation is a wholly owned subsidiary of another corporation immediately following such merger, consolidation or acquisition, the parent corporation of such surviving or resulting corporation); (C) any transaction or series of related transactions to which the Company is a party in which in excess of fifty percent (50%) of the Company's voting power is transferred; provided that it shall not include any transaction or series of related transactions principally for bona fide equity financing purposes in which cash is received by the Company or any successor or indebtedness of the Company is cancelled or converted or a combination thereof occurs, or (D) a liquidation, dissolution or winding up of the Company, the holders of the convertible preferred stock are entitled to receive prior to and in preference to any distribution to holders of the common stock, an amount equal to their respective original issuance price per share (original issuance price per share for Series 1, Series 2, Series 3, Series 4, Series 5, Series 6, and Series 7 preferred stocks are $0.0348, $0.1190, $0.32, $0.35, $0.05053, $0.9151, and $0.5574, respectively), plus any declared but unpaid dividends on such shares. Should the Company's legally available assets be insufficient to satisfy the full liquidation preference, the funds will be distributed ratably among the holders of the convertible preferred stock in proportion to the preferential amount each holder is otherwise entitled to receive.

Upon the closing of the distribution as above, the remaining proceeds shall be distributed among the holders of Series 4, Series 5, Series 6, Series 7 preferred stock and common stock pro rata based on the number of shares of common stock held by each until the holders of the preferred stock have received the "participation cap." Thereafter, if proceeds remain, the holders of Series 7 preferred stock and common stock of this corporation shall receive all of the remaining proceeds pro rata based on the number of shares of common stock held by each (assuming full conversion of all such series 7 preferred stock). The Company has a per share "Participation Cap" of $1.8302 for the Series 6 preferred stock, $1.0106 for the Series 5 preferred stock, and $0.70 for the Series 4 preferred stock (each as adjusted for any stock splits, stock dividends, combinations, subdivisions, recapitalizations or the like with respect to such series of preferred stock).

Conversion

Each share of Series 1, Series 2, Series 3, Series 4, Series 5, Series 6, and Series 7 preferred stock is convertible at the option of the holder, into the number of shares of Series 2 common stock into which such shares are at the then effective conversion ratio or one to one ratio. The conversion price per share for Series 1, Series 2, Series 3 and Series 4, Series 5, Series 6, and Series 7 preferred stock shall be the respective issuance price per share, respectively. The initial conversion price is subject to adjustment from time to time. The conversion ratio of each share of Series 6 preferred stock impacted by repricing is convertible at the option of the holder on a one to 1.05 ratio. In March 2017, the conversion price per share for the Series 6 convertible preferred stock was amended from $0.8730 per share to $0.8643 per share which resulted in the conversion ratio increasing from 1.05 to 1.06 per share.

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Each share of preferred stock (shall be converted into common stock shares upon the earlier of (i) immediately before the closing of a firm commitment underwritten public offering in which the aggregate gross proceeds of not less than $50.0 million and a per share public offering of not less than 1.6722 of preferred stock, or (ii) the Company's receipt of a written request for such conversion from the holders of at least the voting majority of all outstanding preferred stock (voting as a single class and on an as-converted basis).

Other Matters

The Company has classified the preferred stock as temporary equity on the balance sheets as the shares can be redeemed upon the occurrence of certain change in control events that are outside the Company's control, including deemed liquidation, sale or transfer of the Company. The Company has not adjusted the carrying values of the preferred stock to the liquidation preferences of such shares because it is uncertain whether or when an event would occur that would obligate the Company to pay the liquidation preferences to holders of shares of preferred stock. Subsequent adjustments to the carrying values to the liquidation preferences will be made only when it becomes probable that such a liquidation event will occur.

9. Warrants

Warrants issued in connection with the debt financing at December 31, 2016 are as follows (in thousands, except per share data):

Warrants to purchase	Series	Date			Number of shares Underlying Warrants	Price per Share	Fair Value at the Date of Issuance
		Issuance	Expiration				
Common stock		7/19/2013	7/22/2023	[a]	1,818,182	$ 0.22	$ 244
Common stock		11/26/2014	11/26/2024	[a]	394,736	$ 0.19	$ 47
Total common stock warrants					2,212,918		
Convertible preferred stock	Series 5	7/1/2012	7/25/2019	[b]	988,522	$ 0.51	$ 255
Convertible preferred stock	Series 5	7/19/2013	7/22/2023	[c]	395,804	$ 0.51	$ 122
Convertible preferred stock	Series 6	11/26/2014	11/26/2024	[c]	113,587	$ 0.92	$ 49
Convertible preferred stock	Series 6	10/20/2015	10/20/2025	[c]	708,120	$ 0.92	$ 396
Convertible preferred stock	Series 6	11/9/2015	11/9/2025	[c]	437,111	$ 0.92	$ 244
Convertible preferred stock	Series 7	12/22/2016	12/22/2026	[c]	174,844	$ 0.56	$ 45
Total convertible preferred stock warrants					2,817,988		
Total outstanding common and convertible preferred stock warrants					5,030,906		

[a] Common stock warrants will remain outstanding until exercised by the holder.
[b] These warrants terminate upon the earlier of (i) their expiration, (ii) immediately prior to the closing of the Company's initial public offering (IPO), or (iii) a corporate transaction as defined in the Note and Warrant Purchase Agreement dated July 25, 2012.
[c] Convertible preferred stock warrants will remain outstanding until exercised by the holder and will convert to common stock warrants upon an IPO and the convertible preferred stock warrant liability will be re-measured through the date of the IPO and if these warrants on common stock subsequently qualify for equity classification, no further re-measurement will be required thereafter. The warrants will be exercisable for 10 years from the date of issuance.

In connection with previously issued debt, the Company issued 1,818,182 warrants to purchase common shares of the Company at an exercise price of $0.22 cents per share in July 2013. Additionally, the Company issued warrants to purchase an additional 394,736 shares of common stock at an exercise price of $0.19 cents per share in November 2014.

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In conjunction with debt issued in July 2012, the Company issued warrants to purchase an aggregate of 988,522 shares of Series 5 preferred stock of the Company at an exercise price of $0.51 cents per price.

In conjunction with debt issued in 2013 and 2014, the Company issued 395,804 warrants to purchase Series 5 convertible preferred stock of the Company at an exercise price of $0.51 cents per share. Subsequently, the Company issued additional warrants to purchase 113,587 shares of Series 6 convertible preferred stock at an exercise price of $0.92 cents per share.

In conjunction with the new debt agreement with SVB and Oxford, or Term Loan agreement, (see Note 6), the Company issued warrants to purchase 708,120 shares of Series 6 convertible preferred stock at an exercise price of $0.92 cents per price in October 2015 and additional 437,111 shares of Series 6 convertible preferred stock at an exercise price of $0.92 cents per price in November 2015.

In conjunction with the Term Loan agreement and its modification (see Note 6), the Company issued additional warrants for the purchase of 174,844 shares of Series 7 convertible preferred stock at an exercise price of $0.56 cents per share in December 2016.

The fair value of warrants to purchase preferred stock are recorded at the date of issuance as a discount to the convertible note payable and amortized to interest expense over the term of the note. The debt discount is being amortized to interest expense over the term of the note using the effective interest method. The changes in the fair value of the preferred stock warrants are recorded in other income and expense.

Weighted-average assumptions used in computation of the fair value of all the convertible preferred stock warrants are summarized in the table below:

	December 31,		March 31,	
	2015	2016	2016	2017
			(unaudited)	
Remaining contractual term (in years)	6.5	4.6	3.5	4.6
Expected volatility	47.56%	44.77%	65.50%	62.47%
Risk-free interest rate	1.82%	1.71%	1.13%	1.72%
Dividend yield	0%	0%	0%	0%

Other Warrants (unaudited)

In March 2017, the Company issued a warrant to purchase 25,000 shares of common stock at an exercise price of $0.25 to a non-employee. The expense related to this warrant was not material. The Company determined that such warrant meets the requirements for equity classification.

10. Stock Option Plan

In April 2008, the Company adopted the 2008 Stock Option Plan (the “Plan”), as amended, under which the Board of Directors may issue incentive and nonqualified stock options to employees, directors and consultants. The Board of Directors has the authority to determine to whom options will be granted, the number of shares, the term and the exercise price. If an individual owns stock representing more than 10% of the outstanding shares, the price of each share shall be at least 110% of the fair market value, as determined by the Board of Directors. The exercise price of an incentive stock option and a nonqualified stock option shall not be less than 100% and 85%, respectively, of the fair market value on the date of grant. As of December 31, 2016, a total of 88,501,442 shares of common stock have been reserved for issuance under the Plan. Options granted have a term of ten

years, except, options granted to individuals holding more than 10% of the outstanding shares have a term of five years. Options generally vest over a four-year period. Certain shares issued under the Plan are exercisable immediately, but subject to a right of repurchase by the Company of any unvested shares.

The following table summarizes activity under the Plan for the years ended December 31, 2015 and 2016 and March 31, 2017 (unaudited):

		Options Outstanding			
	Shares Available for Grant	Number of Shares	Weighted Average Exercise Price per share	Weighted Average Remaining Contractual Life (in years)	Aggregate Intrinsic Value (in thousands)
Balances at January 1, 2015	1,823,262	34,923,054	0.16		$ 1,139
Options granted	(11,328,115)	11,328,115	0.43		
Options exercised	—	(6,693,475)	0.14		$ 1,438
Options cancelled	2,922,345	(2,922,345)	0.21		
Additions to the Plan	12,290,760	—			
Balances at December 31, 2015	5,708,252	36,635,349	0.24		$ 10,840
Options granted	(11,967,085)	11,967,085	0.25		
Options exercised	—	(2,193,125)	0.17		$ 452
Options cancelled	2,087,127	(2,087,127)	0.24		
Options repurchased	153,992	—	0.20		
Additions to the Plan	9,688,409	—			
Balances at December 31, 2016	5,670,695	44,322,182	$ 0.20		$ 5,592
Options granted (unaudited)	(12,044,446)	12,044,446	0.33		
Options exercised (unaudited)	—	(786,443)	0.13		$ 189
Options cancelled (unaudited)	286,114	(286,114)	0.22		
Additions to the Plan (unaudited)	7,800,000	—			
Balances at March 31, 2017 (unaudited)	1,712,363	55,294,071	$ 0.23	8.0	$ 8,265
Options vested and exercisable-December 31, 2016		23,162,813	$ 0.18	6.8	$ 3,536
Options vested and expected to vest-December 31, 2016		41,374,659	$ 0.20	7.8	$ 5,166
Option vested and exercisable—March 31, 2017 (unaudited)		24,263,242	$ 0.18	6.7	$ 4,803
Options vested and expected to vest—March 31, 2017 (unaudited)		43,572,577	$ 0.21	7.6	$ 7,505

The aggregate intrinsic values of options outstanding, exercisable, vested and expected to vest were calculated as the difference between the exercise price of the options and the estimated fair value of the Company's common stock, as determined by the board of directors, as of December 31, 2016 and March 31, 2017 (unaudited). The total grant date fair value of options that vested during the year ended December 31, 2015 and 2016 was $1.1 million, and $0.9 million, respectively, and $0.3 million (unaudited) for each of the three months ended March 31, 2016 and 2017.

SI-BONE, INC.
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The following table summarizes information about stock options outstanding under the Plan at December 31, 2016:

Options Outstanding			Options Exercisable	
Exercise Price	Number Outstanding	Average Remaining Contractual Life (Years)	Number Vested	Weighted-Average Exercise Price
$0.015 – $0.18	7,836,008	5.1	7,436,429	$ 0.10
$0.19 – $0.21	12,192,552	7.6	7,526,126	$ 0.19
$0.22 – $0.23	3,407,194	6.3	3,340,612	$ 0.22
$0.24 – $0.24	20,379,428	9.0	4,812,979	$ 0.24
$0.25 – $0.54	507,000	9.7	46,667	$ 0.48
	44,322,182		23,162,813	

The following table summarizes information about stock options outstanding under the Plan at March 31, 2017 (unaudited):

Options Outstanding			Options Exercisable	
Exercise Price	Number Outstanding	Average Remaining Contractual Life (Years)	Number Vested	Weighted-Average Exercise Price
$0.015 – $0.18	7,402,268	4.9	7,107,432	$ 0.11
$0.19 – $0.21	11,930,969	7.3	8,065,745	$ 0.19
$0.22 – $0.23	3,258,454	6.0	3,246,056	$ 0.22
$0.24 – $0.24	20,155,934	8.8	5,792,175	$ 0.24
$0.25 – $0.54	12,546,446	9.9	51,834	$ 0.48
	55,294,071		24,263,242	

Early Exercise of Unvested Stock Options

Early exercises of stock options are subject to a right of repurchase by the Company of any unvested shares. The repurchase rights lapse over the original vesting period of the options. The Company accounts for the cash received in consideration for the early exercised options as a liability included in accrued liabilities, which is then reclassified to stockholders' deficit as the options vest. At December 31, 2015 and 2016, and March 31, 2017, the Company had a total of 1,635,430, 854,104, and 698,867 (unaudited) shares of common stock, respectively, subject to repurchase under the Plan and $311,000, $168,000, and $139,000 (unaudited), respectively, of associated liabilities for the repurchase.

SI-BONE, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Stock-Based Compensation

The following table sets forth stock-based compensation expense related to options granted for the periods presented (in thousands):

	Year Ended December 31,		Three Months Ended March 31,	
	2015	2016	2016	2017
			(unaudited)	
Cost of goods sold	$ 18	$ 20	$ 4	$ 6
Research and development	143	137	31	32
Sales and marketing	340	399	88	99
General and administrative	730	842	163	203
	$ 1,231	$ 1,398	$ 286	$ 340

Employee Stock-Based Compensation

During the years ended December 31, 2015 and 2016 and the three months ended March 31, 2016 and 2017, the Company granted stock options to employees to purchase 11,273,115, 11,917,085, 467,500 (unaudited) and 12,032,446 (unaudited) shares of common stock, respectively, with a weighted-average grant date fair value of $0.20, $0.10, $0.06 (unaudited) and $0.17 (unaudited), respectively. As of December 31, 2016, there was a total unrecognized compensation cost of $2.9 million. These costs are expected to be recognized over a period of approximately 2.5 years. The Company estimates the fair value of stock options using the Black-Scholes option valuation model. The fair value of employee stock options is being amortized on a straight-line basis over the requisite service period of the awards. The fair value of employee stock options was estimated using the assumptions below. Each of these inputs is subjective and its determination generally requires significant judgment.

Performance Stock Option

In March 2017, the Company granted 10,153,900 (unaudited) performance stock options at a grant price of $0.33 (unaudited), of which 7,353,900 (unaudited) performance options will vest monthly over four years and 2,800,000 (unaudited) performance options will vest monthly over three years. The vesting period will begin on the date of the closing of an initial public offering (“IPO”), the performance condition, subject to the optionee’s continuous service. Stock-based compensation expense for performance stock options is based on the probability of achieving certain performance criteria, as defined in the individual option grant agreement. The Company estimates the number of performance options ultimately expected to vest and recognizes stock-based compensation expense for those options when it becomes probable that the performance criteria will be met. As of March 31, 2017 (unaudited), no stock-based compensation expense had been recognized because achievement against these performance criteria or completion of an IPO had not yet been achieved or considered probable.

Fair Value of Common Stock

The fair value of the shares of the Company’s common stock underlying the stock options has historically been determined by the Company’s Board of Directors. Because there has been no public market for the Company’s common stock, its Board of Directors has determined the fair value of the Company’s common stock at the time of grant of the option by considering a number of objective and subjective factors, including the Company’s stage of development, sales of the Company’s convertible preferred stock, the Company’s operating and financial performance, equity market conditions affecting comparable public companies, the lack of liquidity of the Company’s capital stock, and the general and industry-specific economic outlooks.

SI-BONE, INC.
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Expected Term

The expected term represents the period that the share-based awards are expected to be outstanding. The Company used the simplified method to determine the expected term, which is calculated as the average of the time to vesting and the contractual life of the options.

Expected Volatility

As the Company's common stock has never been publicly traded, the expected volatility is derived from the average historical volatilities of publicly traded companies within its industry that the Company considers to be comparable to its business over a period approximately equal to the expected term for its stock options.

Risk-Free Interest Rate

The risk-free interest rate is based on the U.S. Treasury zero coupon issues in effect at the time of grant for periods corresponding with the expected term of the option.

Dividend Yield

The Company has never paid dividends on its common stock and has no plans to pay dividends on its common stock. Therefore, the Company used an expected dividend yield of zero.

Expected Forfeiture Rate

The Company is required to estimate forfeitures at the time of grant, and revise those estimates in subsequent periods if actual forfeitures differ from those estimates. The Company uses historical data to estimate pre-vesting option forfeitures and record stock-based compensation expense only for those awards that are expected to vest. To the extent actual forfeitures differ from the estimates, the difference will be recorded as a cumulative adjustment in the period that the estimates are revised.

The grant date fair value of the stock option awards granted to employees was estimated at the date of grant using a Black-Scholes option-pricing model with the following assumptions:

	Year Ended December 31,		Three Months Ended March 31,	
	2015	2016	2016	2017
			(unaudited)	
Expected term	6.25	6.25	6.25	6.25
Expected volatility	45%-50%	44%-54%	47%	53%-55%
Risk-free interest rate	1.54%-1.88%	1.14%-2.19%	1.40%	1.99-2.28%
Dividend yield	0%	0%	0%	0%

Non-Employee Stock-Based Compensation

During the years ended December 31, 2015 and 2016 and the three months ended March 31, 2016 and 2017, the Company granted 55,000, 50,000, 50,000 (unaudited) and 12,000 (unaudited) stock options, respectively, to nonemployees, at an average exercise price of $0.42, $0.54, $0.54 (unaudited) and $0.33 (unaudited) per share, respectively, and a grant date fair value of $0.27, $0.31, $0.31 (unaudited) and $0.21 (unaudited), respectively. The stock based compensation expense was insignificant for the all periods presented.

SI-BONE, INC.
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Option Modification/Repricing

In July 2016, the Company modified the terms of 10,365,515 vested and unvested stock option awards by reducing their exercise price from $0.44 – $0.54 to $0.24 per share. There was no change in any of the other terms of the option awards. The modification resulted in an incremental value of $432,000 being allocated to the options, of which $127,000 was recognized to expense immediately based on options that were vested at the time of the modification. The remaining incremental value of $238,000 attributable to unvested shares at December 31, 2016 will be recognized over a weighted-average remaining term of 2.55 years.

11. Employee Benefit Plan

The Company sponsors a 401(k) plan covering all employees. Contributions made by the Company are discretionary and are determined annually by the Board of Directors. The Company has made no contributions to the 401(k) plan since its inception.

12. Income Taxes

The components of the Company's loss before income taxes were as follows (in thousands):

	Year Ended December 31,	
	2015	2016
Domestic	$ (24,700)	$ (20,429)
Foreign	(3,454)	(160)
Loss before income taxes	$ (28,154)	$ (20,589)

The components of income tax expense are as follows (in thousands):

	Year Ended December 31,	
	2015	2016
Current:		
Federal	$ —	$ —
State	—	—
Foreign	—	—
Total current	—	—
Deferred:		
Federal	9,130	6,810
State	1,037	941
Foreign	—	—
Total deferred	10,167	7,751
Change in deferred tax valuation allowance	(10,167)	(7,751)
Net deferred	—	—
Provision for income taxes	$ —	$ —

SI-BONE, INC.
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Income tax expense differs from the amount computed by applying the statutory federal income tax rate due to the following:

	Year Ended December 31,	
	2015	2016
Tax at statutory federal rate	(34.0%)	(34.0%)
State tax, net of federal benefit	(4.2%)	(4.3%)
Foreign tax differential	0.0%	0.0%
Tax credits	(1.4%)	(1.3%)
Change in deferred tax valuation allowance	36.1%	37.6%
Other	3.5%	2.0%
Total income tax expense	0.0%	0.0%

The tax effects of temporary differences and carry forwards that give rise to significant portions of the deferred tax assets are presented below (in thousands):

	December 31,	
	2015	2016
Net operating loss carry forwards	$ 32,406	$ 39,966
Research and development credits	1,645	1,868
Depreciation and amortization	147	192
Accruals and reserves	1,398	1,321
	35,596	43,347
Less: Valuation allowance	(35,596)	(43,347)
Total deferred tax assets	$ —	$ —

The Company has established a full valuation allowance against its deferred tax assets due to the uncertainty surrounding realization of such assets.

As of December 31, 2016, the Company had net operating loss (“NOL”) carryforwards of approximately $105.0 million and $83.7 million available to reduce future taxable income, if any, for federal and state income tax purposes, respectively. If not utilized, the Company’s federal net operating loss carryforward begins to expire in 2029, and the state net operating loss carryforward begins to expire in 2017.

As of December 31, 2016, the Company had credit carryforwards of approximately $1.7 million and $1.5 million available to reduce future taxable income, if any, for both Federal and state income tax purposes, respectively. The Federal credits begin to expire in 2030, and the state credits have no expiration date.

The Tax Reform Act of 1986 limits the use of net operating loss and tax credit carryforwards in certain situations where changes occur in the stock ownership of a company. The Company has determined that it experienced Section 382 ownership changes in 2010 and $1.4 million of its NOLs are limited.

SI-BONE, INC.
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The Company accounts for the uncertainty in income taxes by utilizing a comprehensive model for the recognition, measurement, presentation and disclosure in financial statements of any uncertain tax positions that have been taken or are expected to be taken on an income tax return. The changes in the Company's uncertain income tax positions for the years ended December 31, 2015 and 2016 consisted of the following (in thousands):

Beginning balance as of January 1, 2015	$635
Increases in balances related to tax positions taken during 2015	196
Ending balance as of December 31, 2015	831
Increases in balances related to tax positions taken during 2016	119
Ending balance as of December 31, 2016	$950

The Company has elected to recognize interest and penalties related to uncertain tax positions as a component of income tax expense. The Company has accrued zero at December 31, 2015 and 2016 for payment of interest related to unrecognized tax benefits. None of the Company's unrecognized tax benefits that, if recognized, would affect its effective tax rate at December 31, 2016.

The Company did not record a provision or benefit for income taxes during the three months ended March 31, 2016 (unaudited) or 2017 (unaudited). The Company continues to maintain a full valuation allowance against its net deferred tax assets.

The Company currently has no federal or state tax examinations in progress nor has it had any federal or state examinations since inception. As a result of the Company's net operating loss carry forwards, all of its tax years are subject to federal and state tax examinations.

13. Related Party Transactions

In March 2013, the Company granted a loan to its then current Chief Financial Officer to assist with the exercise of his stock option grants in the form of a full recourse promissory note with an aggregate principal amount of $200,000. The note is collateralized by the common stock issued upon the exercise of the stock options, as well as personal assets of the borrower. Interest under this note will accrue at the rate of 1.09% per annum. In November 2016, the loan amount was partially repaid in the amount of $116,000 (including principle of $113,000 and interest of $3,000). The remainder of the principal balance of this note, together with all accrued and unpaid interest to date, is due in March 2018.

In February 2014, the Company granted a loan to its Chief Executive Officer to assist with the exercise of his stock option grants in the form of a promissory note with an aggregate principal amount of $437,000. The note is collateralized by the common stock issued upon the exercise of the stock options, as well as personal assets of the borrower. At the time of issuance, the Company accounted for the note as a full recourse promissory note based on historical pattern of collecting payment on notes in full and no other notes had been forgiven, nor had any recourse notes been substantively converted to nonrecourse (unaudited). Interest under this note will accrue at the rate of 1.97% per annum. The principal balance of this note, together with all accrued and unpaid interest to date, is due in February 2019. In March 2017, the Company forgave $231,000 (unaudited) of principal and interest due on a promissory note from its Chief Executive Officer. In addition, the Board of Directors approved the forgiveness of the remaining 50% of the principal balance of the note upon the earlier of an IPO, change of control, or January 1, 2018. At the time of the forgiveness, all of the related stock options were fully vested. As a result, the Company has expensed the whole note plus accrued interest to compensation expense.

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14. Net Loss Per Share of Common Stock

The following table summarizes the computation of basic and diluted net loss per share (in thousands, except share and per share data):

	Year Ended December 31,		Three Months Ended March 31,	
	2015	2016	2016	2017
			(unaudited)	
Net loss	$ (28,154)	$ (20,589)	$ (6,641)	$ (6,589)
Weighted-average shares used to compute basic and diluted net loss per share	55,292,845	59,659,307	58,782,930	61,735,139
Net loss per share, basic and diluted	$ (0.51)	$ (0.35)	$ (0.11)	$ (0.11)

Weighted average unvested shares for the years ended December 31, 2015 and 2016 and the three months ended March 31, 2016 (unaudited) and 2017 (unaudited) were excluded from the weighted average shares used to compute basic and diluted net loss per share.

The following common stock equivalents were excluded from the computation of diluted net loss per share for the periods presented because including them would have been antidilutive:

	December 31,		March 31,	
	2015	2016	2016	2017
			(unaudited)	
Stock options	36,635,349	44,322,182	36,066,753	55,294,071
Unvested shares	1,635,430	854,104	1,438,019	698,867
Convertible preferred stock	167,242,376	203,954,077	167,242,376	213,689,844
Convertible preferred stock warrants	2,643,144	2,817,988	2,643,144	2,817,988
Common stock warrants	2,212,918	2,212,918	2,212,918	2,237,918

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Unaudited Pro Forma Net Loss Per Share of Common Stock

Unaudited pro forma basic and diluted loss per share is computed as follows (in thousands, except share and per share data):

	Year Ended December 31, 2016	Three Months Ended March 31, 2017
		(unaudited)
Numerator:		
Net loss	$ 20,589	$ (6,589)
Change in fair value of convertible preferred stock warrant liability		
Pro forma net loss attributable to common shareholder—basic and diluted	$ —	$ —
Denominator:		
Weighted-average shares used to compute basic and diluted net loss per share		
Adjustments to reflect the assumed conversion of convertible preferred stock		
Pro forma weighted average common shares used to compute net loss per share, basic and diluted preferred stock outstanding		
Net loss per share, basic and diluted	$	$

15. Subsequent Events

In February 2017, the Board of Directors approved an amendment of the Term Loan (Note 6) to extend the interest only period by six months to October 1, 2017. In addition, the amendment extended the draw period through January 2018 for the fourth tranche of $5.0 million under the Term Loan upon achieving certain revenue milestones.

Between February and March 2017, the Company completed a second round of the Series 7 convertible preferred stock issuance in a $5.4 million financing and issued a total of 9,735,767 shares at $0.56 per share. Additionally, the initial conversion price per share for the Series 6 convertible preferred stock was amended to $0.8643 per share. All of the other terms and conditions of the Series 6 convertible preferred stock remain the same.

In March 2017, the Board of Directors approved increases to the stock option plan totaling 7,800,000 shares available for grant, an increase to the total authorized common stock to 10,000,000 and an increase to the total authorized convertible preferred stock to 9,931,685.

In March 2017, the Company granted options to purchase a total of 12,044,446 of company common stock at an exercise price of $0.33 per share.

In March 2017, the Company forgave $231,000 of principal and interest due on a promissory note from its Chief Executive Officer. In addition, the Board of Directors approved the forgiveness of the remaining principal balance of $218,000 upon the earlier of an IPO, change of control, or January 1, 2018.

For its financial statements as of December 31, 2016 and for the year then ended, the Company evaluated subsequent events through March 24, 2017, the date on which those financial statements were available to be issued.

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16. Subsequent Events (unaudited)

In May 2017, the Company granted options to purchase a total of 520,000 of company common stock at an exercise price of $0.38 per share.

For its interim financial statements as of March 31, 2017 and for the three months then ended, the Company evaluated subsequent events through May 24, 2017, the date on which those financial statements were available to be issued.

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Prospectus

Morgan Stanley **BofA Merrill Lynch**

Canaccord Genuity **JMP Securities**

, 2017

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution

The following table sets forth the various expenses expected to be incurred and payable by us in connection with the sale and distribution of our common stock, other than underwriting discounts and commissions. All amounts are estimates except for the Securities and Exchange Commission (SEC) registration fee, the Financial Industry Regulatory Authority (FINRA) filing fee and the Nasdaq Global Market listing fee.

	Payable by us
SEC registration fee	$ *
FINRA filing fee	*
Nasdaq Global Market listing fee	*
Blue sky fees and expenses	*
Accounting fees and expenses	*
Legal fees and expenses	*
Printing and engraving expenses	*
Registrar and transfer agent fees and expenses	*
Miscellaneous fees and expenses	*
Total	$ *

* To be filed by amendment.

Item 14. Indemnification of Directors and Officers

Section 145 of the Delaware General Corporation Law authorizes a court to award, or a corporation's board of directors to grant, indemnity to directors and officers under certain circumstances and subject to certain limitations. The terms of Section 145 of the Delaware General Corporation Law are sufficiently broad to permit indemnification under certain circumstances for liabilities, including reimbursement of expenses incurred, arising under the Securities Act of 1933, as amended, or the Securities Act.

As permitted by the Delaware General Corporation Law, our amended and restated certificate of incorporation and amended and restated bylaws contain provisions relating to the limitation of liability and indemnification of directors and officers. The amended and restated certificate of incorporation provides that our directors will not be personally liable to us or our stockholders for monetary damages for any breach of fiduciary duty as a director, except for liability:

- for any breach of the director's duty of loyalty to us or our stockholders;
- for acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- in respect of unlawful payments of dividends or unlawful stock repurchases or redemptions as provided in Section 174 of the Delaware General Corporation Law; or
- for any transaction from which the director derives any improper personal benefit.

Our amended and restated certificate of incorporation also provides that if Delaware law is amended after the approval by our stockholders of the certificate of incorporation to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of our directors will be eliminated or limited to the fullest extent permitted by Delaware law.

Our amended and restated bylaws provide that we will indemnify our directors and officers to the fullest extent permitted by Delaware law, as it now exists or may in the future be amended, against all expenses and

liabilities reasonably incurred in connection with their service for or on our behalf. Our amended and restated bylaws provide that we shall advance the expenses incurred by a director or officer in advance of the final disposition of an action or proceeding, and permit us to secure insurance on behalf of any director, officer, employee, or other enterprise agent for any liability arising out of his or her action in that capacity, whether or not Delaware law would otherwise permit indemnification.

We intend to enter into indemnification agreements with each of our directors and executive officers and certain other key employees, a form of which is attached as Exhibit 10.1. The form of agreement provides that we will indemnify each of our directors, executive officers and such other key employees against any and all expenses incurred by that director, executive officer, or other key employee because of his or her status as one of our directors, executive officers or other key employees, to the fullest extent permitted by Delaware law, our amended and restated certificate of incorporation and our amended and restated bylaws. In addition, the form agreement provides that, to the fullest extent permitted by Delaware law, we will advance all expenses incurred by our directors, executive officers and other key employees in connection with a legal proceeding.

Reference is made to the underwriting agreement contained in Exhibit 1.1 to this registration statement, indemnifying our directors and officers against limited liabilities. In addition, Section 1.9 of our amended and restated investors' rights agreement, or IRA, contained in Exhibit 10.19 to this registration statement provides for indemnification of certain of our stockholders against liabilities described in our IRA.

We maintain insurance policies that indemnify our directors and officers against various liabilities under the Securities Act and the Exchange Act of 1934, as amended, that might be incurred by any director or officer in his or her capacity as such.

Item 15. Recent Sales of Unregistered Securities

The following sets forth information regarding all unregistered securities sold from January 1, 2012 through March 31, 2017:

(1) On July 25, 2012, we issued and sold an aggregate of $2,000,000 in principal of convertible promissory notes and warrants to two accredited investors, with such convertible promissory notes accruing interest at a rate of 8% per annum. On April 21, 2014, all outstanding principal and unpaid accrued interest in connection with such convertible promissory notes were converted into shares of our Series 5 preferred stock at $0.51 per share.

(2) From April 15, 2014 to June 19, 2015, we issued and sold an aggregate of 59,747,277 shares of our Series 6 preferred stock at $0.92 per share to 31 accredited investors for an aggregate consideration of approximately $54,674,733.

(3) On July 25, 2012, we issued warrants to purchase an aggregate of 988,522 shares of Series 5 preferred stock at an exercise price of $0.51 per share in connection with a bridge loan financing entered into with our investors, Montreux Equity Partners and Skyline Ventures. As of March 31, 2017, the warrants were exercisable for an aggregate of 988,522 shares of Series 5 preferred stock at an exercise price of $0.51 per share until the earliest to occur of (i) their expiration on July 25, 2019, (ii) an initial public offering, or (iii) a corporate transaction.

(4) In connection with the Loan and Security Agreement we entered into with Silicon Valley Bank, or SVB, on July 22, 2013, we issued to each of SVB and Westriver Mezzanine Loans, LLC, or Westriver, a warrant to purchase, in the aggregate, 1,818,182 shares of our common stock at an exercise price of $0.22 per share. As of March 31, 2017, the warrants were exercisable for an aggregate of 1,818,182 shares of common stock at an exercise price of $0.22 per share until their expiration on July 22, 2023. In addition, we issued to SVB a warrant to purchase 395,804 shares of our Series 5 preferred stock at an exercise price of $0.51 per share. As of March 31, 2017, the warrant was exercisable for an aggregate of 395,804 shares of Series 5 preferred stock at an exercise price of $0.51 per share until their expiration on July 22, 2023.

(5) In connection with the Amended and Restated Loan and Security Agreement we entered into with SVB, on November 26, 2014, we issued to each of SVB and Westriver, a warrant to purchase, in the aggregate, 394,736 shares of our common stock at an exercise price of $0.19 per share. As of March 31, 2017, the warrants were exercisable for an aggregate of 394,736 shares of common stock at an exercise price of $0.19 per share until their expiration on November 25, 2024. In addition, we issued to SVB, a warrant to purchase 113,587 shares of our Series 6 preferred stock at an exercise price of $0.92 per share. As of March 31, 2017, the warrant was exercisable for an aggregate of 113,587 shares of Series 6 preferred stock at an exercise price of $0.92 per share until their expiration on November 25, 2024.

(6) In connection with the Loan and Security Agreement, dated October 20, 2015, we entered into with Oxford Finance LLC, or Oxford, and SVB, we issued to each of Oxford and SVB a warrant to purchase, in aggregate (i) 708,120 shares of Series 6 preferred stock at an exercise price of $0.92 per share in October 2015, (ii) 437,111 shares of Series 6 preferred stock at an exercise price of $0.92 per shares in November 2015 and (iii) 174,844 shares of Series 7 preferred stock at an exercise price of $0.56 per share in December 2016. As of March 31, 2017, the above warrants were exercisable for an aggregate of (i) 749,739 shares of our common stock at an exercise price of $0.92 per share until their expiration on October 20, 2025, (ii) 462,801 shares of our common stock at an exercise price of $0.92 per share until their expiration on November 9, 2025 and (iii) 174,844 shares of our common stock at an exercise price of $0.56 per share until their expiration on November 22, 2026, respectively.

(7) From June 2016 to March 2017, we issued and sold an aggregate of 46,447,468 shares of Series 7 preferred stock at $0.56 per share to 21 accredited investors for an aggregate consideration of approximately $25,889,819.

(8) On March 1, 2017, we issued a warrant to purchase 25,000 shares of our common stock with an exercise price of $0.33 per share to a former consultant.

(9) Under our 2008 Stock Plan, we granted options to purchase an aggregate of 122,511,641 shares of our common stock with per share exercise prices ranging from $0.01 to $0.54. Of these, options to purchase (i) 39,911,216 shares have been exercised, (ii) 27,306,354 shares have been cancelled or expired without being exercised and (iii) 55,294,071 shares remain outstanding.

None of the foregoing transactions involved any underwriters, underwriting discounts or commissions, or any public offering. The Registrant believes that each transaction was exempt from the registration requirements of the Securities Act in reliance on the following exemptions:

(1) The transactions set forth in paragraphs (1) through (8) were deemed to be exempt from registration under the Securities Act in reliance upon Section 4(a)(2) of the Securities Act or Regulation D promulgated thereunder as transactions by an issuer not involving any public offering. The recipients of the securities in each of these transactions represented their intentions to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were placed upon the stock certificates issued in these transactions. All recipients made representations to us that such recipient was an “accredited investor,” as defined under Rule 501 of the Securities Act, and that such recipient had adequate information about us or had adequate access, through their relationships with us, to information about us.

(2) The transactions set forth in paragraph (9) were deemed to be exempt from registration under the Securities Act in reliance upon Rule 701 promulgated under Section 3(b) of the Securities Act pursuant to benefit plans and contracts relating to compensation as provided under Rule 701. The recipients of the securities in each of these transactions represented their intentions to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were placed upon the stock certificates issued in these transactions. All recipients had adequate information about us or had adequate access, through their relationships with us, to information about us.

Item 16. Exhibits and Financial Statement Schedules

(a) Exhibits. We have filed the exhibits listed on the accompanying Exhibit Index, which is incorporated herein by reference.

(b) Financial Statement Schedules. All schedules have been omitted because the information required to be presented in them is not applicable or is shown in the financial statements or related notes, which is incorporated herein by reference.

Item 17. Undertakings

The undersigned registrant hereby undertakes to provide to the underwriters at the closing specified in the underwriting agreements certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b) (1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of San Jose, State of California, on the day of , 2017.

SI-BONE, INC.

By: _____

Jeffrey W. Dunn
President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS that each person whose signature appears below constitutes and appoints Jeffrey W. Dunn, Laura A. Francis and Michael A. Pisetsky, and each of them, his or her true and lawful attorneys-in-fact and agents, each with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments, including post- effective amendments, to this registration statement, and any registration statement relating to the offering covered by this registration statement and filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorney-in-fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Name	Title	Date
Jeffrey W. Dunn	President, Chief Executive Officer (*Principal Executive Officer*), and Chairman	, 2017
Laura A. Francis	Chief Financial Officer (*Principal Financial and Accounting Officer*)	, 2017
David P. Bonita, M.D.	Director	, 2017
Timothy E. Davis, Jr.	Director	, 2017
John G. Freund, M.D.	Director	, 2017
Gregory K. Hinckley	Director	, 2017

Name	Title	Date
Karen A. Licitra	Director	, 2017
Mark A. Reiley, M.D.	Director	, 2017
Timothy B. Petersen	Director	, 2017
Keith C. Valentine	Director	, 2017

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EXHIBIT INDEX

Exhibit No.	Description
1.1*	Form of Underwriting Agreement.
3.1†	Restated Certificate of Incorporation of Registrant, as amended.
3.2*	Form of Amended and Restated Certificate of Incorporation of Registrant, to be effective upon closing of this offering.
3.3†	Second Amended and Restated Bylaws of Registrant.
3.4*	Form of Amended and Restated Bylaws of Registrant, to be effective upon closing of this offering.
4.1*	Form of Registrant's Common Stock Certificate.
5.1*	Opinion of Cooley LLP.
10.1*	Form of Indemnity Agreement between the Registrant and each of its directors and executive officers.
10.2*	2008 Stock Plan and forms of agreements thereunder.
10.3*	2017 Equity Incentive Plan and form of agreements thereunder.
10.4*	2017 Employee Stock Purchase Plan and form of agreements thereunder.
10.5	Office Lease Agreement, dated August 9, 2012, by and among the Registrant and the other party thereto, as amended on December 19, 2013, February 27, 2014, February 27, 2015 and June 20, 2016.
10.6	Loan and Security Agreement, dated October 20, 2015, between the Registrant, Oxford Finance LLC, and Silicon Valley Bank, as amended on August 1, 2016 and February 21, 2017.
10.7#	Quality and Manufacturing Agreement, dated April 18, 2016, between the Registrant and Orchid MPS Holdings, LLC and Addendum No. 1 dated March 1, 2017.
10.8#	Manufacturing, Quality and Supply Agreement, dated January 31, 2017, between the Registrant and rms Company.
10.9	Offer Letter Agreement, dated December 15, 2009, between the Registrant and Jeffrey W. Dunn.
10.10	Offer Letter Agreement, dated April 27, 2015, between the Registrant and Laura Francis.
10.11	Severance and Change in Control Agreement dated March 15, 2016, between the Registrant and Laura Francis.
10.12	Amended and Restated Letter Agreement, dated March 1, 2017, between the Registrant and Laura Francis.
10.13	Offer Letter Agreement, dated February 7, 2012, between the Registrant and W. Carlton Reckling.
10.14	Severance and Change in Control Agreement, dated March 15, 2016, between the Registrant and W. Carlton Reckling.
10.15	Letter Agreement, dated January 18, 2017, between the Registrant and W. Carlton Reckling.
10.16	Offer Letter Agreement, dated December 16, 2010, between the Registrant and Scott A. Yerby.
10.17	Severance and Change in Control Agreement dated March 15, 2016, between the Registrant and Scott A. Yerby.
10.18	Offer Letter Agreement, dated June 19, 2016, between the Registrant and Anthony J. Recupero.
10.19	Amended and Restated Investors' Rights Agreement, dated June 2, 2016, by and among the Registrant and the parties thereto.

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Exhibit No.	Description
10.20*	Form of Warrant to Purchase Common Stock dated July 19, 2013.
10.21*	Form of Warrant to Purchase Stock (Series 5 Preferred).
10.22*	Form of Warrant to Purchase Common Stock dated November 26, 2014.
10.23*	Form of Warrant to Purchase Stock (Series 6 Preferred).
10.24*	Form of Warrant to Purchase Stock (Series 7 Preferred).
21.1*	List of Subsidiaries of Registrant.
23.1*	Consent of Cooley LLP (contained in Exhibit 5.1).
23.2*	Consent of PricewaterhouseCoopers LLP, independent registered public accounting firm.
24.1*	Power of Attorney (contained in the signature page to this registration statement).

* To be filed by amendment.
† Previously filed.
# Confidential Treatment Requested.

Exhibit 10.5

OFFICE LEASE AGREEMENT

BETWEEN

FRIT SAN JOSE TOWN AND COUNTRY VILLAGE, LLC, LANDLORD

AND

SI-BONE, INC., TENANT

DATE: 8/09, 2012

OFFICE LEASE AGREEMENT

THIS OFFICE LEASE AGREEMENT (this "Lease") is made this 9th day of August, 2012, by and between FRIT SAN JOSE TOWN AND COUNTRY VILLAGE, LLC, a California limited liability company, by its managing member, STREET RETAIL, INC., a Maryland corporation ("Landlord"), and SI-BONE, INC., a Delaware corporation ("Tenant").

WHEREAS, pursuant to that certain sublease (the "Sublease") by and between Reardon Commerce, Inc. ("Reardon") (successor-in-interest to Ketera Technologies Inc.) (as sublandlord), Tenant (as subtenant) is occupying the Leased Premises (as defined below);

WHEREAS, that certain Office Lease Agreement dated September 14, 2009, by and between Reardon and Landlord is scheduled to expire on December 31, 2012, whereupon Tenant's right to occupy the Leased Premises as a subtenant shall simultaneously terminate; and

WHEREAS, Tenant is desirous of remaining in occupancy of the Leased Premises as a tenant pursuant to the terms of this Lease and Landlord is desirous of leasing the same to Tenant.

NOW, THEREFORE, IN CONSIDERATION of the payments of rents and other charges provided for herein and the covenants and conditions hereinafter set forth, Landlord and Tenant hereby covenant and agree as follows:

ARTICLE I

REFERENCE PROVISIONS, DEFINITIONS AND EXHIBITS

As used in this Lease, the following terms shall have the meanings set forth in Sections 1.01 and 1.02 below.

Section 1.01. Reference Provisions.

A. Leased Premises: The premises located on the second floor (designated as Suite 2200) of the Building described in Section 1.01.J, below, as shown on the floor plan attached hereto as Exhibit A, and consisting of ten thousand six hundred thirteen (10,613) square feet of rentable office space, as determined by Landlord's architect.

B. Term: Four (4) Lease Years.

C. Term Commencement Date: January 1, 2013.

D. Rent Commencement Date: January 1, 2013.

E. Termination Date: December 31, 2016.

F. Minimum Rent:

Lease Year	Annually	Monthly
1/01/2013 to 12/31/2013	$413,907.00	$34,492.25
1/01/2014 to 12/31/2014	$430,463.28	$35,871.94
1/01/2015 to 12/31/2015	$448,293.12	$37,357.76
1/01/2016 to 12/31/2016	$466,122.96	$38,843.58

G. Security Deposit: One Hundred Sixteen Thousand Five Hundred Thirty and 74/100 Dollars ($116,530.74).

H. Rent Payments: Except to the extent Tenant is required to make such payments electronically, in the manner set forth in Section 5.01 of this Lease, Rent payments due herein shall be made payable to Landlord at the following address:

FRIT SAN JOSE TOWN AND COUNTRY VILLAGE, LLC - Property 1668
c/o Federal Realty Investment Trust
P.O. Box 79408
City of Industry, CA 91716-9408

I. Notice Addresses:

TO LANDLORD:
FRIT SAN JOSE TOWN AND COUNTRY VILLAGE, LLC
c/o Federal Realty Investment Trust
1626 East Jefferson Street
Rockville, MD 20852-4041
Attention: Legal Department

TO TENANT:

(prior to taking occupancy)
SI-BONE, INC.
3055 Olin Avenue, Suite 2200
San Jose, CA 95128
Attention: Dan Murray

(following occupancy)
SI-BONE, INC.
3055 Olin Avenue, Suite 2200
Attention: Dan Murray

J. Building: That certain building, including any Common Areas (hereinafter defined) housing the Leased Premises and identified on Exhibit A, within the commercial portion (the “Commercial Portion”) of that certain mixed-use project known as Santana Row (the “Village”) commonly known as Santana Row, located in the City of San Jose, County of Santa Clara, in the State of California. The Village also contains a residential portion (the “Residential Portion”) to be adjacent to and/or above some of the Commercial Portion. The Residential

Portion will be controlled separately from the Commercial Portion and for purposes of this Lease shall not be deemed to be a part of the Commercial Portion. It is understood and agreed that the "Commercial Portion" shall be comprised of all portions of the Village other than the Residential Portion.

K. Parking Spaces: Forty-Two (42)

L. Renewal Options: None.

M. Schedules and Exhibits: The schedules and exhibits listed below are attached to this Lease and are hereby incorporated in and made a part of this Lease.

Exhibit A	Plan
Exhibit A-1	Tenant's Sign
Exhibit B	Intentionally Deleted
Exhibit C	Rules and Regulations
Exhibit D	Tenant's Contractors Rules and Regulations
Addendum I	Asbestos Containing Material

Section 1.02. Definitions.

A. Common Areas: Any existing or future improvements, equipment, areas and/or spaces for the non-exclusive, common and joint use or benefit of Landlord, Tenant and other tenants, occupants and users of the Building or the Commercial Portion. The Common Areas include without limitation sidewalks, roofs, gutters and downspouts, parking areas, access roads, driveways, landscaped areas, service drives and service roads, traffic islands, loading and service areas, stairs, landings, ramps, elevators, escalators, utility and mechanical rooms and equipment, corridors, lobbies, public washrooms, and other similar areas and improvements.

B. Floor Area: When used with respect to the Leased Premises, the number of rentable square feet set forth in Section 1.01.A, above, which the Leased Premises shall be deemed to contain. When used with respect to any other space in the Building or the Commercial Portion, Floor Area shall mean the number of rentable square feet of such space as reasonably determined by Landlord.

C. Interest: A rate per annum of the lesser of (i) twelve percent (12%) or (ii) the maximum permitted by law.

D. Lease Year: Each twelve (12) month period beginning with the Term Commencement Date, and each anniversary thereof, provided the Term Commencement Date occurs on the first day of a month. If the Term Commencement Date occurs on a day other than the first day of a month, then the first Lease Year shall begin on the Term Commencement Date and shall terminate on the last day of the twelfth (12th) full calendar month after the Term Commencement Date. Each subsequent Lease Year shall commence on the date immediately following the last day of the preceding Lease Year and shall continue for a period of twelve (12) full calendar months, except that the last Lease Year of the Term shall terminate on the date this Lease expires or is otherwise terminated.

E. Partial Lease Year: Any period during the Term which is less than a full Lease Year.

F. Operating Year: Intentionally Deleted.

G. Base Year: Intentionally Deleted.

H. Person: An individual, firm, partnership, association, corporation, limited liability company, or any other legal entity.

I. Additional Rent: All sums payable by Tenant to Landlord under this Lease, other than Minimum Rent.

J. Rent: Minimum Rent plus Additional Rent.

K. Tenant's Operating Costs Share: Intentionally Deleted.

L. Tenant's Tax Share: Intentionally Deleted.

M. Base Operating Costs: Intentionally Deleted.

N. Base Taxes: Intentionally Deleted.

O. Building Hours: At least from 7:00 a.m. until 6:00 p.m. on weekdays (excluding holidays).

ARTICLE II

LEASED PREMISES

Landlord demises and leases to Tenant, and Tenant leases and takes from Landlord, the Leased Premises together with the right to use for ingress to and egress from the Leased Premises, in common with others, the Common Areas. Landlord has the exclusive right to (i) use the exterior faces of all perimeter walls of the Building, the roof and all air space above the Building, and (ii) install, maintain, use, repair and replace pipes, ducts, cables, conduits, plumbing, vents, utility lines and wires to, in, through, above and below the Leased Premises and other parts of the Building.

ARTICLE III

TERM

Section 3.01. Term.

The Term shall commence on the Term Commencement Date specified in Section 1.01.C, above, and shall be for the period of time specified in Section 1.01.B, above, and expire on the Termination Date specified in Section 1.01.E, above. Notwithstanding the foregoing, all obligations of the parties, as set forth in this Lease, shall be binding as of the date hereof.

Section 3.02. End of Term.

This Lease shall terminate on the Termination Date without the necessity of notice from either Landlord or Tenant. Upon the Termination Date, Tenant shall quit and surrender to Landlord the Leased Premises, broom-clean, in and the same or better condition as at the beginning of the term, ordinary wear and tear and Casualty (subject to Article XI) and Taking (subject to Article XII) excepted; and shall surrender to Landlord all keys and access cards, if applicable, to or for the Leased Premises.

Section 3.03. Holding Over.

If Tenant fails to vacate the Leased Premises on the Termination Date, Landlord shall have the benefit of all provisions of law respecting the speedy recovery of possession of the Leased Premises (whether by summary proceedings or otherwise). In addition to and not in limitation of the foregoing, occupancy subsequent to the Termination Date ("Holdover Occupancy") shall be a tenancy at will. Holdover Occupancy shall be subject to all terms, covenants, and conditions of this Lease (including those requiring payment of Additional Rent), except that the Minimum Rent for each day that Tenant holds over ("Holdover Minimum Rent") shall be equal to one and one-half (1-1/2) times the per diem Minimum Rent payable in the last Lease Year. Landlord also shall be entitled to recover all damages, including lost business opportunity regarding any prospective tenant(s) for the Leased Premises, suffered by Landlord as a result of Tenant's Holdover Occupancy.

ARTICLE IV

USE AND OPERATION OF THE LEASED PREMISES

Section 4.01. Intentionally Deleted.

Section 4.02. Use.

A. Tenant shall use the Leased Premises solely for general office use, and for no other purpose.

B. Tenant shall comply with all statutes, laws, rules, orders, regulations and ordinances affecting the Leased Premises or relating to the use or occupancy thereof and all the orders or recommendations of any insurance underwriters, safety engineers, and loss prevention consultants as may from time to time be consulted by Landlord. In addition, if Landlord makes any alteration to any part of the Building as a result of any damage or alteration to the Leased Premises caused or made by or on behalf of Tenant or in order to comply with any requirement of any statutes, laws, rules, orders, regulations and ordinances and such requirement is a result of Tenant's particular business or use of the Leased Premises (as opposed to general office use), then Tenant shall reimburse Landlord upon demand for the cost thereof. In no event shall Tenant use the Leased Premises for purposes which are prohibited by zoning or similar laws or regulations, or covenants, conditions or restrictions of record. Tenant acknowledges and agrees it is solely responsible for determining if its business complies with the applicable zoning regulations, and that Landlord makes no representation (explicit or implied) concerning such zoning regulations.

C. Tenant shall, at its sole expense: (i) keep the Leased Premises in a good order and condition consistent with the operation of a first-class office building; (ii) pay before delinquency any and all taxes, assessments and public charges levied, assessed or imposed upon Tenant's business, upon the leasehold estate created by this Lease or upon Tenant's fixtures, furnishings or equipment in the Leased Premises; (iii) not use or permit or suffer the use of any portion of the Leased Premises for any unlawful purpose; (iv) not use the plumbing facilities for any purpose other than that for which they were constructed, or dispose of any foreign substances therein; (v) not place a load on any floor exceeding the floor load per square foot which such floor was designed to carry in accordance with the plans and specifications of the Building, and not install, operate or maintain in the Leased Premises any heavy item of equipment except in such manner as to achieve a proper distribution of weight; (vi) not strip, overload, damage or deface the Leased Premises, or the hallways, stairways, elevators, parking facilities or other public areas of the Building, or the fixtures therein or used therewith, nor permit any hole to be made in any of the same; (vii) not move any furniture or equipment into or out of the Leased Premises except at such reasonable times and in such manner as Landlord may from time to time reasonably designate; (viii) not install or operate in the Leased Premises any electrical heating, air conditioning or refrigeration equipment, or other equipment not shown on approved plans which will increase the amount of electricity required for use of the Leased Premises as general office space (other than ordinary office equipment such as personal computers, printers, copiers and the like) without first obtaining the written consent of Landlord, which shall not be unreasonably withheld; (ix) not install any other equipment of any kind or nature which will or may necessitate any changes, replacements or additions to, or in the use of, the water, heating, plumbing, air conditioning or electrical systems of the Leased Premises or the Building, without first obtaining the written consent of Landlord.

D. In addition to and not in limitation of the other restrictions on use of the Leased Premises set forth in this Section 4.02, Tenant hereby agrees that the following uses of the Leased Premises shall not be considered to be "office use" and shall not be permitted: (1) any use of the Leased Premises by an organization or person enjoying sovereign or diplomatic immunity; (2) any use of the Leased Premises by or for any medical, mental health or dental practice; (3) any use of the Leased Premises by or for an employment agency or bureau; (4) any use of the Leased Premises for classroom purposes (other than internal or, on an infrequent basis, customer training purposes); (5) any use of the Leased Premises by or for any user which distributes governmental or other payments, benefits or information to persons that personally appear at the Leased Premises; (6) any other use of the Leased Premises or any portion of the Building by any user that will attract a volume, frequency or type of visitor or employee to the Leased Premises or any portion of the Building which is not consistent with the standards of a high quality, first-class office building in the general area of the Building or that will in any way impose an excessive demand or use on the facilities or services of the Leased Premises or the Building.

Section 4.03. Intentionally Deleted.

Section 4.04. Signs and Advertising.

Tenant shall not inscribe, paint, affix, or otherwise display any sign, advertisement or notice on any part of the outside or inside of the Building. If the same shall not already be

present, Landlord shall provide, at the cost of Tenant, standard suite entry signage, if applicable, to be affixed at the entrance to the Leased Premises. Landlord shall also prepare and install at Tenant's expense a name plate designating Tenant on the directory for the Building (if any). If any other signs, advertisements or notices are painted, affixed, or otherwise displayed without the prior approval of Landlord, Landlord shall have the right to remove the same, and Tenant shall be liable for any and all costs and expenses incurred by Landlord in such removal. Tenant shall be entitled to retain the use of any signage that it is displaying as of the date of this Lease.

Provided that Tenant is leasing the entire Leased Premises, Tenant shall be entitled, at its sole cost and expense, to install identification signage at the location shown on Exhibit A-1; provided that any such sign shall be (a) permitted by and compliant with Legal Requirements, (b) compliant with Landlord's sign criteria for the Building, (c) reasonably approved in advance by Landlord as to size, materials, design, content, color and method of installation. Tenant shall be responsible for the continued maintenance of such sign to keep the same in a condition keeping with Landlord's standards for the Commercial Portion and shall, upon the expiration or earlier termination of the Lease, remove the same and restore the area affected thereby to the condition that existed prior to Tenant's installation of the same.

ARTICLE V

RENT

Section 5.01. Rent Payable.

A. Commencing on the Rent Commencement Date, Tenant shall pay all Rent to Landlord, without prior notice or demand and without offset, deduction or counterclaim whatsoever, in the amounts, at the rates and times set forth herein, in the manner set forth in this Section 5.01.A. Tenant shall (i) promptly execute any and all agreements and authorizations, and supply any and all information necessary, to authorize Landlord to initiate debit entries ("Auto-Debit Transfers") from Tenant's account to Landlord for such portions of Rent due under this Lease as Landlord may elect to be paid by Auto-Debit Transfer; and (ii) take all actions necessary on Tenant's part to insure that any and all such payments will be received by the Landlord by the dates due as specified in this Lease. Except for the Security Deposit, Landlord initially elects that Minimum Rent shall be paid by Auto-Debit Transfer. Landlord may elect, by giving Notice to Tenant, that additional recurring payments constituting Rent shall be paid by Auto-Debit Transfer pursuant to this Section 5.01.A. All payments of Rent not made by Auto-Debit Transfer shall be made at the place set forth in Section 1.01. or as Landlord may otherwise designate by Notice to Tenant.

B. If Tenant fails to make any payment of Rent by the date such Rent is due, Tenant shall pay Landlord a late payment charge equal to the greater of (i) five percent (5%) of such payment of Rent, or (ii) Twenty Dollars ($20.00) per day from the due date until the date of receipt by Landlord. Payment of such late charge shall not excuse or waive the late payment of Rent. Tenant acknowledges and agrees that such late charge is a reasonable estimate of the damages as a result of Tenant's violations of this Section 5.01.B. and that it would be impracticable or extremely difficult to determine Landlord's actual damages. **Notwithstanding the foregoing, Landlord will not assess the foregoing late charge until Landlord has given**

written notice of such late payment for the first late payment in any twelve (12) month period and after Tenant has not cured such late payment within three (3) days from receipt of such notice (no other notices will be required during the following twelve (12) months for a late charge to be incurred).

C. If Landlord receives two (2) or more checks from Tenant that are dishonored by Tenant's bank, all checks for Rent thereafter shall be bank certified and Landlord shall not be required to accept checks except in such form. Tenant shall pay Landlord any bank service charges resulting from dishonored checks, plus Fifty Dollars ($50.00) for each dishonored check as compensation to Landlord for the additional cost of processing such check.

D. Any payment by Tenant of less than the total Rent due shall be treated as a payment on account. Acceptance of any check bearing an endorsement, or accompanied by a letter stating, that such amount constitutes "payment in full" (or terms of similar import) shall not be an accord and satisfaction or a novation, and such statement shall be given no effect. Landlord may accept any check without prejudice to any rights or remedies which Landlord may have against Tenant.

E. For any portion of a calendar month at the beginning of the Term, Tenant shall pay in advance the pro-rated amount of the Rent for each day included in such portion of the month.

Section 5.02. Payment of Minimum Rent.

Tenant shall pay Landlord the Minimum Rent set forth in Section 1.01.F, above, in equal monthly installments, in advance, commencing on the Rent Commencement Date, and on the first day of each calendar month thereafter throughout the Term. Landlord may, in its sole discretion, elect to apply all or any portion of Minimum Rent to the costs of (i) operating, managing, insuring, maintaining, and repairing the Building or the Commercial Portion, (ii) any governmental or quasi-governmental taxes, fees, charges and assessments applicable to the Building or the Commercial Portion (together with any costs incurred in any tax appeal or negotiation), or (iii) promoting the Building or the Commercial Portion.

ARTICLE VI

COMMON AREAS

Section 6.01. Use of Common Areas.

Tenant shall have a non-exclusive license to use the Common Areas for ingress to and egress from the Leased Premises, subject to the exclusive control and management of Landlord and the rights of Landlord and of other tenants. Tenant shall comply with such rules and regulations as Landlord prescribes regarding use of the Common Areas. Tenant shall not use the Common Areas for any sales or display purposes, or for any purpose which would impede or create hazardous conditions for the flow of pedestrian or other traffic. The Common Areas shall at all times be subject to the exclusive control and management of Landlord.

Section 6.02. Management and Operation of Common Areas.

Landlord shall operate, repair, equip and maintain the Common Areas and shall have the exclusive right and authority to employ and discharge personnel with respect thereto. Without limiting the foregoing, Landlord may (i) use the Common Areas for promotions, exhibits, displays, outdoor seating, food facilities and any other use; (ii) grant the right to conduct sales in the Common Areas; (iii) erect, remove and lease kiosks, planters, pools, sculptures and other improvements within the Common Areas; (iv) enter into, modify and terminate easements and other agreements pertaining to the use and maintenance of the Building or the Village; (v) construct, maintain, operate, replace and remove lighting, equipment, and signs on all or any part of the Common Areas; (vi) provide security personnel; and (vii) restrict parking. Landlord reserves the right at any time and from time to time to change or alter the location, layout, nature or arrangement of the Common Areas or any portion thereof, including but not limited to the arrangement and/or location of entrances, passageways, doors, corridors, stairs, lavatories, elevators, parking areas, and other public areas of the Building or the Village. Landlord shall have the right to close temporarily all or any portion of the Common Areas to such extent as may, in the reasonable opinion of Landlord, be necessary for repairs, replacements or maintenance to the Common Areas, provided such repairs, replacements or maintenance are performed expeditiously and in such a manner so as not to deprive Tenant of access to the Leased Premises. **Landlord shall use commercially reasonable efforts to exercise the foregoing rights in such a manner so as not to unreasonably interfere with Tenant's use of or access to the Leased Premises.**

ARTICLE VII

SERVICES AND UTILITIES

Section 7.01. Services Provided by Landlord.

Landlord shall provide the following facilities and services to Tenant:

A. Electricity for normal lighting purposes and the operation of ordinary office equipment, subject to Section 7.03, below;

B. Normal and usual cleaning and char services after Building Hours each day except on Saturdays, Sundays and legal holidays recognized by the United States Government;

C. Rest room facilities and necessary lavatory supplies, including hot and cold running water at the points of supply, as provided for the general use of all tenants in the Building, and routine maintenance, painting, and electric lighting service for all Common Areas of the Building in such manner as Landlord deems reasonable;

D. During Building Hours, central heating and air conditioning during the seasons of the year when these services are normally and usually furnished based upon standard electrical energy requirements of not more than an average of five (5) watts per square foot of the Leased Premises and a human occupancy of not more than one person for each 150 square feet of rentable area of the Leased Premises. Landlord shall provide the aforesaid services at other times, at Tenant's expense, provided Tenant gives Landlord notice by 1:00 p.m. on weekdays for

after-hour service on the next weekday, by 1:00 p.m. the day before a holiday for service on a holiday, and by 1:00 p.m. on Friday for after-hour service on Saturday or service on Sunday. Such after-hour, holiday or special weekend service shall be charged to Tenant at rates to be calculated by Landlord, which rates shall be given to Tenant on request. While the current rate for such after hours HVAC is Fifty-Five Dollars ($55.00) per floor/per hour, Landlord reserves the right to reasonably adjust, from time to time, the rate at which such services shall be provided. Tenant shall pay for such service, as Additional Rent, within thirty (30) days of receipt of an invoice with respect thereto;

E. Automatically operated elevator service, if applicable;

F. All electric bulbs and fluorescent tubes for building standard light fixtures in the Leased Premises and Common Areas;

G. Two (2) keys to the Leased Premises at no cost to Tenant, all additional keys at the cost of Tenant; and

H. An electronically controlled perimeter access system to the Building's entrance. Landlord shall provide Tenant with two (2) Building key cards at Landlord's expense. Any additional or replacement cards shall be at Tenant's expense. Individual security systems shall be installed by Tenant at Tenant's cost.

Section 7.02. Landlord's Access to Leased Premises.

Landlord shall have access to and reserves the right to inspect, erect, use, connect to, maintain and repair pipes, ducts, conduits, cables, plumbing, vents and wires, and other facilities in, to and through the Leased Premises as and to the extent that Landlord may now or hereafter reasonably deem to be necessary or appropriate for the proper operation and maintenance of the Building (including the servicing of other tenants in the Building) and the right at all times to transmit water, heat, air conditioning and electric current through such pipes, conduits, cables, plumbing, vents and wires and the right to interrupt the same in emergencies without eviction of Tenant or abatement of Rent. Any failure by Landlord to furnish the foregoing services, resulting from circumstances beyond Landlord's reasonable control or from interruption of such services due to repairs or maintenance, shall not render Landlord liable in any respect for damages to either person or property, nor be construed as an eviction of Tenant, nor cause an abatement of Rent hereunder, nor relieve Tenant from any of its obligations hereunder; **provided, however, that, in the event that, (a) any interruption or stoppage of any service Landlord is required hereunder to provide to the Leased Premises and reinstatement of such service is within Landlord's reasonable control, or (b) Landlord shall fail to provide Tenant with access to the Leased Premises, and, in either such event, the condition shall continue for more than five (5) consecutive business days and shall render all or any portion of the Leased Premises untenantable for general office purposes and Tenant shall actually** cease **to conduct business in such portion of the Leased Premises, then, provided no Default exists, the portion of scheduled Rent attributable to such untenantable area shall, commencing on the sixth (6th) business day after receipt from Tenant of written notice that Tenant has experienced such an interruption or stoppage of services and has ceased the use thereof, abate until the earlier of the date that (i) Tenant again uses such portion of the Leased Premises, or (ii) such portion of the Leased Premises is again tenantable.** If any public utility

or governmental body shall require Landlord or Tenant to restrict the consumption of any utility or reduce any service for the Leased Premises or the Building, Landlord and Tenant shall comply with such requirements, whether or not the utilities and services referred to in this Article VII are thereby reduced or otherwise affected, without any liability on the part of Landlord to Tenant or any other person or any reduction or adjustment in Rent payable hereunder. Landlord and its agents shall be permitted reasonable access to the Leased Premises for the purpose of installing and servicing systems within the Leased Premises deemed reasonably necessary by Landlord to provide the services and utilities referred to in this Article VII to Tenant and other tenants in the Building.

Section 7.03. Electrical Energy.

Landlord shall be under no obligation to furnish electrical energy to Tenant in amounts greater than needed for lighting and normal and customary items of equipment for general office purposes (i.e., not more than an average of five (5) watts per square foot of the Leased Premises), and Tenant shall not install or use within the Leased Premises any electrical equipment, appliance or machine which shall require amounts of electrical energy exceeding such standard wattage provided for the Building, unless the installation and use of such additional electrical equipment, appliance, or machine has been reasonably approved by Landlord, which approval may be conditioned upon the payment by Tenant, as Additional Rent, of the cost of the additional electrical energy and modifications to the Building's electrical system required for the operation of such electrical equipment, appliance or machine. Landlord shall have the right to charge Tenant for the cost of its electricity consumption beyond Building Hours or in excess of five (5) watts per square foot of rentable area of the Leased Premises and for the cost of any additional wiring or other improvements to the Building as may be occasioned by or required as a result of any such excess use. In the event of any excessive consumption of any utilities (including without limitation any consumption beyond Building Hours), Landlord shall be entitled to require that Tenant install in the Leased Premises (at Tenant's cost and in a location approved by Landlord) meters or submeters to measure Tenant's utility consumption for the Leased Premises or for any specific equipment causing excess consumption, as Landlord shall require; in which case, Tenant shall maintain in good order and repair (and replace, if necessary) such meters or submeters. If separate meters are installed for measuring Tenant's use of any utilities, then charges for such utilities shall be paid directly by Tenant to the appropriate utility company. If submeters are installed for measuring Tenant's consumption of any utilities, Tenant shall pay the costs of the same to Landlord as Additional Rent, within thirty (30) days of its receipt of a bill therefor based on such submeter readings.

ARTICLE VIII

INDEMNITY AND INSURANCE

Section 8.01. Indemnity.

A. Tenant shall indemnify, defend and hold Landlord, its lessors, partners and members, and their respective shareholders, partners, members, trustees, agents, representatives, directors, officers, employees and Mortgagee(s) (collectively, "Landlord's Indemnitees") harmless from and against all liabilities, obligations, damages, judgments, penalties, claims, costs, charges and expenses, including reasonable architects' and attorneys' fees, which may be

imposed upon, incurred by, or asserted against any of Landlord's Indemnitees by a third party and arising, directly or indirectly, out of or in connection with (i) Tenant's breach of its obligations under this Lease, (ii) the acts or negligence of Tenant or any Person claiming by, through or under Tenant, or the agents, contractors, employees, servants or licensees of any such Person, in, on or about the Leased Premises, the Building or the Village, or (iii) the use or occupancy during the Term (a) of the Leased Premises, or (b) by Tenant of the Building or the Village. Tenant shall not be obligated to indemnify Landlord's Indemnitees against loss, liability, damage, cost or expense arising out of a claim for which Tenant is released from liability pursuant to Section 8.07 below, or a claim arising out of the willful misconduct or sole negligent acts or omissions of Landlord or its agents, employees or contractors.

B. Landlord shall indemnify, defend and hold Tenant, its partners, officers, shareholders, members, trustees, principals, agents, directors and employees (collectively "Tenant's Indemnitees") harmless from and against all liabilities, obligations, damages, penalties, claims, costs, charges and expenses, including reasonable architects' and attorneys' fees, which may be imposed upon, incurred by, or asserted against any of the Tenant's Indemnitees by a third party and arising, directly or indirectly, out of or in connection with (i) Landlord's breach of its obligations under the Lease, (ii) the acts or negligence of Landlord or any person claiming by, through or under Landlord, or the agents, contractors, servants, employees and/or licensees of any such person in, on or about the Common Areas, and (iii) the use of the Common Areas. Landlord shall not be obligated to indemnify Tenant's Indemnitees against loss, liability, damage, cost or expense arising out of a claim for which Landlord is released from liability pursuant to Section 8.07 below, or a claim arising out of the willful misconduct or sole negligent acts or omissions of Tenant or its agents, employees or contractors.

Section 8.02. Landlord Not Responsible for Acts of Others.

Landlord shall not be liable to Tenant, nor to those claiming through Tenant, for any loss, theft, injury, liability or damage of, for or to Tenant's business and/or property which may result from: (a) any act, omission, fault or negligence of other tenants or licensees, their agents, employees or contractors, or any other persons (including occupants of adjoining or contiguous buildings, owners of adjacent or contiguous property, or the public), (b) **except to the extent caused by the gross negligence or willful misconduct of Landlord (but subject to the provisions of Section 8.07)** the breaking, bursting, backup, stoppage or leaking of electrical or phone/internet cables and wires, or water, gas, sewer, HVAC or steam pipes or ducts serving the Leased Premises and/or the Building, (c) water, snow or ice being upon the Building or coming into the Leased Premises, and/or (d) earthquake or other act of God. Tenant acknowledges that its use of the Leased Premises and the Building is at its own risk.

Section 8.03. Tenant's Insurance.

Commencing on the Term Commencement Date and at all times thereafter, Tenant shall carry and maintain:

A. Commercial General Liability Insurance (a non-deductible policy with ISO occurrence form or equivalent) naming Tenant as the named insured and Landlord and (at Landlord's request) Landlord's mortgagee (and managing agent), if any, Landlord's property manager, if any, and Federal Realty Investment Trust ("FRIT"), if FRIT is not the Landlord

under this Lease, as additional insureds, providing an Additional Insured – Managers or Lessors of Premises Endorsement (#CG-20-11-01-96 or equivalent) protecting Tenant and the additional insureds against liability for bodily injury, death and property damage with respect to liability arising out of the ownership, use, occupancy or maintenance of the Leased Premises and all areas appurtenant thereto, with a minimum combined single limit of Two Million Dollars ($2,000,000.00) and a general aggregate limit of Four Million Dollars ($4,000,000.00). If the policy also covers locations other than the Leased Premises, the policy shall include a provision to the effect that the aggregate limit of Four Million Dollars ($4,000,000.00) shall apply separately at the Leased Premises. These policy limits may be obtained through any combination of primary and excess insurance. If Tenant sells, serves or distributes alcoholic beverages in or on the Leased Premises, then such General Liability Insurance shall include Liquor Legal Liability coverage at the same minimum limits of liability as shown above. If Tenant sells, serves or distributes food in or on the Leased Premises, then such General Liability Insurance shall include products liability with a combined single limit of Two Million Dollars ($2,000,000.00) per occurrence and an aggregate limit of Two Million Dollars ($2,000,000.00).

B. “All Risks” or “Special Causes of Loss Form” property insurance covering all of Tenant’s Property and Leasehold Improvements (as both are defined in Section 9.05. below), and those portions of the Leased Premises that Tenant is responsible to repair pursuant to Section 10.02. below, and written for at least the full replacement cost with a deductible of not more than. Five Thousand Dollars ($5,000.00).

C. Plate glass insurance covering all plate glass in the Leased Premises. Tenant shall be and remain liable for the repair and restoration of all such plate glass.

D. Comprehensive boiler and machinery coverage, including electrical apparatus, if applicable, with a deductible of not more than Five Thousand Dollars ($5,000.00).

E. Business interruption, loss of income and extra expense insurance in amounts sufficient to pay for Tenant’s expenses and lost income.

F. Employer’s liability insurance with a minimum of Five Hundred Thousand Dollars ($500,000.00) as required by the jurisdiction in which the Leased Premises is located, and worker’s compensation insurance.

Notwithstanding anything set forth above, all dollar limits specified in this Section 8.03. shall be increased from time to time, as reasonably necessary upon Notice from Landlord, to effect economically equivalent insurance coverage, or coverage deemed adequate in light of then existing circumstances and customarily required for similar tenants leasing similar premises. Such increase may not be invoked more than once during the term.

Section 8.04. Tenant’s Contractor’s Insurance.

Tenant shall cause any contractor performing work on the Leased Premises to obtain, carry and maintain, at no expense to Landlord: (i) employer’s liability insurance with a minimum of Five Hundred Thousand Dollars ($500,000.00) as required by the jurisdiction in which the Commercial Portion is located, and worker’s compensation insurance; (ii) builder’s risk insurance with a deductible no greater than Ten Thousand Dollars ($10,000.00), in the amount of

the full replacement cost of Tenant's Property and Leasehold Improvements; (iii) Commercial General Liability Insurance, including completed operations and contractual liability coverage, providing on an occurrence basis a minimum combined single limit of Three Million Dollars ($3,000,000.00) per occurrence (and Five Million Dollars ($5,000,000.00) general aggregate, if applicable), and if the policy also covers projects other than the Leased Premises, the policy shall include a provision to the effect that the aggregate limit of Three Million Dollars ($3,000,000.00) shall apply separately at the Leased Premises; and (iv) business automobile liability insurance including the ownership, maintenance and operation of the automotive equipment, owned, hired, and non-owned coverage with a combined single limit of not less than One Million Dollars ($1,000,000.00) for bodily injury and property damage. If the contractor fails to acquire such insurance, Tenant shall provide such insurance (except worker's compensation insurance and employer's liability).

Section 8.05. Policy Requirements.

Any company writing any insurance which Tenant is required to maintain or cause to be maintained under Sections 8.03 and 8.04 as well as any other insurance pertaining to the Leased Premises or the operation of Tenant's business therein (all such insurance being referred to as "Tenant's Insurance") shall at all times be licensed and qualified to do business in the jurisdiction in which the Leased Premises are located and shall have received an A-VII or better rating by the latest edition of A.M. Best's Insurance Rating Service. All of Tenant's Insurance may be carried under a blanket policy covering the Leased Premises and any other location of Tenant, if (i) the coverage afforded Landlord and any designees of Landlord shall not be reduced or otherwise adversely affected, and (ii) such blanket policy allocates to the properties and liabilities to be insured under this Article VIII an amount not less than the amount of insurance required to be covered pursuant to this Article VIII, so that the proceeds of such insurance shall not be less than the proceeds that would be available if Tenant were insured under a unitary policy. Tenant's Commercial General Liability policies shall name Landlord and/or its designees as additional insured, and Tenant's property insurance policies shall name Landlord and/or its designees as loss payee for Leasehold Improvements and betterments. All policies of Tenant's Insurance shall contain endorsements requiring the insurer(s) to give to all additional insureds at least thirty (30) days' advance Notice of any reduction, cancellation, termination or non-renewal of said insurance (or Notice within ten (10) days of a failure to pay any premium). Tenant shall be solely responsible for payment of premiums for all of Tenant's Insurance. Tenant shall deliver to Landlord at least fifteen (15) days prior to the time Tenant's Insurance is first required to be carried by Tenant, and upon renewals at least ten (10) days prior to the expiration of the term of any such insurance policy, a certificate of insurance of all policies of Tenant's Insurance. The limits of Tenant's Insurance shall not limit Tenant's liability under the Lease, at law, or in equity. All policies of Tenant's Insurance shall be primary and noncontributory with respect to Landlord's liability arising out of the act or omission of Tenant, its officers, agents, contractors, employees, or, while upon the Leased Premises, invitees. If Tenant fails to deposit a certificate of insurance with Landlord (which shows compliance with the provisions of this Article VIII) within three (3) days after Notice from Landlord, Landlord may acquire such insurance, and Tenant shall pay Landlord the amount of the premium applicable thereto within five (5) days following Notice from Landlord.

Section 8.06. Increase in Insurance Premiums.

Tenant shall not keep or do anything in the Leased Premises that will: (i) cause an increase in the rate of any insurance on the Building; (ii) violate the terms of any insurance coverage on the Building carried by Landlord or any other tenant; (iii) prevent Landlord from obtaining such policies of insurance acceptable to Landlord or any Mortgagee of the Building; or (iv) violate the rules, regulations or recommendations of Landlord's insurers, loss prevention consultants, safety engineers, the National Fire Protection Association, or any similar body having jurisdiction over the Leased Premises. If Tenant does so, Tenant shall pay to Landlord upon demand the amount of any increase in any such insurance premium. In determining the cause of any increase in insurance premiums, the schedule or rate of the organization issuing the insurance or rating procedures shall be conclusive evidence of the items and charges which comprise the insurance rates and premiums on such property.

Section 8.07. Waiver of Right of Recovery.

Except for the indemnification for Hazardous Substances as set forth in Section 17.23., neither Landlord nor Tenant shall be liable to the other party or to any insurance company (by way of subrogation or otherwise) insuring such other party for loss or damage to any building, structure or other tangible property, or any resulting loss of income, or losses under worker's compensation laws or benefits, even though such loss or damage might have been occasioned by the negligence of Landlord or Tenant, or their respective agents or employees; provided, however, the mutual release contained herein shall not apply to damage to property or loss of income caused by the willful misconduct of such other party. This Section 8.07. shall not limit or supersede the indemnification to third parties as provided in Section 8.01. The provisions of this Section 8.07. shall apply to any Transferee pursuant to Article XV of this Lease, and the Transferee shall expressly agree in writing to be bound by the provisions of this Section 8.07. (as if such Transferee were Tenant hereunder) for the benefit of Landlord.

Section 8.08. Landlord's Insurance.

Landlord shall maintain (i) "all risk" or "special causes of loss form" property insurance insuring the structural components of the Building, to the extent of eighty percent (80%) of the full replacement value of such Building, and insuring the Common Areas of the Building, and (ii) Commercial General Liability Insurance (ISO form or equivalent) covering the Common Areas of the Building. Provided the insurance coverage carried by Landlord pursuant to (i) above shall not be reduced or otherwise adversely affected, all of Landlord's insurance may be carried under a blanket policy covering the Building and any other property owned, leased or operated by Landlord or its affiliates, provided the insurance requirements in this Lease are fulfilled and the insurance coverage is not diminished in any way.

ARTICLE IX

CONSTRUCTION AND ALTERATIONS

Section 9.01. Condition of Leased Premises Upon Delivery.

Tenant acknowledges: (i) it has inspected the Leased Premises; (ii) it accepts the Leased Premises, and all improvements, betterments and equipment "AS IS," with no representation or

warranty, express or implied, by Landlord as to the condition or suitability of the Leased Premises or of the Building for Tenant's purpose; and (iii) Landlord has no obligation to improve or repair the Leased Premises, or the Building, except as specifically set forth in this Lease.

Notwithstanding the foregoing, not later than the thirtieth (30th) day following the Term Commencement Date, Landlord agrees to have the (a) carpet within the Leased Premises professionally cleaned, and (b) paint on the interior of the Leased Premises touched up where Landlord reasonably determines the same is required. Tenant acknowledges that the foregoing work shall be performed while Tenant is in occupancy and the parties agree to reasonably cooperate in the scheduling and/or staging of the same to permit Tenant to continue business operations during the performance of the same; provided, however, that Landlord shall perform the carpet cleaning after business hours or on weekends.

Section 9.02. Tenant Improvements.

Landlord and Tenant, at their respective sole cost and expense, agree to provide all improvements to the Leased Premises in accordance with their respective obligations set forth in Exhibit B, if any.

Section 9.03. Alterations.

A. Tenant shall not make or cause to be made any alterations, additions, renovations, improvements or installations in or to the Leased Premises without Landlord's prior consent, which such consent **shall not be unreasonably withheld, unless Landlord reasonably determines that the proposed Alterations could (i) affect the exterior or common areas of the Building or adversely affect the Building's structure or safety; (ii) adversely affect in any respect the electrical, plumbing, fire/life/safety or mechanical (including HVAC) systems of the Building or the functioning thereof; (iii) be or become visible from the exterior of the Leased Premises or the Building; or (iv) interfere with the operation of the Building or the provision of services or utilities to other tenants in the Building.** Tenant shall in no event make or permit to be made any alterations, modification, substitution or other change to the mechanical, electrical, plumbing, HVAC and sprinkler systems within or serving the Leased Premises. If Landlord consents to any such alterations, additions, renovations, improvements or installations by Tenant, Landlord shall have the right (but not the obligation) in its sole discretion to manage or supervise such work and Tenant shall pay to Landlord a reasonable fee to reimburse Landlord for overhead and **administrative** costs and expenses incurred in connection with the management or supervision of such work by Landlord.

B. **Notwithstanding anything contained in this Section 9.03, Tenant shall have the right to make Permitted Alterations (hereinafter defined) in the Leased Premises, without Landlord's consent (but with twenty (20) days prior written notice (the "Permitted Alterations Notice"), which notice shall contain a description of the Permitted Alterations proposed to be undertaken by Tenant and state that such Alterations are Permitted Alterations). A Permitted Alteration shall mean any cosmetic Alterations in the Leased Premises that could not (i) affect the exterior or common areas of the Building or the structure or safety of the Building; (ii) affect the electrical, plumbing, fire/life/safety or mechanical systems of the Building or the functioning thereof; (iii) be or become visible**

from the exterior of the Leased Premises or Building; (iv) interfere with the operation of the Building or the provision of services or utilities to other tenants in the Building; (v) cost more than Twenty Thousand Dollars ($20,000.00) in any twelve (12) month period; and (vi) require a permit. In the event that, within ten (10) days after receiving the Permitted Alterations Notice, Landlord determines, in its reasonable discretion, that the proposed Alterations are not Permitted Alterations, and so notifies Tenant, Tenant shall apply for Landlord's consent for such Alterations in accordance with the provisions of this Article IX.

Section 9.04. Work Requirements.

All work performed by Tenant in the Leased Premises shall be performed (i) promptly and in a workmanlike manner with first-class materials; (ii) by duly qualified or licensed persons; (iii) without interference with, or disruption to, the operations of Landlord or other tenants or occupants of the Building; (iv) in accordance with (a) plans and specifications approved in writing in advance by Landlord (as to both design and materials) which such approval may be granted or withheld in Landlord's sole and absolute discretion, except as otherwise provided in Section 9.03, above, and (b) all applicable governmental permits, rules and regulations; and (v) in conformance with any rules and regulations therefor (including those shown on Exhibit D, attached hereto).

Section 9.05. Ownership of Improvements.

All present and future alterations, additions, renovations, improvements and installations made to the Leased Premises, including without limitation the Tenant Work (if any) ("Leasehold Improvements"), shall be deemed to be the property of Landlord when made and, upon Tenant's vacation or abandonment of the Leased Premises, unless Landlord directs otherwise **at the time Tenant requests Landlord's consent to the applicable Leasehold Improvements (or, as to Permitted Alterations, at any time following the installation thereof),** shall remain upon and be surrendered with the Leased Premises in good order, condition and repair. **Tenant shall not be required to remove any Leasehold Improvements installed prior to the date of this Lease.** All movable goods, inventory, office furniture, equipment, trade fixtures and other movable personal property belonging to Tenant that are not permanently affixed to the Leased Premises, shall remain Tenant's property ("Tenant's Property") and shall be removable by Tenant at any time, provided that Tenant (i) is not in violation of any provision of this Lease, and (ii) repairs any damage to the Leased Premises or the Building caused by the removal of any of Tenant's Property.

Section 9.06. Removal of Tenant's Property.

Tenant shall remove all of Tenant's Property (and any Leasehold Improvements as Landlord may direct) prior to the Termination Date or the termination of Tenant's right to possession. Tenant shall repair any damage to the remaining Leasehold Improvements, the Leased Premises or any other portion of the Building caused by such removal. If Tenant fails to timely remove said items, they shall be considered as abandoned and shall become the property of Landlord, or Landlord may remove and dispose of them.

Section 9.07. Mechanic's Liens.

No mechanic's or other lien shall be allowed against the Building as a result of Tenant's improvements to the Leased Premises. Tenant shall give Landlord written notice not less than thirty (30) days prior to commencement of any work in, on or about the Leased Premises, and Landlord shall have the right to record and post notices of non-responsibility in or on the Leased Premises.

Tenant shall promptly pay all Persons furnishing labor, materials or services with respect to any work performed by Tenant on the Leased Premises. If any mechanic's or other lien shall be filed against the Leased Premises or the Building by reason of work, labor, services or materials performed or furnished, or alleged to have been performed or furnished, to or for the benefit of Tenant, Tenant shall cause the same to be discharged of record or bonded to the satisfaction of Landlord within ten (10) days subsequent to the filing thereof. If Tenant fails to discharge or bond any such lien, Landlord, in addition to all other rights or remedies provided in this Lease, may bond said lien or claim (or pay off said lien or claim if it cannot with reasonable effort be bonded) without inquiring into the validity thereof and all expenses incurred by Landlord in so discharging said lien, including reasonable attorney's fees, shall be paid by Tenant to Landlord as Additional Rent on ten (10) days' demand.

ARTICLE X

REPAIRS, MAINTENANCE, AND LANDLORD'S ACCESS

Section 10.01. Repairs by Landlord.

Landlord covenants to keep, maintain, manage and operate the Common Areas in manner consistent with the operation of office buildings of a similar size, location and age of the Building. Subject to the terms of this Lease, Landlord agrees to maintain the roof and roof membrane, the exterior and structural portions of the Building, and the central or base Building mechanical, electrical and plumbing systems (specifically excluding any supplemental HVAC system, sprinkler system or any other system exclusively servicing the Leased Premises). If any such repairs are necessitated by Tenant's breach of this Lease, or by any act or negligence of Tenant, its agents, employees, assigns, concessionaires, contractors or invitees, Tenant shall reimburse to Landlord the reasonable cost incurred in completing such repairs within five (5) days of demand therefor.

Section 10.02. Repairs and Maintenance by Tenant.

Throughout the Term Tenant shall maintain the Leased Premises, including any Leasehold Improvements, alterations or other improvements therein, in good order, condition and repair. Tenant shall not cause or permit any waste, damage or injury to the Leased Premises or the Building. Tenant's obligations shall include, without limitation, the repair and replacement of appliances and equipment installed specifically for Tenant such as refrigerators, disposals, computer room, air conditioning, sinks and special plumbing fixtures, special fixtures and bulbs for those fixtures, and any non-standard outlets.

Section 10.03. Inspections, Access and Emergency Repairs by Landlord.

Upon reasonable prior notice and without materially adversely affecting Tenant's business within the Leased Premises, Tenant shall permit Landlord to enter all parts of the Leased Premises to inspect the same. In the event of an emergency, Landlord may enter the Leased Premises at any time and make such inspection and repairs as Landlord deems necessary, at the risk and for the account of Tenant.

ARTICLE XI

CASUALTY

Section 11.01. Fire or Other Casualty.

Tenant shall give prompt notice to Landlord in case of fire or other casualty ("Casualty") to the Leased Premises or the Building.

Section 11.02. Right to Terminate.

A. If (i) the Building is damaged to the extent of more than fifty percent (50%) of the cost of replacement thereof; (ii) during the last two (2) Lease Years or in any Partial Lease Year at the end of the Term, the Leased Premises are damaged to the extent of more than twenty-five percent (25%) of the cost of replacement thereof; or (iii) the Leased Premises are damaged to the extent of fifty percent (50%) or more of the cost of replacement thereof (i.e., more than fifty percent (50%) of the Floor Area of the Leased Premises immediately before such Casualty is rendered untenantable) and Landlord determines that such damage cannot be repaired within one hundred eighty (180) days from the date of such occurrence; then Landlord may terminate this Lease by notice to Tenant within sixty (60) days after the date of the Casualty. If Landlord so terminates this Lease then the Termination Date shall be the date set forth in the notice to Tenant, which date shall not be less than sixty (60) days nor more than ninety (90) days after the giving of said notice. The "cost of replacement" shall be determined by the company or companies insuring Landlord against the Casualty, or, if there shall be no such determination, by a qualified Person selected by Landlord to determine such "cost of replacement."

B. If during the last two (2) Lease Years or in any Partial Lease Year at the end of the Term either (i) the Leased Premises are damaged to the extent of twenty-five percent (25%) or more of the cost of replacement thereof, or (ii) more than fifty percent (50%) of the Floor Area of the Leased Premises immediately before such Casualty is rendered untenantable and Landlord determines that such damage cannot be repaired within one hundred eighty (180) days from the date of such occurrence, Tenant may terminate this Lease by giving Landlord sixty (60) days' prior notice given within sixty (60) days after the date of the Casualty. If the Casualty shall render the Leased Premises untenantable or wholly inaccessible, in whole or in part, all Rent shall abate proportionately during the period of such untenantability, computed on the basis of the ratio which the amount of Floor Area of the Leased Premises rendered untenantable bears to the total Floor Area of the Leased Premises. Such abatement shall terminate on the earlier of (i) thirty (30) days after the date any such repair and restoration work is substantially completed by Landlord, or (ii) the date Tenant reopens for business in the portion of the Leased Premises previously rendered untenantable; **provided, however, that in the event that the entrance to the Leased Premises is damaged to the extent that the remainder of the Leased Premises is**

not accessible for Tenant's use, the remainder of the Leased Premises shall accordingly be deemed to be untenantable for the purposes of calculating the Rent abatement. Except to the extent specifically set forth in this Section 11.02, neither the Rent nor any other obligations of Tenant under this Lease shall be affected by any Casualty, and Tenant hereby specifically waives all other rights it might otherwise have under law or by statute, including, without limitation, California Civil Code Sections 1932 and 1933.

Section 11.03. Landlord's Duty to Reconstruct.

Subject to Landlord's ability to obtain the necessary permits and the availability of insurance proceeds, Landlord shall repair the Leased Premises (excluding Tenant's Property, which shall be Tenant's obligation to repair, restore or replace) to a substantially similar condition as existed prior to the Casualty; provided, Landlord shall not be required to expend an amount in excess of the insurance proceeds received by Landlord (plus the amount of any deductible) in performing such repairs or reconstruction.

Section 11.04. Tenant's Duty to Reconstruct.

Tenant shall promptly commence and diligently pursue to completion the redecorating and refixturing of the Leased Premises, including repairing, restoring or replacing Tenant's Property, to a substantially similar condition as existed prior to the Casualty. Tenant shall reopen for business in the Leased Premises as soon as practicable after the occurrence of the Casualty.

ARTICLE XII

CONDEMNATION

Section 12.01. Taking of Leased Premises.

A. If more than twenty-five percent (25%) of the Floor Area of the Leased Premises shall be appropriated or taken under the power of eminent domain, or conveyance shall be made in anticipation or in lieu thereof ("Taking"), either party may terminate this Lease as of the effective date of the Taking by giving notice to the other party of such election within thirty (30) days prior to the date of such Taking.

B. If there is a Taking of a portion of the Leased Premises and this Lease is not terminated pursuant to Section 12.01.A, above, then (i) as of the effective date of the Taking, this Lease shall terminate only with respect to the portion of the Leased Premises taken; (ii) after the effective date of the Taking, the Rent shall be reduced by multiplying the same by a fraction, the numerator of which shall be the Floor Area taken and the denominator of which shall be the Floor Area of the Leased Premises immediately prior to the Taking; and (iii) as soon as reasonably possible after the effective date of the Taking, Landlord shall, to the extent feasible, restore the remaining portion of the Leased Premises to a complete unit of a similar condition as existed prior to any work performed by Tenant, provided, however, Landlord shall not be required to expend more on such alteration or restoration work than the condemnation award received and retained by Landlord for the Leased Premises.

Section 12.02. Taking of Building.

If there is a Taking of any portion of the Building so as to render, in Landlord's judgment, the remainder unsuitable for use as an office building, Landlord shall have the right to terminate this Lease upon thirty (30) days' notice to Tenant. Provided Tenant is not then in violation of any provision of this Lease, Tenant shall receive a proportionate refund from Landlord of any Rent Tenant paid in advance.

Section 12.03. Condemnation Award.

All compensation awarded for a Taking of any part of the Leased Premises (including the Leasehold Improvements) or a Taking of any other part of the Building shall belong to Landlord. Tenant hereby assigns to Landlord all of its right, title and interest in any such award. Tenant shall have the right to collect and pursue any separate award as may be available under local procedure for moving expenses or Tenant's Property, so long as such award does not reduce the award otherwise belonging to Landlord as aforesaid.

The rights contained in this Article XI and Article XII shall be Tenant's sole and exclusive remedy in the event of a Casualty or Taking. Tenant waives the provisions of Sections 1265.130 and 1265.150 of the California Code of Civil Procedure and the provisions of any successor or other law of like import.

ARTICLE XIII

PARKING

Section 13.01. Parking Rights.

Provided that Tenant is occupying the Leased Premises, Tenant shall have the right to use, at no additional cost, the number of monthly parking space contracts set forth in Subsection 1.01.K, above, on an non-exclusive and unreserved basis and on the terms and conditions established by the Building garage operator(s) from time to time. While all parking spaces shall be on a non-exclusive and unreserved basis, the permit holders shall all be required, as a condition of their permit, to park no lower than the second (2nd) level in Parking Garage 3B and any failure to so adhere may result in the violative vehicle(s) being towed at the owner's expense. Notwithstanding the forgoing, during the Term of the Lease, Landlord shall have the right to change the location of the Parking Spaces from Parking Garage 3B to another location in the Village. Landlord reserves the right, from time to time, to temporarily restrict access to the parking areas to perform maintenance thereof; provided, however, that Landlord agrees that such restriction shall be on a temporary basis and that Tenant shall, in any event, be provided with alternate parking elsewhere in the Village during any such periods of restriction. Notwithstanding the foregoing, in the event that Tenant or its assignee is leasing less than the entire Leased Premises, there shall be a ratable reduction of Parking Spaces available to Tenant.

Section 13.02. Parking Rules and Conditions.

Use of the Building garage and/or Parking Garage 3B by Tenant, its employees, agents and business invitees is subject to the reasonable rules and regulations of Landlord and/or the Building garage and/or Parking Garage 3B operator as may be reasonably promulgated or

amended by Landlord and/or the Building and/or Parking Garage 3B garage operator from time to time. All monthly parking space contracts obtained by Tenant are non-transferable other than to permitted sublessees and assignees hereunder.

ARTICLE XIV

SUBORDINATION AND ATTORNMENT

Section 14.01. Subordination.

Tenant's rights under this Lease are subordinate to (i) all present and future ground or underlying leases affecting all or any part of the Building, and (ii) any easement, license, mortgage, deed of trust or other security instrument now or hereafter affecting the Building (those documents referred to in (i) and (ii) above being collectively referred to as a "Mortgage" and the Person or Persons having the benefit of same being collectively referred to as a "Mortgagee"). Tenant's subordination provided in this Section 14.01 is self-operative and no further instrument of subordination shall be required. **Notwithstanding anything to the contrary contained herein, Landlord hereby represents that as of the date of this Lease there is no existing mortgage or deed of trust affecting the Building. Tenant shall not be required to subordinate this Lease to any future mortgage or deed of trust placed against the Building unless the mortgagee shall agree to honor and abide by** the **terms of the Lease and give Tenant a non-disturbance agreement providing in effect that Tenant's right to use and occupy the Leased Premises will not be deprived as a result of such foreclosure so long as Tenant shall not be in Default, whereupon Tenant will attorn to the future mortgagee upon foreclosure of the mortgage.**

Section 14.02. Attornment.

If any Person succeeds to all or part of Landlord's interest in the Leased Premises, whether by purchase, foreclosure, deed in lieu of foreclosure, power of sale, termination of lease or otherwise, Tenant shall, without charge, attorn to such successor-in-interest upon request from Landlord.

Section 14.03. Estoppel Certificate.

Each of Landlord and Tenant, within fourteen (14) days after receiving notice from, and without charge or cost to, the other, shall certify by written instrument to the other or any other Person designated by Landlord or Tenant: (i) that this Lease is in full force and effect and unmodified (or if modified, stating the modification); (ii) the dates, if any, to which each component of the Rent due under this Lease has been paid; (iii) whether Landlord or Tenant has failed to perform any covenant, term or condition under this Lease, and the nature of Landlord's or Tenant's failure, if any; and (iv) such other relevant information as Landlord or Tenant may request pertaining to the status of this Lease.

Section 14.04. Quiet Enjoyment.

Landlord covenants that it has full right, power and authority to enter into this Lease and that Tenant, upon performing all of Tenant's obligations under this Lease and timely paying all Rent, shall peaceably and quietly have, hold and enjoy the Leased Premises during the Term without hindrance, ejection or molestation by any Person lawfully claiming by, through or under Landlord.

ARTICLE XV

ASSIGNMENT AND SUBLETTING

Section 15.01. Landlord's Consent Required.

A. Tenant and any permitted Transferee, as hereinafter defined, shall not voluntarily or involuntarily, by operation of law or otherwise: (i) transfer, assign, mortgage, encumber, pledge, hypothecate, or assign all or any of its interest in this Lease; (ii) sublet or permit the Leased Premises, or any part thereof, to be used by others, including, but not limited to, concessionaires or licensees; (iii) issue new stock (or partnership shares or membership interests), create additional classes of stock (or partnership shares or membership interests), or sell, assign, hypothecate or otherwise transfer the outstanding voting stock (or partnership shares or membership interests) so as to result in or make possible a change in the present control of Tenant or any permitted Transferee, provided, however, that this subsection (iii) shall not be applicable to Tenant so long as it is a publicly owned corporation whose outstanding voting stock is listed on a national securities exchange (as defined in the Securities Exchange Act of 1934, as amended) or is traded actively in the over-the-counter market; or (iv) sell, assign or otherwise transfer all or substantially all of Tenant's or any permitted Transferee's assets; without the prior consent of Landlord, in each instance, which consent Landlord may not unreasonably withhold, which reasonableness is subject to the provisions set forth in Section 15.01.D. All of the foregoing transactions shall be referred to collectively or singularly as a "Transfer", and the Person to whom Tenant's interest is transferred shall be referred to as a "Transferee".

B. Any Transfer without Landlord's consent shall not he binding upon Landlord, shall confer no rights upon any third Person, and shall, without notice or grace period of any kind, constitute an immediate Default by Tenant under this Lease. Acceptance by Landlord of Rent following any Transfer shall not be deemed to be a consent by Landlord to any such Transfer, acceptance of the Transferee as a tenant, release of Tenant from the performance of any covenants herein, or waiver by Landlord of any remedy of Landlord under this Lease, although amounts received shall be credited by Landlord against Tenant's Rent obligations. Consent by Landlord to any one Transfer shall not be a waiver of the requirement for consent to any other Transfer. No reference in this Lease to assignees, concessionaires, subtenants or licensees shall be deemed to be a consent by Landlord to occupancy of the Leased Premises by any such assignee, concessionaire, subtenant or licensee.

C. Landlord's consent to any Transfer shall not operate as a waiver of, or release of Tenant from, Tenant's covenants and obligations hereunder; nor shall the collection or acceptance of Rent or other performance from any Transferee have such effect. Rather, Tenant shall remain fully and primarily liable and obligated under this Lease for the entire Term in the event of any Transfer, and in the event of a Default by the Transferee, Landlord shall be free to pursue Tenant, the Transferee, or both, without prior notice or demand to either.

D. Landlord reserves the right to withhold its consent to a Transfer if any of the following conditions are applicable and it shall be deemed reasonable for Landlord to deny such consent if any of the following conditions are applicable:

(i) Tenant is in violation of any provision of this Lease;

(ii) The net worth (excluding goodwill) of the Transferee immediately prior to the Transfer is insufficient to fulfill the terms of the Lease **(or, in the case of a sublease, those obligations being assumed),** as reasonably determined by Landlord, based on financial information provided by Tenant;

(iii) The inability of Transferee to continue to operate the business conducted in the Leased Premises for general office purposes; or

(iv) Transferee is an existing tenant in the or the Commercial Portion and Landlord reasonably believes that it will be able to accommodate the space needs of such existing tenant.

E. Notwithstanding the foregoing, the following conditions shall apply to any proposed Transfer:

(i) Each and every covenant, condition, or obligation imposed upon Tenant by this Lease and each and every right, remedy, or benefit afforded Landlord by this Lease shall not be impaired or diminished as a result of such Transfer;

(ii) Tenant shall assign to Landlord 50% of any and all consideration paid directly or indirectly for the assignment by Tenant to the Transferee of Tenant's leasehold interest or 50% of any and all subrentals payable by subtenants which are in excess of the Minimum Rent provided herein (computed on a square footage basis) **after first deducting the reasonable expenses incurred by Tenant for (1) any alterations and improvements to the Leased Premises paid for by Tenant in connection with such Transfer, (2) any other out-of-pocket monetary concessions provided by Tenant to the assignee or subtenant, and (3) any brokerage commissions and attorneys fees paid for by Tenant in connection with such Transfer;**

(iii) Tenant to which the Leased Premises were initially leased shall continue to remain liable under this Lease for the performances of all terms, including, but not limited to, payment of Rent due under this Lease;

(iv) Transferee must expressly assume in a written instrument delivered and reasonably acceptable by Landlord all the obligations of Tenant under the Lease **(or, in the case of a sublease, those obligations being assumed).**

(v) Landlord shall furnish the appropriate documentation in connection with any such Transfer and be entitled to a reasonable administrative fee therefor, as set forth in Section 17.03.

(vi) Prior to the effective date of such proposed Transfer, Landlord shall receive the following information in connection with such Transfer: the name of the proposed Transferee, a copy of the financial statement of the proposed Transferee and any guarantor, information regarding the proposed Transferee's business history and experience and the proposed Transferee's business plan and projections for the Leased Premises.

Landlord shall approve or disapprove of such proposed Transfer within fifteen (15) business days following receipt of Tenant's written notice of its intent to Transfer the Lease together with the required information set forth above.

F. If the proposed term with respect to the space proposed to be subleased (the "Proposed Sublet Space") is to extend (including any renewal or extension options) beyond the first (1st) day of the eighteenth (18th) calendar month before the then scheduled expiration of the Term, or if the Proposed Sublet Space is (or, when aggregated with other space then being sublet by Tenant, will be) more than fifty percent (50%) of the Leased Premises and the term of the proposed sublease is for seventy-five percent (75%) or more of the then-remaining Term, then Landlord shall have the right in its sole and absolute discretion to terminate this Lease with respect to the Proposed Sublet Space by sending Tenant written notice of such termination within fifteen (15) business days after Landlord's receipt of Tenant's request Notice. If the Proposed Sublet Space does not constitute the entire Leased Premises and Landlord exercises its option to terminate this Lease with respect to the Proposed Sublet Space, then (a) Tenant shall tender the Proposed Sublet Space to Landlord on the Proposed Sublease commencement date and such space shall thereafter be deleted from the Leased Premises, and (b) as to that portion of the Premises which is not part of the Proposed Sublet Space, this Lease shall remain in full force and effect except that Minimum Rent and Additional Rent shall be reduced pro rata. Fifty percent (50%) of the cost of any construction required to permit the operation of the Proposed Sublet Space separate from the balance of the Leased Premises shall be paid by Tenant to Landlord as additional rent hereunder. If the Proposed Sublet Space constitutes the entire Leased Premises and Landlord elects to terminate this Lease, then Tenant shall tender the Proposed Sublet Space to Landlord, and this Lease shall terminate, on the Proposed Sublease commencement date.

G. **Notwithstanding anything contained herein to the contrary, Tenant may upon at least fifteen (15) days prior written notice to Landlord (the "Affiliate Notice") (it being agreed that, in the event that Tenant is forbidden by law or the terms of a binding nondisclosure agreement from providing such notice, Tenant shall provide such notice immediately upon the consummation of the transaction protected by the non-disclosure agreement or Legal Requirement (as applicable)), but without Landlord's prior written consent and without paying over to Landlord the fees or sums otherwise due pursuant to Subsections 15.01(E)(ii) and (v) and without any right to recapture or reclaim all or a portion of the Leased Premises as set forth in Subsection 15.01(F), assign this Lease to a Qualified Tenant Affiliate (hereinafter defined), provided that no Default exists hereunder and no event exists which event with notice and/or the passage of time would constitute a default hereunder if not cured within the applicable cure period. A "Qualified Tenant Affiliate" shall mean a corporation or other entity which (i) shall control, be controlled by or be under common control with Tenant, which acquires a controlling interest in Tenant by a transfer of stock, equity or ownership whether by transfer or issuance of new stock, or which results from a merger or consolidation with Tenant or succeeds to all the business and assets of Tenant, (ii) is of a type and quality consistent with the first-class nature of the Building, and (iii) in the case of a merger or consolidation, has a net worth immediately after such merger or consolidation at least equal to the net worth of Tenant immediately**

prior to such merger or consolidation. For purposes of the immediately preceding sentence, "control" shall be deemed to be ownership of more than fifty-one percent (51%) of the legal and equitable interest of the controlled corporation or other business entity. In the event of any assignment to a Qualified Tenant Affiliate, Tenant shall remain fully liable to perform the obligations of the Tenant under this Lease, such obligations to be joint and several with the obligations of the Qualified Tenant Affiliate as tenant under this Lease, and Tenant shall execute such guaranty or other agreement as Landlord shall request to confirm such liability. Notwithstanding any provision contained in this Lease to the contrary, Landlord's prior written consent shall be required to (a) any merger, consolidation or asset acquisition involving Tenant or the assets or ownership interest of Tenant if in connection therewith, any of the assets of Tenant are transferred, granted or pledged as security for the purchase price (or other consideration) for such merger, consolidation or asset acquisition (provided, however, that if the tangible net worth (i.e., excluding goodwill) of Tenant immediately following such transaction would be equal to or greater than Five Million and 00/100 Dollars ($5,000,000.00), this Subsection 15.01(G)(a) shall be inapplicable), and (b) any sale, conveyance or transfer of all or substantially all of Tenant's assets to an entity that does not assume all of the obligations of Tenant under this Lease. Any permitted Transfer by Tenant pursuant to this 15.01(G) or otherwise shall be only for valid independent business purposes and any Transfer, however structured, designed primarily for avoidance of the rights of Landlord hereunder shall not be permitted. In no event shall Tenant be permitted to use a series of one or more permitted Transfers solely for the purpose of "spinning-off' this Lease to an independent third party that would not otherwise be a permitted Transferee. As an example of the foregoing, Tenant shall not assign this Lease to an affiliate whose assets consist solely of this Lease and the rights granted herein, and thereafter sell the stock of such affiliate to an independent third party in a merger, with the intended result being to defeat the purpose of this Lease to an independent third party by means of what would otherwise be two (2) separate permitted transfers.

ARTICLE XVI

DEFAULT AND REMEDIES

Section 16.01. Default.

Each of the following events shall constitute a default ("Default") by Tenant under this Lease: (i) Tenant's failure to pay, or make available as required by this Lease, any Rent by the date such Rent is due; (ii) if Tenant breaches or fails to observe or perform any term, condition or covenant of this Lease, other than those involving the payment of Rent, and such breach or failure is not cured within thirty (30) days after Tenant's receipt of notice thereof, unless such condition cannot reasonably be cured within such thirty (30) days, in which case Tenant must commence such cure within said thirty (30) days and diligently pursue said cure to its completion (provided, however, if such breach or failure creates a hazard, public nuisance or dangerous situation, said thirty (30) day grace period shall be reduced to forty-eight (48) hours after Tenant's receipt of notice); or (iii) if Tenant fails to carry and maintain the insurance required by this Lease. Any notice given pursuant to this Section shall be in lieu of, and not in addition to, any notice required under Section 1161, et seq., of the California Code of Civil Procedure.

Notwithstanding anything to the contrary contained herein, if the Default can be cured by the payment of money, Tenant shall, except as hereinafter provided, have five (5) business days after notice from Landlord to cure the Default. Notwithstanding the preceding sentence, if Landlord shall give notice of two (2) such monetary Defaults within any twelve (12) month period, then thereafter, Tenant shall be in Default under this Lease if it fails to pay any Rent within ten (10) days after the same shall be due and payable, without the necessity of notice.

Section 16.02. Remedies and Damages.

A. If a Default described in Section 16.01, above, occurs, Landlord shall have all the rights and remedies provided in this Section 16.02, in addition to all other rights and remedies available under this Lease or provided at law or in equity.

B. Landlord may, upon notice to Tenant, terminate this Lease, or terminate Tenant's right to possession without terminating this Lease (as Landlord may elect). If this Lease or Tenant's right to possession under this Lease are at any time terminated under this Section 16.02 or otherwise, Tenant shall immediately surrender and deliver the Leased Premises peaceably to Landlord. If Tenant fails to do so, Landlord shall be entitled to re-enter, without process and without notice (any notice to quit or of re-entry being hereby expressly waived), using such force as may be necessary, and, alternatively, Landlord shall have the benefit of all provisions of law respecting the speedy recovery of possession of the Leased Premises (whether by summary proceedings or otherwise).

C. Landlord may also perform, on behalf and at the expense of Tenant, any obligation of Tenant under this Lease which Tenant fails to perform, the cost of which (together with an administrative fee equal to ten percent (10%) of such cost to cover Landlord's overhead in connection therewith) shall be paid by Tenant to Landlord within five (5) days of demand therefor. In performing any obligations of Tenant, Landlord shall incur no liability for any loss or damage that may accrue to Tenant, the Leased Premises or Tenant's Property by reason thereof, except if caused by Landlord's willful and malicious act. The performance by Landlord of any such obligation shall not constitute a release or waiver of any of Tenant's obligations under this Lease.

D. Upon termination of this Lease or of Tenant's right to possession under this Lease, Landlord may at any time and from time to time relet all or any part of the Leased Premises for the account of Tenant or otherwise, at such rentals and upon such terms and conditions as Landlord shall deem appropriate. Landlord shall receive and collect the rents therefor, applying the same first to the payment of such expenses as Landlord may incur in recovering possession of the Leased Premises, including legal expenses and attorneys' fees, in placing the Leased Premises in good order and condition and in preparing or altering the same for re-rental; second, to the payment of such expenses, commissions and charges as may be incurred by or on behalf of Landlord in connection with the reletting of the Leased Premises; and third, to the fulfillment of the covenants of Tenant under this Lease, including the various covenants to pay Rent. Any such reletting may be for such term(s) as Landlord elects. Thereafter, Tenant shall pay Landlord until the end of the Term of this Lease the equivalent of the amount of all the Rent and all other sums required to be paid by Tenant, less the net avails of such reletting, if any, on the dates such Rent and other sums above specified are due. Any reletting by Landlord shall not be construed as an election by Landlord to terminate this Lease unless notice of such

intention is given by Landlord to Tenant. Notwithstanding any reletting without termination of this Lease, Landlord may at any time thereafter elect to terminate this Lease. In any event, Landlord shall not be liable for, nor shall Tenant's obligations hereunder be diminished by reason of, any failure by Landlord to relet the Leased Premises or any failure by Landlord to collect any sums due upon such reletting.

E. In addition to all other remedies provided in this Lease and at law, if there occurs a Default by Tenant, in addition to any other remedies available to Landlord at law or in equity, Landlord may terminate this Lease and all rights of Tenant hereunder by written notice to Tenant, in which event Tenant shall immediately surrender the Leased Premises to Landlord. In the event that Landlord shall elect to so terminate this Lease, then Landlord may recover from Tenant:

(i) The worth at the time of award of any unpaid rent which had been earned at the time of such termination; plus

(ii) The worth at the time of award of the amount by which the unpaid rent which would have been earned after termination until the time of award exceeds the amount of such rental loss that Tenant proves could have been reasonably avoided; plus (iii)The worth at the time of award of the amount by which the unpaid rent for the balance of the Lease Term after the time of award exceeds the amount of such rental loss that Tenant proves could have been reasonably avoided; plus

(iii) Any other amount necessary to compensate Landlord for all the detriment proximately caused by Tenant's failure to perform its obligations under this Lease or which in the ordinary course of events would likely result therefrom, specifically including, but not limited to, brokerage commissions and advertising expenses incurred, expenses of remodeling the Leased Premises or any portion thereof for a new tenant, whether for the same or a different use, and any special concessions made to obtain a new tenant; and

(iv) At Landlord's election, such other amounts in addition to or in lieu of the foregoing as may be permitted from time to time by applicable law.

As used in subparagraphs (i) and (ii) above, the "worth at the time of award" is computed by allowing interest at the Interest rate. As used in subparagraph (iii) above, the "worth at the time of award" is computed by discounting such amount at the discount rate of the Federal Reserve Bank of San Francisco at the time of award plus one percent (1%). Further, Tenant shall be liable for all leasing commissions paid or owing by Landlord arising from this Lease and any extension thereof.

Efforts by Landlord to mitigate damages caused by Tenant's Default or breach of this Lease shall not waive Landlord's right to recover damages under this Section. If termination of this Lease is obtained through an unlawful detainer action, Landlord shall have the right to recover in such proceeding the unpaid rent and damages as are recoverable thereon, or Landlord may reserve the right to recover all or any part thereof in a separate suit for such rent and/or damages. If a notice and grace period required under this Lease was not previously given, a notice to pay rent or quit, or to perform or quit, as the case may be, given to Tenant under any

statute authorizing the forfeiture of leases for unlawful detainer shall also constitute the applicable notice for grace period purposes required by this Lease. In such event, the applicable grace period under the unlawful detainer statute shall run concurrently after the one such statutory notice, and the failure of Tenant to cure the Default within the longer of two such grace periods shall constitute both an unlawful detainer and a breach of this Lease entitling Landlord to the remedies provided for in this Lease and/or by statute.

F. At Landlord's option and in addition to all other remedies provided in this Lease and at law, if there occurs a Default, Landlord may elect to continue this Lease and Tenant's right to possession in effect under California Civil Code Section 1951.4 after Tenant's breach or Default and recover the rent as it becomes due. Landlord and Tenant agree that the limitations on assignment and subletting set forth in Article XV in this Lease are reasonable. Acts of maintenance or preservation, efforts to relet the Leased Premises or the appointment of a receiver to protect Landlord's interest under this Lease, shall not constitute a termination of Tenant's right to possession.

Section 16.03. Remedies Cumulative.

No reference to any specific right or remedy in this Lease shall preclude Landlord from exercising any other right, from having any other remedy, or from maintaining any action to which it may otherwise be entitled under this Lease, at law or in equity.

Section 16.04. Waiver.

A. Neither party shall be deemed to have waived any provision of this Lease, or the breach of any such provision, unless specifically waived by such party in a writing executed by an authorized officer. No waiver of a breach shall be deemed to be a waiver of any subsequent breach of the same provision, or of the provision itself, or of any other provision.

B. Tenant hereby expressly waives any and all rights of redemption and any and all rights to relief from forfeiture which would otherwise be granted or available to Tenant under any present or future statutes, rules or case law.

C. **IN ANY LITIGATION (WHETHER OR NOT ARISING OUT OF OR RELATING TO THE LEASE) IN WHICH LANDLORD AND TENANT SHALL BE ADVERSE PARTIES, BOTH LANDLORD AND TENANT KNOWINGLY, VOLUNTARILY AND INTENTIONALLY WAIVE THEIR RESPECTIVE RIGHTS TO TRIAL BY JURY.**

D. Notwithstanding anything to the contrary contained in this Lease, Tenant waives the right to make repairs at Landlord's expense under Sections 1941 and 1942 of the California Civil Code and all other laws now or hereafter in effect. Furthermore, Tenant hereby waives the provisions of California Civil Code Sections 1932(2) and 1933(4) and the provisions of any successor or other law of like import.

ARTICLE XVII

MISCELLANEOUS PROVISIONS

Section 17.01. Notices.

A. Whenever any demand, request, approval, consent or notice (singularly and collectively, "Notice") shall or may be given by one party to the other, such Notice shall be in writing and addressed to the parties at their respective addresses as set forth in Section 1.01.I, above, and served by (i) hand, (ii) a nationally recognized overnight express courier, or (iii) registered or certified mail return receipt requested. The date the Notice is received shall be the date of service of Notice. If an addressee refuses to accept delivery, however, then Notice shall be deemed to have been served on either (i) the date hand delivery is refused, (ii) the next business day after the Notice was sent in the case of attempted delivery by overnight courier, or (iii) five (5) business days after mailing the Notice in the case of registered or certified mail. Either party may, at any time, change its Notice address by giving the other party Notice, in accordance with the above, stating the change and setting forth the new address.

B. If any Mortgagee shall notify Tenant that it is the holder of a Mortgage affecting the Leased Premises, no Notice thereafter sent by Tenant to Landlord shall be effective unless and until a copy of the same shall also be sent to such Mortgagee, in the manner prescribed in this Section 17.01, to the address as such Mortgagee shall designate.

Section 17.02. Recording.

Neither this Lease nor a memorandum thereof shall be recorded without the prior written consent of Landlord.

Section 17.03. Interest and Administrative Costs.

A. If (i) Tenant fails to make any payment under this Lease when due, or (ii) Landlord incurs any costs or expenses in performing any obligation of Tenant or as a result of Tenant's Default under this Lease, then Tenant shall pay, upon demand, such costs and/or expenses plus Interest from the date such payment was due or from the date Landlord incurs such costs or expenses relating to the performance of any such obligation or Tenant's Default.

B. If Tenant requests that Landlord review and/or execute any documents in connection with this Lease, including Assignment and Transfer documents, and Landlord Waivers of Lien, Tenant shall pay to Landlord, upon demand, as an administrative fee for the review and/or execution thereof an amount equal to One Thousand Five Dollars ($1,500.00), but the fee for the first such request shall be Five Hundred Dollars ($500.00).

Section 17.04. Legal Expenses.

If Landlord or Tenant institutes any suit against the other in connection with the enforcement of their respective rights under this Lease, the violation of any term of this Lease, the declaration of their rights hereunder, or the protection of Landlord's or Tenant's interests under this Lease, the non-prevailing party shall reimburse the prevailing party for its reasonable expenses incurred as a result thereof including court costs and attorneys' fees within five (5) days of demand therefor. Notwithstanding the foregoing, if Landlord files any legal action for

collection of Rent or any eviction proceedings, whether summary or otherwise, for the nonpayment of Rent, and Tenant pays such Rent prior to the rendering of any judgment, the Landlord shall be entitled to collect, and Tenant shall pay, all court filing fees and the reasonable fees of Landlord's attorneys.

Section 17.05. Successors and Assigns.

This Lease and the covenants and conditions herein contained shall inure to the benefit of and be binding upon Landlord and Tenant, and their respective permitted successors and assigns. Upon any sale or other transfer by Landlord of its interest in the Leased Premises, Landlord shall be relieved of any obligations under this Lease occurring subsequent to such sale or other transfer.

Section 17.06. Limitation on Right of Recovery Against Landlord.

No shareholder, member, trustee, partner, director, officer, employee, representative or agent of Landlord shall be personally liable in respect of any covenant, condition or provision of this Lease. If Landlord breaches or defaults in any of its obligations in this Lease, Tenant shall look solely to the equity of the Landlord in the Building (and any rents, profits and proceeds therefrom) for satisfaction of Tenant's remedies.

Section 17.07. Security Deposit.

Tenant shall deposit with Landlord in advance upon Tenant's execution of this Lease, for Landlord's general account, the Security Deposit set forth in Section 1.01.G hereof as security for the performance of each and every term, covenant, agreement and condition of this Lease to be performed by Tenant. In the event of a Default, Landlord may use, apply on Tenant's behalf or retain (without liability for interest) during the Term all or any part of the Security Deposit to the extent required for the payment of any Rent which may be owed hereunder, or for any sum which Landlord may expend to cure any Default of Tenant. After each application from the Security Deposit, Tenant shall, within five (5) business days of Notice from Landlord, restore said deposit to the amount set forth in Section 1.01.G hereof. The use, application or retention of the Security Deposit by Landlord shall not be deemed a limitation on Landlord's recovery in any case, or a waiver by Landlord of any Default, nor shall it prevent Landlord from exercising any other right or remedy for a Default by Tenant. If Tenant has complied with all the terms, covenants, agreements, and conditions of this Lease, the Security Deposit (less any amount applied as herein provided) shall be returned to Tenant without interest within thirty (30) days after the Termination Date and after surrender of possession of the Leased Premises to Landlord in accordance with the terms of this Lease.

Section 17.08. Entire Agreement; No Representations; Modification.

This Lease is intended by the parties to be a final expression of their agreement and as a complete and exclusive statement of the terms thereof. All prior negotiations, considerations and representations between the parties (oral or written) are incorporated herein. No course of prior dealings between the parties or their officers, employees, agents or affiliates shall be relevant or admissible to supplement, explain or vary any of the terms of this Lease. No representations, understandings, agreements, warranties or promises with respect to the Leased Premises or the Building, or with respect to past, present or future tenancies, rents, expenses, operations, or any

other matter, have been made or relied upon in the making of this Lease, other than those specifically set forth herein. This Lease may only be modified, or a term thereof waived, by a writing signed by an authorized officer of Landlord and Tenant expressly setting forth said modification or waiver.

Section 17.09. Severability.

If any term or provision of this Lease, or the application thereof to any Person or circumstance, shall be invalid or unenforceable, the remainder of this Lease, or the application of such term or provision to Persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected thereby, and each term and provision of this Lease shall be valid and be enforced to the fullest extent permitted by law.

Section 17.10. Joint and Several Liability.

If two or more Persons shall sign this Lease as Tenant, the liability of each such Person to pay the Rent and perform all other obligations hereunder shall be deemed to be joint and several, and all Notices, payments and agreements given or made by, with or to any one of such Persons shall be deemed to have been given or made by, with or to all of them. In like manner, if Tenant shall be a partnership or other legal entity, the partners or members of which are, by virtue of any applicable law, rule, or regulation, subject to personal liability, the liability of each such partner or member under this Lease shall be joint and several and each such partner or member shall be fully obligated hereunder and bound hereby as if each such partner or member had personally signed this Lease.

Section 17.11. Broker’s Commission.

Except for (i) Mike Grado of CB Richard Ellis, as broker for and on behalf of Landlord (“Landlord’s Broker”), whom Landlord agrees to pay a commission under the terms of a separate agreement and (ii) John Brady of CRESA, as broker for and on behalf of Tenant (“Tenant’s Broker”), to whom Landlord’s Broker shall pay a commission under the terms of a separate agreement, Landlord and Tenant each warrants and represents to the other that no broker, finder or agent has acted for or on its behalf in connection with the negotiation, execution or procurement of this Lease. Landlord and Tenant each agrees to indemnify and hold the other harmless from and against all liabilities, obligations and damages arising, directly or indirectly, out of or in connection with a claim from a broker, finder or agent with respect to this Lease or the negotiation thereof, including costs and attorneys’ fees incurred in the defense of any claim made by a broker alleging to have performed services on behalf of the indemnifying party.

Section 17.12. Irrevocable Offer; No Option.

The submission of this Lease by Landlord to Tenant for examination shall not constitute an offer to lease or a reservation of or option for the Leased Premises. Tenant’s execution of this Lease shall be deemed an offer by Tenant, but this Lease shall become effective only upon execution thereof by both parties and delivery thereof to Tenant.

Section 17.13. Inability to Perform.

Except for the payment of monetary obligations and Tenant’s obligations under Exhibit B, if Landlord or Tenant is delayed or prevented from performing any of its obligations

under this Lease by reason of strike, labor troubles, or any similar cause whatsoever beyond their control, the period of such delay or such prevention shall be deemed added to the time herein provided for the performance of any such obligation by Landlord or Tenant.

Section 17.14. Survival.

Occurrence of the Termination Date shall not relieve Tenant from its obligations accruing prior to the expiration of the Term. All such obligations shall survive termination of this Lease.

Section 17.15. Corporate Tenants.

If Tenant is not an individual, the individual(s) executing this Lease on behalf of Tenant hereby covenant(s) and warrant(s) that: (i) Tenant is duly formed, qualified to do business and in good standing in the state in which the Building is located; and (ii) such Person(s) are duly authorized by such Person to execute and deliver this Lease on behalf of Tenant. Tenant shall remain qualified to do business and in good standing in said state throughout the Term.

Section 17.16. Construction of Certain Terms.

The term “including” shall mean in all cases “including, without limitation.” Wherever Tenant is required to perform any act hereunder, such party shall do so at its sole cost and expense, unless expressly provided otherwise. All payments to Landlord, other than Minimum Rent, whether as reimbursement or otherwise, shall be deemed to be Additional Rent, regardless of whether denominated as “Additional Rent.”

Section 17.17. Showing of Leased Premises.

Landlord may enter upon the Leased Premises for purposes of showing the Leased Premises to Mortgagees or prospective Mortgagees at any time during the Term and to prospective tenants during the last six (6) months of the Term.

Section 17.18. Relationship of Parties.

This Lease shall not create any relationship between the parties other than that of Landlord and Tenant.

Section 17.19. Rule Against Perpetuities.

Notwithstanding any provision in this Lease to the contrary, if the Term has not commenced within twenty-one (21) years after the date of this Lease, this Lease shall automatically terminate on the twenty-first (21st) anniversary of the date of this Lease. The sole purpose of this provision is to avoid any possible interpretation of this Lease as violating the Rule Against Perpetuities, or any other rule of law or equity concerning restraints on alienation.

Section 17.20. Choice of Law.

This Lease shall be construed, and all disputes, claims, and questions arising hereunder shall be determined, in accordance with the laws of the state within which the Building is located. (For purposes of this provision, the District of Columbia shall be deemed to be a state.)

Section 17.21. Choice of Forum.

Any action involving a dispute relating in any manner to this Lease, the relationship of Landlord/Tenant, the use or occupancy of the Leased Premises, and/or any claim of injury or damage shall be filed and adjudicated solely in the state or federal courts of the jurisdiction in which the Leased Premises are located.

Section 17.22. Intentionally Deleted.

Section 17.23. Hazardous Substances.

No Hazardous Substances (as hereafter defined) shall be used, generated, stored, treated, released, disposed or otherwise managed by or on behalf of Tenant or any invitee at the Leased Premises or the Building with the exception of minor amounts of Hazardous Substances customarily and lawfully used in conjunction with the Permitted Use. Tenant shall immediately notify Landlord upon discovery of any Hazardous Substance release affecting the Leased Premises and, at its sole expense and at Landlord's option, remediate to Landlord's satisfaction or reimburse Landlord's costs of investigation or remediation of any release of Hazardous Substances arising from any act or omission of Tenant, its employees, agents, contractors or invitees within five (5) days of demand therefor. Tenant shall cooperate with Landlord and provide access to the Leased Premises from time to time for inspections and assessments of environmental conditions and shall remove all Hazardous Substances from the Leased Premises introduced by or on behalf of Tenant upon expiration or termination of the Lease. Tenant agrees to indemnify, defend and hold Landlord and Landlord's Indemnitees harmless from and against all liabilities, obligations, damages, judgments, penalties, claims, costs, charges and expenses, including reasonable architects' and attorneys' fees, which may be imposed upon, incurred by or asserted against Landlord or Landlord's Indemnitees by a third party and arising, directly or indirectly, out of or in connection with the presence of Hazardous Substances at or affecting the Building due to any act of Tenant, its agents, servants, employees or contractors. As used herein, "Hazardous Substances" shall mean (i) hazardous or toxic substances, wastes, materials, pollutants and contaminants which are included in or regulated by any federal, state or local law, regulation, rule or ordinance, including CERCLA, Superfund Amendments and Reauthorization Act of 1986, the Resource Conservation and Recovery Act, and the Toxic Substances Control Act, as any of the foregoing may be amended from time to time, (ii) petroleum products, (iii) halogenated and non-halogenated solvents, and (iv) all other regulated chemicals, materials and solutions which, alone or in combination with other substances, are potentially harmful to the environment, public health or safety or natural resources.

Notwithstanding anything to the contrary, Tenant shall not be responsible for any costs, abatement or remediation of any Hazardous Substances which may exist in the Leased Premises prior to the Lease Commencement Date unless brought onto the Leased Premises by or on behalf of Tenant, including during its occupancy under the Sublease.

Section 17.24. OFAC Certification.

Tenant certifies that: (i) it is not acting, directly or indirectly, for or on behalf of any person, group entity, or nation named by any Executive Order or the United States Treasury Department as a terrorist, "Specially Designated National and Blocked Person," or other banned or blocked person, entity, nation, or transaction pursuant to any law, order, rule or regulation that

is enforced or administered by the Office of Foreign Assets Control; and (ii) it is not engaging in, instigating or facilitating this transaction, directly or indirectly, on behalf of any such person, group, entity, or nation.

Tenant hereby agrees to defend, indemnify, and hold harmless Landlord from and against any and all claims, damages, losses, risks, liabilities, and expenses (including attorneys' fees and costs) arising from or related to any breach of the foregoing certification.

Section 17.25. Time is of the Essence.

Time is of the essence with respect to each and every obligation arising under this Lease.

Section 17.26. Counterparts.

This Lease may be executed in one or more counterparts, each of which shall be deemed an original, and all of which shall constitute one and the same instrument. Moreover, signatures received by facsimile or portable document format shall be deemed effective for the purposes of this Lease.

IN WITNESS WHEREOF, the parties hereto intending to be legally bound hereby have executed this Lease under their respective hands and seals as of the day and year first above written.

WITNESS:

/s/ Yolanda [Illegible]

LANDLORD:
FRIT SAN JOSE TOWN AND COUNTRY VILLAGE, LLC, a California limited liability company, by its managing member, STREET RETAIL, INC., a Maryland corporation

By: */s/ Deborah A. Colson*
Name: Deborah A. Colson
Title: Vice President-Legal Operations

TENANT:
SI-BONE, INC., a Delaware corporation

By: */s/ Dan Murray*
Name: Dan Murray
Title: Chief Operating Officer

EXHIBIT A

SITE PLAN

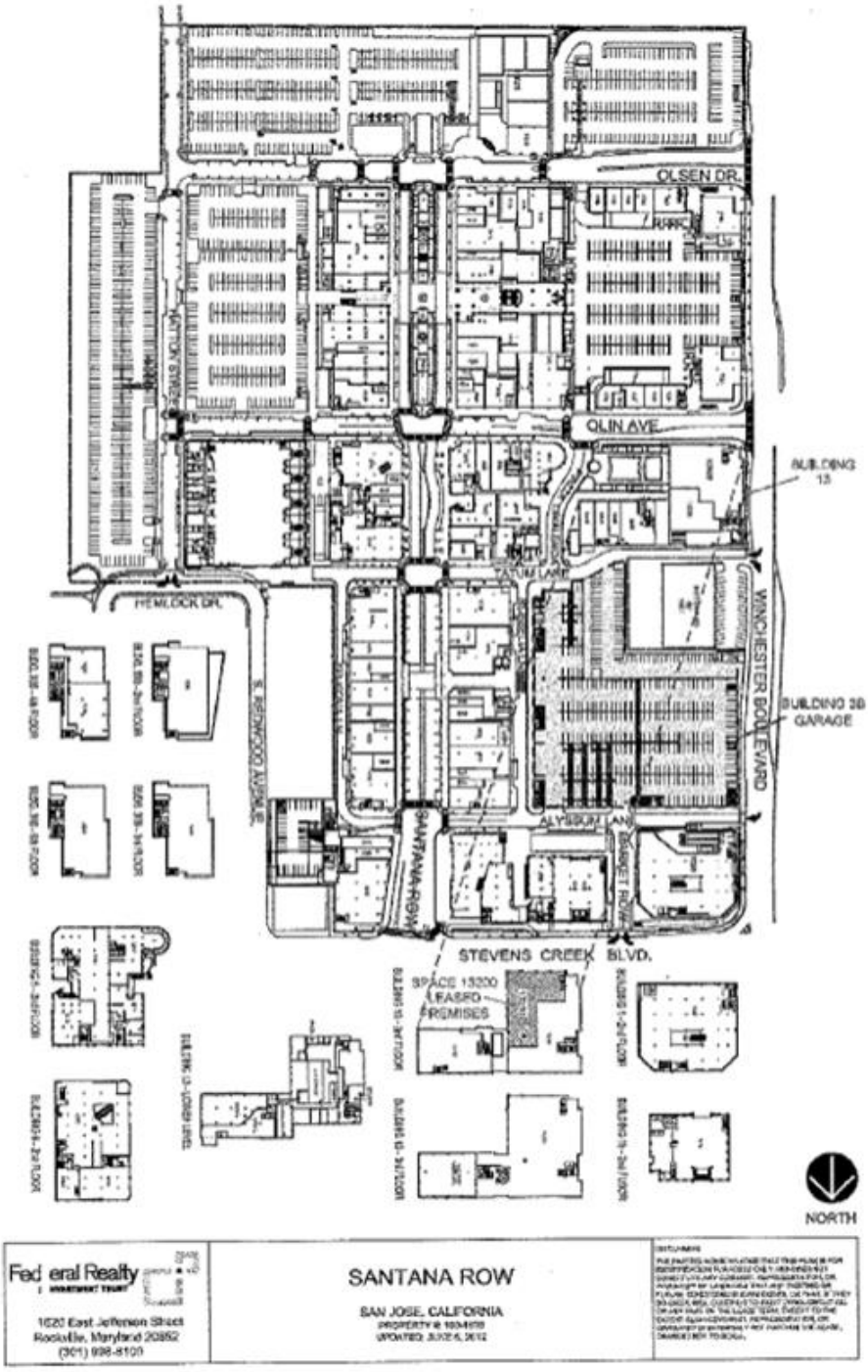


Exhibit A

EXHIBIT A-1

TENANT'S SIGN

Federal Realty
1626 East Jefferson Street
Rockville, Maryland 20852
(301) 998-8100

SANTANA ROW

SAN JOSE, CALIFORNIA

EXHIBIT B

INTENTIONALLY DELETED

EXHIBIT C

RULES AND REGULATIONS

Tenant expressly covenants and agrees, at all times during the Term, and at such other times as Tenant occupies the Leased Premises or any part thereof, to comply, at its own cost and expense, with the following:

1. Tenant shall not obstruct or permit its agents, clerks or servants to obstruct, in any way, the sidewalks, entry passages, corridors, halls, stairways or elevators of the Building, or use the same in any other way than as a means of passage to and from the offices of Tenant; bring in, store, test or use any materials in the Building which could cause a fire or an explosion or produce any fumes or vapor; make or permit any disruptive noises in the Building; smoke in the elevators; throw substances of any kind out of the windows or doors, or in the halls and passageways of the Building; sit on or place anything upon the window sills; or clean the exterior of the windows.

2. Waterclosets and urinals shall not be used for any purpose other than those for which they are constructed; and no sweepings, rubbish, ashes, newspaper or any other substances of any kind shall be thrown into them. Waste and excessive or unusual use of electricity or water is prohibited.

3. Tenant shall not (i) obstruct the windows, partitions and lights that reflect or admit light into the halls or other places in the Building, or (ii) inscribe, paint, affix, or otherwise display signs, advertisements or notices in, on, upon or behind any windows or on any door, partition or other part of the interior or exterior of the Building, without the prior written consent of Landlord. If such consent be given by Landlord, any such sign, advertisement, or notice shall be inscribed, painted or affixed by Tenant, or a company approved by Tenant, and the cost of the same shall be charged to and paid by Tenant, and Tenant agrees to pay the same promptly, on demand.

4. No contract of any kind with any supplier of towels, water, ice, toilet articles, waxing, rug shampooing, venetian blind washing, furniture polishing, lamp servicing, cleaning of electrical fixtures, removal of waste paper, rubbish or garbage, or other like services shall be entered into by Tenant, nor shall any vending machine of any kind be installed in the Building, without the prior written consent of Landlord.

5. When electric wiring of any kind is introduced, it must be connected as directed by Landlord, and no stringing of any kind or cutting of wires will be allowed, except with the prior written consent of Landlord. The number and location of telephones, telegraph instruments, electric appliances, call boxes, etc., shall be subject to Landlord’s approval. No tenants shall be in direct contact with the floor of the Leased Premises; and if linoleum or other similar floor covering is desired to be used, an interlining of builder’s deadening felt shall be first affixed to the floor by a paste or other material, the use of cement or similar adhesive material being expressly prohibited.

6. No additional lock or locks shall be placed by Tenant on any door in the Building without prior written consent of Landlord. Two (2) keys will be furnished Tenant by Landlord; two (2) additional keys will be supplied to Tenant by Landlord, upon request, without charge; any additional keys requested by Tenant shall be paid for by Tenant. Tenant, its agents and

employees, shall not have any duplicate key made and shall not change any locks. All keys to doors and washrooms shall be returned to Landlord at the termination of the tenancy, and in the event of loss of any keys furnished, Tenant shall pay Landlord the cost of replacing the lock or locks to which such keys were fitted and the keys so lost.

7. Tenant shall not employ any person or persons other than Landlord's janitors for the purpose of cleaning the Leased Premises, without prior written consent of Landlord. Landlord shall not be responsible to Tenant for any loss of property from the Leased Premises however occurring, or for any damage done to the effects of Tenant by such janitors or any of its employees, or by any other person or any other cause.

8. No bicycles, vehicles or animals of any kind shall be brought into or kept in or about the Leased Premises.

9. Tenant shall not conduct, or permit any other person to conduct, any auction upon the Leased Premises; manufacture or store goods, wares or merchandise upon the Leased Premises, without the prior written approval of Landlord, except the storage of usual supplies and inventory to be used by Tenant in the conduct of its business; permit the Leased Premises to be used for gambling; make any disruptive noises in the Building; permit to be played any musical instruments, recorded or wired music in such a loud manner as to disturb or annoy other tenants; or permit any unusual odors to be produced upon the Leased Premises.

10. No awnings or other projections shall be attached to the outside walls of the Building. No curtains, shades or screens shall be attached to or hung in, or used in connection with, any window or door of the Leased Premises, without the prior written consent of Landlord. Such curtains, blinds and shades must be of a quality, type, design, and color, and attached in a manner, approved by Landlord.

11. Canvassing, soliciting and peddling in the Building are prohibited, and Tenant shall cooperate to prevent the same. Retail sales will be limited to the ground level and lower level retail store areas.

12. There shall not be used in the Leased Premises or in the Building, either by Tenant or by others in the delivery or receipt of merchandise, any hand trucks, except those equipped with rubber tires and side guards.

13. Tenant, before closing and leaving the Leased Premises, shall ensure that all entrance doors are locked.

14. Landlord shall have the right to prohibit any advertising by Tenant which in Landlord's opinion tends to impair the reputation of the Building or its desirability as a building for offices, and upon written notice from Landlord, Tenant shall refrain from or discontinue such advertising.

EXHIBIT C

RULES AND REGULATIONS

15. Landlord hereby reserves to itself any and all rights not granted to Tenant hereunder, including, but not limited to, the following rights which are reserved to Landlord for its purpose in operating the Building:

(i) the exclusive right to the use of the name of the Building for all purposes, except that Tenant may use the name as its business address and for no other purpose;

(ii) the right to change the name or address of the Building, without incurring any liability to Tenant for so doing;

(iii) the right to install and maintain a sign or signs on the exterior of the Building (except that Tenant shall retain the signage right set forth in the second (2nd) paragraph of Section 4.04 hereinabove);

(iv) the exclusive right to use or dispose of the use of the roof of the Building;

(v) the right to limit the space on the directory of the Building to be allotted to Tenant; and

(vi) the right to grant to anyone the right to conduct any particular business or undertaking in the Building.

16. Tenant and Tenant's employees shall park their automobiles only in such number of spaces as Landlord may fix, taking into consideration the need for customer parking and other factors. The spaces assigned to Tenant and Tenant's employees shall be limited to any parking area designated by Landlord for use of office tenants, and the right to use spaces so assigned to Tenant and its employees shall be subject to such regulations as Landlord may reasonably promulgate from time to time to prevent parking by unauthorized parties or parking in prohibited areas.

17. All safes shall stand on a base of such size as shall be designated by the Landlord.

The Landlord reserves the right to inspect all freight to be brought into the Building and to exclude from the Building all freight which violates any of these Rules and Regulations or the Lease of which these Rules and Regulations are a part. No machinery of any kind or articles of unusual weight or size will be allowed in the Building without the prior written consent of Landlord. Business machines and mechanical equipment, if so consented to by Landlord, shall be placed and maintained by Tenant, at Tenant's expense, in settings sufficient to absorb and prevent all vibration, noise and annoyance.

18. The Leased Premises shall not be used for lodging or sleeping purposes, and cooking therein is prohibited.

19. After 6:00 p.m. until 8:00 a.m. on weekdays, after 1:00 p.m. on Saturdays, and at all hours on Sundays and legal holidays, all persons entering or leaving the Building may be required to identify themselves to establish their rights to enter or leave the Building. Landlord or

its agents may exclude from the Building during such periods all persons who do not present satisfactory identification. Each tenant shall be responsible for all persons for whom it requests admission and shall be liable to Landlord for all acts of such persons.

20. In addition to all other liabilities for breach of any provision of these Rules and Regulations, Tenant shall pay to Landlord all damages caused by such breach. The violation of any such provision may be restrained by injunction.

EXHIBIT D

TENANT CONTRACTOR RULES AND REGULATIONS

1. All demolition and/or construction work generating sufficient noise to disturb Building occupants (e.g., core drilling and ramset shots) must be accomplished before or after normal operating hours. Determination of sufficient noise levels to cause a disturbance shall be made at the Landlord's sole discretion.

2. Loading dock use for the delivery of materials and/or equipment or for the removal of trash shall be before or after the normal hours of operation for the Building. For isolated special cases, arrangements may be made with the property manager of the Building ("Property Manager) for deliveries between 7:00 a.m. and 7:00 p.m.

3. Freight elevator use for the delivery of materials and/or equipment or the removal of trash shall normally be before or after the normal hours of operation for the Building and only with the express permission of the Property Manager. For isolated special cases, special arrangements may be made with the Property Manager for deliveries between 6:00 a.m. and 10:00 p.m. All elevator use must be with the full knowledge and consent of the Property Manager.

4. Construction debris must be removed from the Building in suitable containers. Removal must be accomplished in a manner which does not cause damages to the Building, create any disturbances to tenants, or create additional cleaning for Building personnel. Sufficient precautions must be taken to protect finishes in the path of removal. Damages resulting from negligence will result in an assessment to the contractor for damages.

5. Contractors are responsible for timely cleaning of all public areas affected by their construction activities. Contractors are further responsible for providing and promptly removing their own trash containers.

6. Any work not to be installed in strict adherence with the construction contract documents must be approved by the Landlord prior to installation.

7. All workmen must conduct themselves in a reasonable manner at all times. The removal of any workmen using profanity, loitering in the Building, or creating a disturbance to tenants will be required.

8. All of the contractor's personnel are responsible for their own parking and the associated cost. Unauthorized vehicles found in loading areas or parking garages will be ticketed and towed.

9. All work requiring connection to the Building fire alarm system is subject to the Landlord's requirements. The completion of the tie-in must be accomplished utilizing the Landlord's specified contractor. Any warranties voided as a result of the contractor's or subcontractor's failure to comply with this requirement will result in the contractor's replacing the voided warranty in compliance with the Landlord's requirements.

10. Any roof penetrations required must be performed and repaired by the Landlord's designated subcontractor. Any warranties voided as a result of failure to comply with this requirement will result in the contractor's replacing the voided warranty in compliance with the Landlord's requirements.

EXHIBIT D

TENANT CONTRACTOR RULES AND REGULATIONS

11. Any work requiring the partial or full shutdown of any base Building systems, including electrical, mechanical or plumbing, must be scheduled with and approved by the Property Manager 24 hours in advance. The shutdowns generally must be done on Monday through Friday between 1:00 a.m. and 6:00 a.m. or on Saturday between 1:00 a.m. and 6:00 a.m.

12. All painting utilizing oil-based or polymer-based paints shall be performed before or after Building operating hours. The contractor shall be responsible for scheduling with the Property Manager any HVAC required for proper ventilation of work areas and adjacent tenant spaces.

13. The protection of existing mechanical equipment, including but not limited to baseboard heaters, heat pumps, air handlers, air conditioners, ductwork and distribution equipment, from physical damage or damage from dust and debris is the responsibility of the contractor. Damage as a result of failure to protect equipment will result in an assessment against the contractor for such damages and the resulting required repairs.

14. All penetrations to slab materials require the review and approval of the Landlord’s structural engineer without exception. The cost of this review and approval is the contractor’s responsibility.

15. All testing of fire alarm equipment requiring the sounding of bells, sirens, or voice annunciation must be scheduled with the Property Manager 48 hours in advance of the test. Pre-testing of new fire alarm work is mandatory. Rescheduled test as a result of the contractor’s failure to coordinate with the Property Manager, the contractor’s failure to completely pre-test the system, or the contractor’s failure to pass municipal test shall be the contractor’s responsibility.

16. These rules are subject to change at the Landlord’s discretion.

ADDENDUM I

CONTAINING MATERIALS

Due to the recent construction of the Leased Premises, Landlord is not aware of any suspected or presumed asbestos containing materials ("Suspect ACM") within the Leased Premises.

Notwithstanding any other provision in this Lease, in the event that Suspect ACM is identified in the Leased Premises, Tenant will not abrade, remove or engage in any activity that will disturb the Suspect ACM without Landlord's prior written consent, which may be withheld in Landlord's sole discretion.

In addition to any other rights of access to the Leased Premises granted to Landlord in this Lease, Tenant grants Landlord access to the Leased Premises to inspect, sample and abate any Suspect ACM. Landlord hereby agrees to provide Tenant reasonable advance notice of such activities, which will occur, to the extent possible, during non-business hours.

STATE OF CALIFORNIA
COUNTY OF SANTA CLARA

LEASE EXTENSION AND MODIFICATION AGREEMENT

THIS LEASE EXTENSION AND MODIFICATION AGREEMENT ("Agreement") made this 19th day of December, 2013, by and between FRIT SAN JOSE TOWN AND COUNTRY VILLAGE, LLC, a California limited liability company, by its managing member, STREET RETAIL, INC., a Maryland corporation ("Landlord"), and SI-BONE, INC., a Delaware corporation, ("Tenant").

W I T N E S S E T H :

WHEREAS, Landlord and Tenant entered into that certain Lease Agreement dated August 9, 2012 (hereinafter referred to as the "Lease"), pursuant to which Tenant leased from Landlord approximately ten thousand six hundred thirteen (10,613) square feet commonly known as Suite #2200 ("Original Leased Premises"), located at Stevens Creek Boulevard and Winchester Boulevard, San Jose, California 95128, in a development known as Santana Row Shopping Center ("Village"); and

WHEREAS, the Term of the Lease is presently scheduled to expire on December 31, 2016; and

WHEREAS, the parties hereto desire to amend and supplement the Lease, all as hereinafter provided.

NOW THEREFORE, in consideration of the foregoing and the sum of Ten Dollars ($10.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and the mutual promises contained herein, the parties hereto, intending to be legally bound, agree as follows:

1) Recitals. Each of the foregoing recitals and representations form a material part of this Agreement and are incorporated herein by this reference.

2) Storage Space. Addendum II, attached hereto, is hereby added to the Lease and by this reference made a part hereof.

3) California Energy Disclosure. Tenant agrees to cooperate with Landlord with respect to any disclosures necessary to comply with California Assembly Bills 1103 and 531 (or any similar legal requirements).

4) California Disability Compliance The Leased Premises have not undergone inspection by a certified access specialist to evaluate compliance with the Americans With Disabilities Act of 1990 (as amended), California Senate Bill 1608 (known as the Construction-Related Accessibility Standards Compliance Act) or any related Legal Requirement.

5) Brokers. Except for CBRE, whom Landlord agrees to pay a commission under the terms of a separate agreement, Landlord and Tenant each warrants and represents to the other

that no broker, finder or agent has acted for or on its behalf in connection with the negotiation, execution or procurement of this Agreement. Landlord and Tenant each agrees to indemnify and hold the other harmless from and against all liabilities, obligations and damages arising, directly or indirectly, out of or in connection with a claim from a broker, finder or agent with respect to this Agreement or the negotiation thereof, including costs and attorneys' fees incurred in the defense of any claim made by a broker alleging to have performed services on behalf of the indemnifying party.

6) Defined Terms. Terms that are defined in the Lease shall have the same meanings when such terms are used in this Agreement.

7) Time is of the Essence. Time is of the essence with respect to each and every obligation arising under this Agreement and the Lease.

8) Binding Effect. All of the covenants and agreements herein contained shall be binding upon and shall inure to the benefit of the parties hereto and their respective heirs, representatives, successors and assigns.

9) Confirmation of Terms. All of the terms, covenants and conditions of the Lease, except as are herein specifically modified and amended, shall remain in full force and effect, and are hereby adopted and reaffirmed by the parties hereto.

10) Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, and all of which shall constitute one and the same instrument. Moreover, signatures received by facsimile or portable document format shall be deemed effective for the purposes of this Agreement.

IN WITNESS WHEREOF, the parties hereto have set their hands and seals the day and date set forth above.

LANDLORD:
FRIT SAN JOSE TOWN AND COUNTRY VILLAGE, LLC, a California limited liability company, by its managing member, STREET RETAIL, INC., a Maryland corporation

By: */s/ Deborah A. Colson*
Name: Deborah A. Colson
Title: Vice President-Legal Operations

TENANT:
SI-BONE, INC., a Delaware corporation

By: */s/ Dan Murray*
Name: Dan Murray
Title: CFO

[Corporate Seal]

EXHIBIT A

INTENTIONALLY DELETED

ADDENDUM I

INTENTIONALLY DELETED

ADDENDUM II

STORAGE SPACE

In addition to the Leased Premises, Landlord agrees that Tenant may use from and after the date that the same is delivered to Tenant (the "Storage Delivery Date"), for the sole and express purpose of storage of items used in conjunction with Tenant's business in the Leased Premises, approximately six hundred forty-eight (648) square feet of basement storage space, commonly known as Space #13200B (hereinafter "Storage Space") in the approximate location shown on Addendum II, Schedule 1 attached hereto, in accordance with all terms of the Lease except as specifically provided herein.

Tenant shall accept the Storage Space in its "as is" condition. Any alterations or improvements to be performed by Tenant in the Storage Space shall be performed in accordance with plans and specifications approved in advance by Landlord, and in accordance with all applicable provisions of the Lease.

Tenant may use the Storage Space throughout the Term, whereupon Tenant shall vacate and surrender the Storage Space to Landlord in good and broom clean condition.

For all purposes under the Lease, the Storage Space shall be deemed to be a part of the Leased Premises, except as otherwise provided in this Addendum. Tenant shall pay Landlord the following as Additional Rent for the Storage Space (the "Storage Space Rent"):

Rent Period	Annually	Monthly
Storage Delivery Date to 12/31/2014	$15,552.00	$1,296.00
1/01/2015 to 12/31/2015	$16,018.56	$1,334.88
1/01/2016 to 12/31/2016	$16,499.12	$1,374.93

The Storage Space Rent shall be due and payable by Tenant monthly in advance on the first day of every calendar month during the Term, unless terminated earlier as provided above. The Floor Area of the Storage Space shall not, however, be included in Tenant's Proportionate share for purposes of calculating Tax Rent or Tenant's Share of Operating Costs, nor shall Tenant pay Minimum Rent on the Storage Space.

STATE OF CALIFORNIA
COUNTY OF SANTA CLARA

LEASE EXTENSION AND MODIFICATION AGREEMENT

THIS LEASE EXTENSION AND MODIFICATION AGREEMENT ("Agreement") made this 27 day of February, 2014, by and between FRIT SAN JOSE TOWN AND COUNTRY VILLAGE, LLC, a California limited liability company, by its managing member, STREET RETAIL, INC., a Maryland corporation ("Landlord"), and SI-BONE, INC., a Delaware corporation, ("Tenant").

W I T N E S S E T H:

WHEREAS, Landlord and Tenant entered into that certain Lease Agreement dated August 9, 2012, as amended by that certain Lease Extension and Modification Agreement dated December 19, 2013 (the "2013 Amendment") (hereinafter referred to as the "Lease"), pursuant to which Tenant is leasing from Landlord approximately ten thousand six hundred thirteen (10,613) square feet commonly known as Suite #2200 ("Original Leased Premises"), together with the Storage Space (as defined in the 2013 Amendment), located at Stevens Creek Boulevard and Winchester Boulevard, San Jose, California 95128, in a development known as Santana Row Shopping Center ("Village"); and

WHEREAS, the Term of the Lease is presently scheduled to expire on December 31, 2016; and

WHEREAS, the parties hereto desire to modify the Lease by expanding the Original Leased Premises to include the "cross-hatched" space indicated on the site plan attached hereto as Exhibit A, comprised of a portion of Suite 2100 and constituting approximately seven thousand six hundred thirty-one (7,631) square feet (subject to re-measurement and/or approval of the Tenant's Space Plan as defined in Exhibit B), and located within the Shopping Center ("Expansion Premises"), all as more specifically detailed below.

WHEREAS, the parties hereto desire to amend and supplement the Lease, all as hereinafter provided.

NOW THEREFORE, in consideration of the foregoing and the sum of Ten Dollars ($10.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and the mutual promises contained herein, the parties hereto, intending to be legally bound, agree as follows:

1) Recitals. Each of the foregoing recitals and representations form a material part of this Agreement and are incorporated herein by this reference.

2) Expansion Premises. From and after the date upon which Landlord delivers the Expansion Premises to Tenant (the "Expansion Date") with Landlord's Work (as defined in Exhibit B) substantially complete (also as defined in Exhibit B), the Leased Premises referred to in the Lease shall be expanded to include the Expansion Premises, and all references in the Lease and in this Agreement to the "Leased Premises" shall include both the Expansion Premises and

the Original Leased Premises. Exhibit A attached hereto shows the outline of the Leased Premises and the approximate outline of the Expansion Premises (subject to re-measurement and/or approval of the Tenant's Space Plan). It is understood and agreed by and between the parties hereto that commencing on the Expansion Date all of the terms and conditions of the Lease shall apply to the Expansion Premises as though the Expansion Premises were originally a portion of the Leased Premises. Commencing on the Expansion Date, the Floor Area of the Leased Premises shall be deemed to be eighteen thousand two hundred forty-four (18,244) square feet (subject to adjustment due to re-measurement and/or approval of the Tenant's Space Plan).

3) Term. Effective on the Expansion Date, (a) the Expansion Premises shall be deemed added to the Original Leased Premises and the Term for the Expansion Premises, the Original Leased Premises and the Storage Space shall be synchronized and become coterminous, and (b) the Term of the Lease (including the Storage Space) shall be extended such that the same shall now terminate on June 30, 2017, subject to all of the terms, covenants and conditions contained in the Lease as modified hereby.

4) Rent. Effective on the Expansion Date and continuing throughout the Term of the Lease, as extended hereby, the Minimum Rent payable by Tenant under the Lease shall be as follows:

Expansion Space (Minimum Rent to be prorated if first month is a partial month)

Rent Period	Annually	Monthly	PSF
Expansion Date to 12/31/2014	N/A	$28,005.77	$44.04
01/01/2015 to 12/31/2015	$349,805.04	$29,150.42	$45.84
01/01/2016 to 12/31/2016	$363,540.84	$30,295.07	$47.64
01/01/2017 to 06/30/2017	$378,192.36	$31,516.03	$49.56

Original Leased Premises

Rent Period	Annually	Monthly	PSF
01/01/2017 to 06/30/2017	$525,980.28	$43,831.69	$49.56

Storage Space

Rent Period	Annually	Monthly	PSF
01/01/2017 to 06/30/2017	$17,159.08	$1,429.92	$26.48

All payments of Rent shall continue to be paid in the intervals and manner required under the Lease.

5) Improvements. The parties shall provide the improvements to the Expansion Premises (as well as certain improvements and modifications to the Original Leased Premises) in accordance with their respective obligations set forth in Exhibit B attached hereto and made a part hereof. Except as otherwise specifically provided for in Exhibit B, Tenant accepts the

Expansion Premises in its "as is" condition; it being expressly understood that Landlord has made no representations or warranties with respect to such premises and that Tenant has inspected same and found such premises to be satisfactory.

6) Additional Security Deposit. Simultaneously with Tenant's execution of this Lease, Tenant shall deliver to Landlord an amount equal to $31,516.03, which amount (a) shall be added to the existing Security Deposit and be held pursuant to the terms of Section 17.07, and (b) represents a sum equal to the final month of Minimum Rent due for the Extended Term applicable the Expansion Space only, and, therefore may be adjusted in the event of any re-measurement of the Expansion Premises.

7) Parking Spaces. From and after the Expansion Date, Tenant shall have the right to use, on the same terms and conditions as set forth in the Lease for the Parking Spaces, an additional thirty (30) additional Parking Spaces (based on a rate of four (4) Parking Spaces per 1,000 square feet of Floor Area in the Expansion Premises).

8) California Energy Disclosure. Tenant agrees to cooperate with Landlord with respect to any disclosures necessary to comply with California Assembly Bills 1103 and 531 (or any similar legal requirements).

9) California Disability Compliance. The Leased Premises have not undergone inspection by a certified access specialist to evaluate compliance with the Americans With Disabilities Act of 1990 (as amended), California Senate Bill 1608 (known as the Construction-Related Accessibility Standards Compliance Act) or any related Legal Requirement.

10) Brokers. Except for CBRE, as broker by and on behalf of Landlord ("Landlord's Broker"), whom Landlord agrees to pay a commission under the terms of a separate agreement, and John Brady of CRESA, as broker by and on behalf of Tenant ("Tenant's Broker"), to whom Landlord's Broker shall pay a commission pursuant to the terms of a separate agreement, Landlord and Tenant each warrants and represents to the other that no broker, finder or agent has acted for or on its behalf in connection with the negotiation, execution or procurement of this Agreement. Landlord and Tenant each agrees to indemnify and hold the other harmless from and against all liabilities, obligations and damages arising, directly or indirectly, out of or in connection with a claim from a broker, finder or agent with respect to this Agreement or the negotiation thereof, including costs and attorneys' fees incurred in the defense of any claim made by a broker alleging to have performed services on behalf of the indemnifying party.

11) Defined Terms. Terms that are defined in the Lease shall have the same meanings when such terms are used in this Agreement.

12) Time is of the Essence. Time is of the essence with respect to each and every obligation arising under this Agreement and the Lease.

13) Binding Effect. All of the covenants and agreements herein contained shall be binding upon and shall inure to the benefit of the parties hereto and their respective heirs, representatives, successors and assigns.

14) Confirmation of Terms. All of the terms, covenants and conditions of the Lease, except as are herein specifically modified and amended, shall remain in full force and effect, and are hereby adopted and reaffirmed by the parties hereto.

15) Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, and all of which shall constitute one and the same instrument. Moreover, signatures received by facsimile or portable document format shall be deemed effective for the purposes of this Agreement.

IN WITNESS WHEREOF, the parties hereto have set their hands and seals the day and date set forth above.

LANDLORD:
FRIT SAN JOSE TOWN AND COUNTRY VILLAGE, LLC, a California limited liability company, by its managing member, STREET RETAIL, INC., a Maryland corporation

By: */s/ Deborah A. Colson*
Name: Deborah A. Colson
Title: Vice President-Legal Operations

TENANT:
SI-BONE, INC., a Delaware corporation

By: */s/ Robert E. Johnson*
Name: Robert E. Johnson
Title: Corp. Secretary & VP

[Corporate Seal]

EXHIBIT A

PLAN SHOWING ORIGINAL LEASED PREMISES
AND EXPANSION PREMISES

Federal Realty
1626 East Jefferson Street
Rockville, Maryland 20852
(301) 998-8100

SANTANA ROW

SAN JOSE, CA

EXHIBIT B

WORK AGREEMENT

Tenant's Authorized Representative. Tenant designates Jeffrey W. Dunn ("Tenant's Authorized Representative") as the person authorized to initial all plans, drawings, change orders and approvals pursuant to this Exhibit. Landlord shall not be obligated to respond to or act upon any such item until such item has been initialed by Tenant's Authorized Representative.

A. Landlord's Work. Commencing with the Expansion Premises in its "as is" condition as of the date hereof, Landlord or its designated contractor shall install in the Expansion Premises those initial improvements specified in final space plans and construction and engineering drawings approved by Landlord (the "**Landlord's Work**"). Landlord shall not be obligated to provide any improvements other than the Landlord's Work. Landlord or its contractor shall be available as reasonably required by Tenant throughout the design construction process to provide Tenant with budgeting and value engineering assistance. Tenant shall pay all costs and expenses (including a fee equal to 2% of the cost of Landlord's Work for Landlord's construction management services) incurred in connection with the Landlord's Work to the extent such costs and expenses exceed an allowance (the "**Construction Allowance**") equal to the product of (a) Nine and 00/100 dollars ($9.00), multiplied by (b) the number of square feet of rentable area in the Expansion Premises. Notwithstanding anything herein to the contrary, the Construction Allowance shall be used to fund the installation of permanent leasehold improvements included in the Landlord's Work, as well as certain "permissible soft costs" directly associated with the preparation and installation of the Landlord's Work (which "soft costs" shall be limited to the preparation of architectural drawings, permitting fees, engineering fees, supervision and labor charges (if shown as a component of the general conditions on the general contractor invoice) and temporary utilities consumed during construction); provided, however, that in no event shall Tenant be permitted to apply an amount in excess of 10% of the total Construction Allowance towards such permissible soft costs. Tenant shall not receive any credit, cash or otherwise, for any unused portion of the Construction Allowance.

After plans have been produced as set forth below, Landlord shall (a) solicit bids from not less than two (2) qualified general contractors for the completion of the Landlord's Work, (b) share the bids with Tenant's Authorized Representative and solicit his or her input on the same, and (c) shall make the selection of such contractor (the "Contractor") based upon price, schedule and expected value, and the selected bid price shall be referred to herein as the "Budget." The Budget, together with the price estimates from the Approved Architect (as defined below), together with any other costs required to design and complete the Landlord's Work (other than the Unreimburseable Landlord's Work) shall be collectively referred to as the "Contract Price." During design and construction, in the event that the Contract Price exceeds the Construction Allowance, Tenant shall pay Landlord shall pay one hundred percent (100%) of Landlord's reasonable estimate of those costs and expenses (if any) which exceed the Construction Allowance on or before the tenth (10th) day after the date Landlord gives Tenant notice of Landlord's estimate of such expenses. In the event of any shortfall between the estimated costs and the actual costs, Tenant shall pay for all such costs and expenses (minus any progress payments made as aforesaid) following substantial completion and within ten (10) days after Tenant receives a bill therefor. All amounts payable pursuant to this Exhibit by Tenant shall be considered Additional Rent and are subject to the provisions of the Lease.

B. Schedule.

1. All of the plans for the Landlord's Work shall be prepared by an architect reasonably selected by Landlord (the "Approved Architect"). Tenant shall respond to any plans submitted to it for approval not later than the 2" day following its receipt of the same. Tenant's failure to timely respond shall entitle Landlord, at Landlord's sole option, to deem such failure an approval of the same. Any disapproval by Tenant shall state in detail the reasons for such disapproval. If any plans and drawings are prepared by Landlord's architect or engineer, such plans and drawings will be prepared on Tenant's behalf and Tenant shall be solely responsible for the timely completion of all plans and drawings and for their compliance with all Legal Requirements.

2. Landlord shall instruct the Approved Architect to produce a space plan for Tenant's approval ("**Tenant's Space Plan**"), on or before the date that is thirty (30) days following the full execution and delivery of this Lease.

3. Landlord shall instruct the Approved Architect to produce final architectural working drawings by the date that is sixty (60) days following Tenant's approval (or deemed approval) of the Tenant's Space Plan. Such architectural working drawings shall include: master legend, construction plan, reflected ceiling plan, telephone and electrical outlet layout, finish plan and all architectural details, elevations and specifications necessary to construct the Expansion Premises. To the extent necessary, promptly after submission of the final architectural working drawings, final engineering working drawings and an estimation of the cost of providing the Landlord's Work shall be prepared.

4. The deadlines specified in this Paragraph shall apply whether plans and drawings are prepared by Landlord's architect or engineer or an architect or engineer selected by Tenant. All deadlines must be met in order to allow Landlord sufficient time to review plans and drawings, discuss with Tenant any changes thereto which Landlord believes to be necessary or desirable, and complete substantially the Landlord's Work. The parties intend for each such deadline to be the applicable deadline, even if any such deadline is before the date the Lease is executed.

C. Approval. All plans and drawings (and changes thereto) shall be subject to Landlord's written approval. Such approval shall not constitute either (a) approval of any delay caused by Tenant or a waiver of any right or remedy that may arise as a result of such delay, or (b) Landlord's representation that such approved plans, drawings or changes comply with all Legal Requirements.

D. Change Orders. If Tenant requests any change or addition to the work or materials to be provided by Landlord pursuant to this Exhibit after Tenant's approval of the final space plan, then Landlord shall not be obligated to perform such change or addition. All additional expenses attributable to any change order requested by Tenant and approved by Landlord shall be payable by Tenant prior to the performance of the work contemplated by such change order.

If Landlord submits an estimate of the additional expenses attributable to a change order, then Tenant shall pay such estimated additional expenses prior to the performance of the work contemplated by such change order. If the actual additional expenses attributable to such change order exceed such estimated additional expenses, then Tenant shall pay the amount of such excess no later than ten (10) days after Tenant's receipt of a bill therefor. If such estimated additional expenses exceed the actual additional expenses attributable to such change order, then the amount of such excess shall be credited against the first installment(s) of rent.

E. Substantial Completion.

1. Landlord and Tenant specifically agree that Tenant shall be solely responsible for the installation of its server(s) and any associated data cabling (the "Excepted Work"). While the Excepted Work shall be shown on the plans, the actual installation of such items shall be specifically excluded from the Budget and the scope of Landlord's Work and shall be performed by Tenant at its sole cost and expense. Except as provided in Paragraph 6(b), the Expansion Premises shall be deemed to have been substantially complete when the work and materials to be provided pursuant to this Exhibit (except for items of work and adjustment of equipment and fixtures that can be completed after the Expansion Premises are occupied without causing substantial interference with Tenant's use of the Expansion Premises (i.e., the "punch list" items)) have been completed, as reasonably determined by Landlord.

2. If Landlord shall be delayed in completing the work and materials to be provided pursuant to this Exhibit as a result of any of the following (each, a "Tenant Delay"): (1) Tenant's failure to comply with any of the deadlines specified in this Exhibit or with any of the other requirements of this Exhibit or the Lease, (2) Tenant's request for modifications to plans or working drawings subsequent to the date such plans or working drawings are approved by Landlord, (3) Tenant's failure to pay when due any amount required pursuant to this Exhibit, (4) Tenant's request for long lead time materials, finishes or installations, or (5) the performance of any work, or the entry into the Leased Premises, by Tenant or any person or firm employed or retained by Tenant, then for purposes of determining the Term Commencement Date and the Rent Commencement Date, the work and materials to be provided pursuant to this Exhibit shall be deemed to have been substantially complete on the date that Landlord determines in its reasonable judgment that such work and materials would have been substantially complete if such delay(s) had not occurred.

3. Possession. Tenant's taking of possession of the Expansion Premises shall constitute Tenant's acknowledgment that the Expansion Premises are in good condition and that all work and materials are satisfactory, except as to any defect or incomplete work that is described in a written notice given by Tenant to Landlord not later than the day Tenant takes possession of the Expansion Premises. Tenant and its agents shall have no right to make any alteration in the Expansion Premises until Tenant submits such written notice.

Landlord will correct and complete those defects and incomplete items described in such notice which Landlord confirms, in its reasonable judgment, are in fact defects or incomplete items. At Landlord's request, Tenant shall accompany Landlord to prepare the punch list on or before the date Tenant takes possession of the Expansion Premises.

Unreimburseable Landlord's Work

In addition and as a part of the Landlord's Work described above, Landlord shall perform the following items, which shall not be subject to the application of the Construction Allowance, nor otherwise reimburseable by Tenant:

1. Demolition of existing wall separating Original Leased Premises from the Expansion Premises; and

2. Construction of demising wall between Expansion Premises and remainder of Suite 2100.

Adjustment of Square Footage

In the event that (a) Tenant's Space Plan, or (b) a remeasurement of the Expansion Premises following Landlord's demising work reveals that the Floor Area of the Expansion Premises differs from 7,631 square feet, the Minimum Rent hereunder, the Security Deposit, the Construction Allowance and any other items predicated upon the square footage of the Expansion Premises shall be adjusted and the parties agree to enter into a letter agreement confirming the same.

ADDENDUM I

ASBESTOS CONTAINING MATERIALS

Due to the recent construction of the Expansion Premises, Landlord is not aware of any suspected or presumed asbestos containing materials ("Suspect ACM") within the Expansion Premises.

Notwithstanding any other provision in this Lease, in the event that Suspect ACM is identified in the Expansion Premises, Tenant will not abrade, remove or engage in any activity that will disturb the Suspect ACM without Landlord's prior written consent, which may be withheld in Landlord's sole discretion.

In addition to any other rights of access to the Expansion Premises granted to Landlord in this Lease, Tenant grants Landlord access to the Expansion Premises to inspect, sample and abate any Suspect ACM. Landlord hereby agrees to provide Tenant reasonable advance notice of such activities, which will occur, to the extent possible, during non-business hours.

LETTER AGREEMENT

SI-BONE, Inc.
Santana Row, San Jose, California

This Letter Agreement ("Agreement") effective February 27, 2015 (the "Effective Date") serves to modify and amend the Office Lease Agreement dated August 9, 2012, as amended by a Lease Extension and Modification Agreement dated December 19, 2013, and by a Lease Extension and Modification Agreement dated February 27, 2014 (hereinafter collectively referred to as the "Lease"), by and between FRIT SAN JOSE TOWN AND COUNTRY VILLAGE, LLC, a California limited liability company, by its managing member, STREET RETAIL INC., a Maryland corporation ("Landlord"), and SI-BONE, INC., a Delaware corporation ("Tenant"), regarding that certain premises known as Suite #2200 ("Leased Premises") located in that certain mixed-use development commonly known as Santana Row, San Jose, California (the "Village") as follows:

Tenant has asserted that it has encountered noise disturbances created by construction in an adjacent tenant premises prior to the Effective Date (the "Noise Disturbances"). Although Landlord asserts that it is not responsible for the actions of the adjacent tenant, as a good faith gesture Landlord has agreed to give Tenant a credit against Rent payable for the month of March, 2015 in the amount of Twenty Thousand and 00/100 Dollars ($20,000.00).

In consideration of the foregoing, Tenant does hereby fully and forever release and discharge Landlord from any and all claims, demands, actions and rights of actions relating to the Noise Disturbances which it may now have or may hereafter have (the "Claims").

Tenant understands and agrees that this settlement is a full accord, satisfaction, and discharge of all of the Claims, whether such claims are presently known or unknown, anticipated or unanticipated, from the beginning of time to the Effective Date. With respect to such unknown or unanticipated claims, Tenant hereby knowingly, voluntarily and expressly waive all rights and benefits otherwise conferred by the provisions of California Civil Code section 1542, which provides as follows:

> A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM MUST HAVE MATERIALLY AFFECTED HIS SETTLEMENT WITH THE DEBTOR.

Tenant hereby acknowledges that. although it is possible that Tenant may discover new or additional damages or injuries relating to the Claims, this settlement extinguishes all obligations in favor of Landlord.

Finally, Tenant agrees that the aforementioned construction is a continuing process and similar disturbances or inconveniences may arise following the Effective Date and, unless the same are extraordinary or otherwise unreasonable, shall not be deemed violative of any rights of Tenant.

LANDLORD:
FRIT SAN JOSE TOWN AND COUNTRY VILLAGE, LLC, a California limited liability company, a California limited liability company, by its managing member, STREET RETAIL, INC., a Maryland corporation

By: */S/ Deborah A. Colson*
Name: Deborah A. Colson
Title: Vice President – Legal Operations
Date:

TENANT:
SI-BONE, INC., a Delaware corporation

By: */S/ Robert E. Johnson*
Name Robert E. Johnson
Title: General Counsel
Date: 3/27/15

STATE OF CALIFORNIA
COUNTY OF SANTA CLARA

LEASE EXTENSION AGREEMENT

THIS LEASE EXTENSION AGREEMENT (this "Agreement") is made this 20th day of June, 2016, by and between FRIT SAN JOSE TOWN AND COUNTRY VILLAGE, LLC, a California limited liability company, by its managing member, STREET RETAIL, INC., a Maryland corporation ("Landlord"), and SI-BONE, INC., a Delaware corporation ("Tenant").

W I T N E S S E T H :

WHEREAS, Landlord and Tenant entered into that certain Office Lease Agreement dated August 9, 2012 (the "Original Lease"), as amended by a Lease Extension and Modification Agreement dated December 19, 2013 (the "First Amendment"), and by a Lease Extension and Modification Agreement dated February 27, 2014 (the "Second Amendment"), and by a Letter Agreement dated February 27, 2015 (the "Letter Agreement"; the Original Lease, First Amendment, Second Amendment and Letter Agreement being collectively referred to herein as the "Lease"), pursuant to which Tenant leased from Landlord approximately eighteen thousand two hundred forty-four (18,244) square feet commonly known as Spaces #13200 and #13210 (collectively, the "Leased Premises") and approximately 648 square feet of storage space (the "Storage Space") in the mixed-use development known as Santana Row, located at Stevens Creek Boulevard and Winchester Boulevard, San Jose, California 95128; and

WHEREAS, the Term of the Lease expires on June 30, 2017; and

WHEREAS, the parties have agreed to extend the Term of the Lease for an additional one (1) year period upon the terms and conditions more particularly set forth herein.

NOW THEREFORE, in consideration of the foregoing and the sum of Ten Dollars ($10.00) and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, and the mutual promises contained herein, the parties hereto, intending to be legally bound, agree as follows:

1) Recitals. Each of the foregoing recitals and representations form a material part of this Agreement and are incorporated herein by this reference.

2) Term. The Term of the Lease shall be extended for a period of one (1) year, commencing on July 1, 2017 and terminating on June 30, 2018 (the "Extended Term"), subject to all of the terms, covenants and conditions contained in the Lease as modified hereby.

3) Minimum Rent.

A. For all periods prior to July 1, 2017 Tenant shall continue to pay Landlord Minimum Rent in accordance with the terms and conditions of the Lease in effect immediately preceding the date of this Agreement.

B. Commencing on July 1, 2017 and continuing throughout the Extended Term, the Minimum Rent payable by Tenant under the Lease shall be as follows:

Leased Premises

Rent Period	Annually	Monthly
7/01/2017 to 6/30/2018	$985,176.00	$82,098.00

Storage Space

Rent Period	Annually	Monthly
7/01/2017 to 6/30/2018	$8,579.54	$714.96

All payments of Rent shall continue to be paid in the intervals and manner required under the Lease and shall be made payable to Landlord at:

FRIT SAN JOSE TOWN AND COUNTRY VILLAGE, LLC - Property 1668
c/o Federal Realty Investment Trust
P.O. Box 79408
City of Industry, CA 91716-9408

4) Condition of the Leased Premises. Tenant agrees to retain possession of the Leased Premises and Storage Space in their respective current as-is condition; it being agreed that Landlord shall have no obligation to make any alterations or improvements thereto, or provide Tenant any allowance in lieu thereof.

5) No Other Options. Should the Lease (including any Addenda thereto) provide Tenant renewal options or rights, or expansion options or rights, other than as specifically provided in this Agreement, such options or rights shall be of no further force or effect.

6) Signage. Tenant hereby waives its right to install exterior building signage as shown on Exhibit A-1 of the Original Lease. The second paragraph of Section 4.04 and Exhibit A-1 of the Original Lease are hereby deleted in their entirety; provided, however, that Tenant waives no other rights related to signage or demarcation of its suite as provided for by the Lease.

7) Communications Data Room. Landlord and Tenant hereby agree that Tenant may use a portion of the Communications Data Room in the basement of the Building as more particularly described on the plans attached hereto and incorporated herein as Exhibit A (the “CDR Space”). Landlord agrees that Tenant may use the CDR Space for the operation of certain of Tenant’s computer servers and communications networking resources. Landlord agrees that Tenant shall not be charged any additional Rent for use of the CDR Space, but Tenant shall be obligated to pay for any utilities used in connection with Tenant’s use of the CDR Space (whether directly to the utility provider by separate meter, or as a reimbursement to Landlord by a separate submeter or by estimated payments, as the parties mutually agree). The CDR Space shall be subject to all of the terms and conditions of the Lease (other than the payment of Rent as provided above), including, without limitation, insurance and indemnification. Notwithstanding anything to the contrary, Tenant agrees that Tenant’s use of the CDR Space shall be at Tenant’s sole risk; it being acknowledged and agreed that Landlord makes no representation or warranty as to access to or Building services or utilities provided to the CDR Space.

8) Broker's Commissions. Except for Mike Grado and Shane McNulty of CB Richard Ellis, to whom Landlord shall pay a commission under the terms of a separate agreement, Landlord and Tenant each warrants and represents to the other that no broker, finder or agent has acted for or on its behalf in connection with the negotiation, execution or procurement of this Lease. Landlord and Tenant each agrees to indemnify and hold the other harmless from and against all liabilities, obligations and damages arising, directly or indirectly, out of or in connection with a claim from a broker, finder or agent with respect to this Lease or the negotiation thereof, including costs and attorneys' fees incurred in the defense of any claim made by a broker alleging to have performed services on behalf of the indemnifying party.

9) Defined Terms. Terms that are defined in the Lease shall have the same meanings when such terms are used in this Agreement.

10) Time is of the Essence. Time is of the essence with respect to each and every obligation arising under this Agreement and the Lease.

11) Binding Effect. All of the covenants and agreements herein contained shall be binding upon and shall inure to the benefit of the parties hereto and their respective heirs, representatives, successors and assigns.

12) Confirmation of Terms. All of the terms, covenants and conditions of the Lease, except as are herein specifically modified and amended, shall remain in full force and effect, and are hereby adopted and reaffirmed by the parties hereto.

13) Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, and all of which shall constitute one and the same instrument. Moreover, signatures received by facsimile or portable document format shall be deemed effective for the purposes of this Agreement.

[SIGNATURE PAGE TO FOLLOW]

IN WITNESS WHEREOF, the parties hereto have set their hands and seals the day and date set forth above.

LANDLORD:
FRIT SAN JOSE TOWN AND COUNTRY VILLAGE, LLC, a California limited liability company, by its managing member, STREET RETAIL, INC., a Maryland corporation

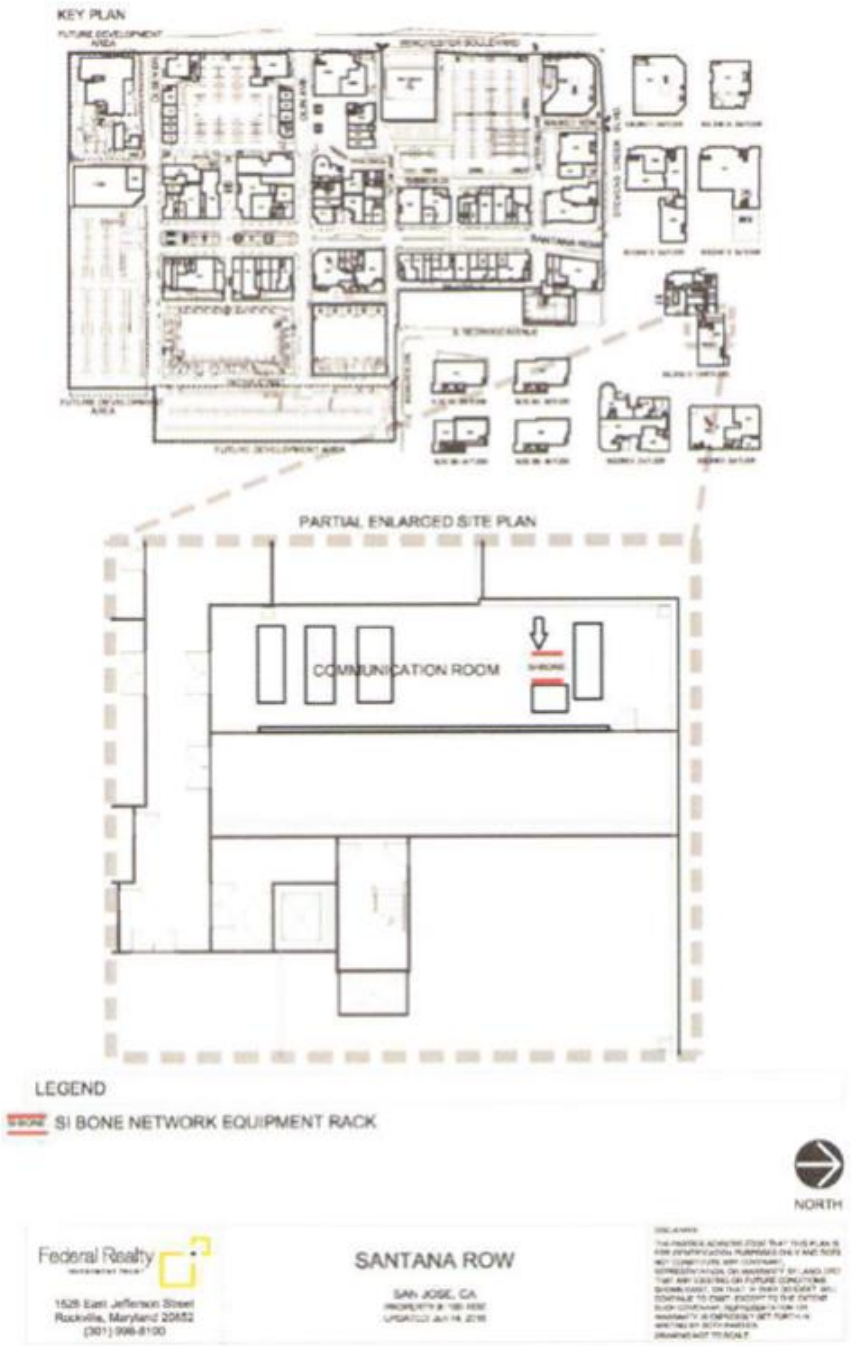
By: */s/ Deborah A. Colson*
Name: Deborah A. Colson
Title: Vice President-Legal Operations

TENANT:
SI-BONE, INC., a Delaware corporation

By: */s/ Jeffrey W. Dunn*
Name: Jeffrey W. Dunn
Title: Chief Executive Officer

EXHIBIT A

CDR PLANS



LOAN AND SECURITY AGREEMENT

THIS LOAN AND SECURITY AGREEMENT (as the same may from time to time be amended, modified, supplemented or restated, this "**Agreement**") dated as of October 20, 2015 (the "**Effective Date**") among OXFORD FINANCE LLC, a Delaware limited liability company with an office located at 133 North Fairfax Street, Alexandria, Virginia 22314 ("**Oxford**"), as collateral agent (together with its successors and assigns in such capacity, "**Collateral Agent**"), the Lenders listed on Schedule 1.1 hereof or otherwise a party hereto from time to time including Oxford in its capacity as a Lender and SILICON VALLEY BANK, a California corporation with an office located at 3003 Tasman Drive, Santa Clara, CA 95054 ("**Bank**" or "**SVB**") (each a "**Lender**" and collectively, the "**Lenders**"), and SI-BONE, INC., a Delaware corporation with offices located at 3055 Olin Avenue, Suite 2200, San Jose, California 95128 ("**Borrower**"), provides the terms on which the Lenders shall lend to Borrower and Borrower shall repay the Lenders. The parties agree as follows:

1. ACCOUNTING AND OTHER TERMS

1.1 Accounting terms not defined in this Agreement shall be construed in accordance with GAAP. Calculations and determinations must be made in accordance with GAAP. Capitalized terms not otherwise defined in this Agreement shall have the meanings set forth in Section 13. All other terms contained in this Agreement, unless otherwise indicated, shall have the meaning provided by the Code to the extent such terms are defined therein. All references to "**Dollars**" or "**$**" are United States Dollars, unless otherwise noted.

2. LOANS AND TERMS OF PAYMENT

2.1 Promise to Pay. Borrower hereby unconditionally promises to pay each Lender, the outstanding principal amount of all Term Loans advanced to Borrower by such Lender and accrued and unpaid interest thereon and any other amounts due hereunder as and when due in accordance with this Agreement.

2.2 Term Loans.

(a) Availability.

(i) Subject to the terms and conditions of this Agreement, the Lenders agree, severally and not jointly, to make term loans to Borrower on the Effective Date in an aggregate amount of Sixteen Million Two Hundred Thousand Dollars ($16,200,000.00) according to each Lender's Term A Loan Commitment as set forth on Schedule 1.1 hereto (such term loans are hereinafter referred to singly as a "**Term A Loan**", and collectively as the "**Term A Loans**"). After repayment, no Term A Loan may be re-borrowed.

(ii) Subject to the terms and conditions of this Agreement, the Lenders agree, severally and not jointly, during the Second Draw Period, to make term loans to Borrower in an aggregate amount equal to Ten Million Dollars ($10,000,000.00) and disbursed in a single advance according to each Lender's Term B Loan Commitment as set forth on Schedule 1.1 hereto (such term loans are hereinafter referred to singly as a "**Term B Loan**", and collectively as the "**Term B Loans**"). After repayment, no Term B Loan may be re-borrowed.

(iii) Subject to the terms and conditions of this Agreement, the Lenders agree, severally and not jointly, during the Third Draw Period, to make term loans to Borrower in an aggregate amount equal to Four Million Dollars ($4,000,000.00) and disbursed in a single advance according to each Lender's Term C Loan Commitment as set forth on Schedule 1.1 hereto (such term loans are hereinafter referred to singly as a "**Term C Loan**", and collectively as the "**Term C Loans**"). After repayment, no Term C Loan may be re-borrowed.

(iv) Subject to the terms and conditions of this Agreement, the Lenders agree, severally and not jointly, during the Fourth Draw Period, to make term loans to Borrower in an aggregate amount equal to Five Million Dollars ($5,000,000.00) and disbursed in a single advance according to each Lender's Term D Loan Commitment as set forth on Schedule 1.1 hereto (such term loans are hereinafter referred to singly as a "**Term D Loan**", and collectively as the "**Term D Loans**"; each Term A Loan, Term B Loan, Term C Loan or Term D Loan is hereinafter referred to singly as a "**Term Loan**" and the Term A Loans, the Term B Loans, the Term C Loans and the Term D Loans are hereinafter referred to collectively as the "**Term Loans**"). After repayment, no Term D Loan may be re-borrowed.

(b) Repayment. Borrower shall make monthly payments of interest only commencing on the first (1st) Payment Date following the Funding Date of each Term Loan, and continuing on the Payment Date of each successive month thereafter through and including the Payment Date immediately preceding the Amortization Date. Borrower agrees to pay, on the Funding Date of each Term Loan, any initial partial monthly interest payment otherwise due for the period between the Funding Date of such Term Loan and the first Payment Date thereof. Commencing on the Amortization Date, and continuing on the Payment Date of each month thereafter, Borrower shall make consecutive equal monthly payments of principal, together with applicable interest, in arrears, to each Lender, as calculated by Collateral Agent (which calculations shall be deemed correct absent manifest error) based upon: (1) the amount of such Lender's Term Loan, (2) the effective rate of interest, as determined in Section 2.4(a), and (3) a repayment schedule equal to (x) thirty-three (33) months, if the Amortization Date is April 1, 2017, or (y) twenty-seven (27) months if the Amortization Date is October 1, 2017. All unpaid principal and accrued and unpaid interest with respect to each Term Loan is due and payable in full on the Maturity Date. Each Term Loan may only be prepaid in accordance with Sections 2.2(c) and 2.2(d).

(c) Mandatory Prepayments. If the Term Loans are accelerated following the occurrence of an Event of Default, Borrower shall immediately pay to Lenders, payable to each Lender in accordance with its respective Pro Rata Share (other than the Additional Prepayment Fee, which is solely for the benefit of SVB), an amount equal to the sum of: (i) all outstanding principal of the Term Loans plus accrued and unpaid interest thereon through the prepayment date, (ii) the Prepayment Fee, plus (iii) all other Obligations that are due and payable, including Lenders' Expenses and interest at the Default Rate with respect to any past due amounts.

(d) Permitted Prepayment of Term Loans. Borrower shall have the option to prepay all, but not less than all, of the Term Loans advanced by the Lenders under this Agreement, provided Borrower (i) provides written notice to Collateral Agent of its election to prepay the Term Loans at least thirty (30) days prior to such prepayment, and (ii) pays to the Lenders on the date of such prepayment, payable to each Lender in accordance with its

respective Pro Rata Share (other than the Additional Prepayment Fee, which is solely for the benefit of SVB), an amount equal to the sum of (A) all outstanding principal of the Term Loans plus accrued and unpaid interest thereon through the prepayment date, (B) the Prepayment Fee, plus (C) all other Obligations that are due and payable, including Lenders' Expenses and interest at the Default Rate with respect to any past due amounts.

2.3 Revolving Advances.

(a) Availability. Subject to the terms and conditions of this Agreement and to deduction of Reserves, Lenders agree, severally and not jointly, to lend to Borrower from time to time prior to the Maturity Date, according to each Lender's pro rata share of the Revolving Line (based upon the respective Revolving Line Commitment Percentage of each Lender), Revolving Advances not to exceed the Availability Amount. Amounts borrowed under the Revolving Line may be repaid and, prior to the Maturity Date, reborrowed, subject to the applicable terms and conditions precedent herein.

(b) Termination; Repayment. The Revolving Line terminates on the Maturity Date, when the principal amount of all Revolving Advances, the unpaid interest thereon, and all other Obligations relating to the Revolving Line (including but not limited to the Revolving Line Termination Fee) shall be immediately due and payable.

(c) Overadvances. If, at any time, the outstanding principal amount of any Revolving Advances exceeds the lesser of either the Revolving Line or the Borrowing Base, Borrower shall immediately pay to Lenders in cash the amount of such excess (such excess, the "**Overadvance**"). Without limiting Borrower's obligation to repay Lenders any Overadvance, Borrower agrees to pay Lenders interest on the outstanding amount of any Overadvance, on demand, at the Default Rate.

2.4 Payment of Interest on the Credit Extensions.

(a) Interest Rate. Subject to Section 2.4(b), the principal amount of the outstanding Credit Extensions shall accrue interest at a floating per annum rate equal to the Basic Rate, determined by Collateral Agent, which interest shall be payable monthly in arrears in accordance with Sections 2.2(b), 2.3(b), 2.3(c) and 2.4(e). Interest shall accrue on each Credit Extension commencing on, and including, the Funding Date of such Credit Extension, and shall accrue on the principal amount outstanding thereunder through and including the day on which such Credit Extension is paid in full.

(b) Default Rate. Immediately upon the occurrence and during the continuance of an Event of Default, Obligations shall accrue interest at a floating per annum rate equal to the rate that is otherwise applicable thereto plus five percentage points (5.00%) (the "**Default Rate**"). Payment or acceptance of the increased interest rate provided in this Section 2.4(b) is not a permitted alternative to timely payment and shall not constitute a waiver of any Event of Default or otherwise prejudice or limit any rights or remedies of Collateral Agent.

(c) 360-Day Year. Interest shall be computed on the basis of a three hundred sixty (360) day year, and the actual number of days elapsed.

(d) Debit of Accounts. Collateral Agent and each Lender may debit (or ACH) any deposit accounts, maintained by Borrower or any of its Subsidiaries, including the Designated Deposit Account, for principal and interest payments or any other amounts Borrower owes the Lenders under the Loan Documents when due. Any such debits (or ACH activity) shall not constitute a set-off.

(e) Payments. Except as otherwise expressly provided herein, all payments by Borrower under the Loan Documents shall be made to the respective Lender to which such payments are owed, at such Lender's office in immediately available funds on the date specified herein. Unless otherwise provided, interest is payable monthly on the Payment Date of each month. Payments of principal and/or interest received after 12:00 noon Eastern time are considered received at the opening of business on the next Business Day. When a payment is due on a day that is not a Business Day, the payment is due the next Business Day and additional fees or interest, as applicable, shall continue to accrue until paid. All payments to be made by Borrower hereunder or under any other Loan Document, including payments of principal and interest, and all fees, expenses, indemnities and reimbursements, shall be made without set-off, recoupment or counterclaim, in lawful money of the United States and in immediately available funds.

(f) Adjustments to Interest Rate. Changes to the interest rate of any Credit Extension based on changes to the Basic Rate shall be effective on the effective date of any change to the Basic Rate and to the extent of any such change.

2.5 Secured Promissory Notes. The Term Loans and Revolving Advances shall be evidenced by Secured Promissory Notes in the form attached as Exhibit D hereto (each a "**Secured Promissory Note**"), and shall be repayable as set forth in this Agreement. Borrower irrevocably authorizes each Lender to make or cause to be made, on or about the Funding Date of any Credit Extension or at the time of receipt of any payment of principal on such Lender's Secured Promissory Note, an appropriate notation on such Lender's Secured Promissory Note Record reflecting the making of such Term Loan, Revolving Advance or (as the case may be) the receipt of such payment. The outstanding amount of each Term Loan and each Revolving Advance set forth on such Lender's Secured Promissory Note Record shall be prima facie evidence of the principal amount thereof owing and unpaid to such Lender, but the failure to record, or any error in so recording, any such amount on such Lender's Secured Promissory Note Record shall not limit or otherwise affect the obligations of Borrower under any Secured Promissory Note or any other Loan Document to make payments of principal of or interest on any Secured Promissory Note when due. Upon receipt of an affidavit of an officer of a Lender as to the loss, theft, destruction, or mutilation of its Secured Promissory Note, Borrower shall issue, in lieu thereof, a replacement Secured Promissory Note in the same principal amount thereof and of like tenor.

2.6 Fees. Borrower shall pay to Collateral Agent:

(a) Prepayment Fee. The Prepayment Fee, when due hereunder, to be shared between the Lenders in accordance with their respective Pro Rata Shares;

(b) Additional Prepayment Fee. The Additional Prepayment Fee, when due hereunder, solely for the benefit of SVB.

(c) Revolving Line Termination Fee. A fee in the event of termination of the Revolving Line (whether at Borrower's election prior to the Maturity Date or at any Lender's election due to the occurrence and continuance of an Event of Default (the "**Revolving Line Termination Fee**") in an amount equal to One Hundred Sixty Thousand Dollars ($160,000.00) to be shared between the Lenders in accordance with their respective Revolving Line Commitment Percentages, in addition to the payment of any other expenses or fees then-owing. Notwithstanding any such termination of the Revolving Line, Lenders' liens and security interests in the Collateral shall continue until Borrower fully satisfies its Obligations (other than inchoate indemnity obligations); and

(d) Lender's Expenses. All Lenders' Expenses (including reasonable attorneys' fees and expenses for documentation and negotiation of this Agreement) incurred through and after the Effective Date, when due.

(e) Good Faith Deposit. Borrower has paid to the Lenders a deposit of Twenty-Five Thousand Dollars ($25,000.00), which will be applied to Lenders' Expenses.

2.7 Withholding. Payments received by the Lenders from Borrower hereunder will be made free and clear of and without deduction for any and all present or future taxes, levies, imposts, duties, deductions, withholdings, assessments, fees or other charges imposed by any governmental authority (including any interest, additions to tax or penalties applicable thereto). Specifically, however, if at any time any Governmental Authority, applicable law, regulation or international agreement requires Borrower to make any withholding or deduction from any such payment or other sum payable hereunder to the Lenders, Borrower hereby covenants and agrees that the amount due from Borrower with respect to such payment or other sum payable hereunder will be increased to the extent necessary to ensure that, after the making of such required withholding or deduction, each Lender receives a net sum equal to the sum which it would have received had no withholding or deduction been required and Borrower shall pay the full amount withheld or deducted to the relevant Governmental Authority. Borrower will, upon request, furnish the Lenders with proof reasonably satisfactory to the Lenders indicating that Borrower has made such withholding payment; provided, however, that Borrower need not make any withholding payment if the amount or validity of such withholding payment is contested in good faith by appropriate and timely proceedings and as to which payment in full is bonded or reserved against by Borrower. The agreements and obligations of Borrower contained in this Section 2.7 shall survive the termination of this Agreement.

3. CONDITIONS OF LOANS

3.1 Conditions Precedent to Initial Credit Extension. Each Lender's obligation to make the initial Credit Extension is subject to the condition precedent that Collateral Agent and each Lender shall consent to or shall have received, in form and substance satisfactory to Collateral Agent and each Lender, such documents, and completion of such other matters, as Collateral Agent and each Lender may reasonably deem necessary or appropriate, including, without limitation:

(a) original Loan Documents, each duly executed by Borrower and each Subsidiary, as applicable;

(b) duly executed original Control Agreements with respect to any Collateral Accounts maintained by Borrower or any of its domestic U.S. Subsidiaries;

(c) duly executed original Secured Promissory Notes in favor of each Lender according to its Term A Loan Commitment Percentage and Revolving Line Commitment Percentage;

(d) the Operating Documents and good standing certificates of Borrower and its Subsidiaries certified by the Secretary of State (or equivalent agency) of Borrower's and such Subsidiaries' jurisdiction of organization or formation and each jurisdiction in which Borrower and each Subsidiary is qualified to conduct business, each as of a date no earlier than thirty (30) days prior to the Effective Date;

(e) a completed Perfection Certificate for Borrower and each of its Subsidiaries;

(f) the Annual Projections, for the current calendar year;

(g) duly executed original officer's certificate for Borrower and each Subsidiary that is a party to the Loan Documents, in a form acceptable to Collateral Agent and the Lenders;

(h) certified copies, dated as of date no earlier than thirty (30) days prior to the Effective Date, of financing statement searches, as Collateral Agent shall request, accompanied by written evidence (including any UCC termination statements) that the Liens indicated in any such financing statements either constitute Permitted Liens or have been or, in connection with the initial Credit Extension, will be terminated or released;

(i) a landlord's consent executed in favor of Collateral Agent in respect of all of Borrower's and each domestic U.S. Subsidiaries' leased locations;

(j) a bailee waiver executed in favor of Collateral Agent in respect of each third party bailee where Borrower or any domestic U.S. Subsidiary maintains Collateral having a book value in excess of One Hundred Thousand Dollars ($100,000.00);

(k) a duly executed legal opinion of counsel to Borrower dated as of the Effective Date;

(l) evidence satisfactory to Collateral Agent and the Lenders that the insurance policies required by Section 6.5 hereof are in full force and effect, together with appropriate evidence showing loss payable and/or additional insured clauses or endorsements in favor of Collateral Agent, for the ratable benefit of the Lenders;

(m) a copy of any applicable Registration Rights Agreement or Investors' Rights Agreement and any amendments thereto;

(n) a payoff letter from Silicon Valley Bank in respect of the Existing Indebtedness;

(o) evidence that (i) the Liens securing the Existing Indebtedness will be terminated and (ii) the documents and/or filings evidencing the perfection of such Liens, including without limitation any financing statements and/or control agreements, have or will, concurrently with the initial Credit Extension, be terminated; and

(p) payment of the fees and Lenders' Expenses then due as specified in Section 2.6 hereof.

3.2 Conditions Precedent to all Credit Extensions. The obligation of each Lender to make each Credit Extension, including the initial Credit Extension, is subject to the following conditions precedent:

(a) receipt by (i) the Lenders of an executed Disbursement Letter in the form of Exhibit B-1 attached hereto; and (ii) SVB of an executed Loan Payment/Advance Request Form in the form of Exhibit B-2 attached hereto;

(b) the representations and warranties in Section 5 hereof shall be true, accurate and complete in all material respects on the date of the Disbursement Letter (and the Loan Payment/Advance Request Form) and on the Funding Date of each Credit Extension; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date, and no Event of Default shall have occurred and be continuing or result from the Credit Extension. Each Credit Extension is Borrower's representation and warranty on that date that the representations and warranties in Section 5 hereof are true, accurate and complete in all material respects; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date;

(c) in such Lender's sole discretion, there has not been any Material Adverse Change;

(d) after giving effect to such Credit Extension, the total outstanding Revolving Advances does not exceed the Availability Amount;

(e) to the extent not delivered at the Effective Date, duly executed original Secured Promissory Notes and Warrants, in number, form and content acceptable to each Lender, and, with respect to the Secured Promissory Notes, in favor of each Lender according to its Term Loan Commitment Percentage or Revolving Line Commitment Percentage, as applicable, with respect to each Credit Extension made by such Lender after the Effective Date; and, with respect to the Warrants, Warrants in favor of each Lender consistent with the Warrants issued on the Effective Date and having the same type/series of stock, exercise price and warrant coverage percentage; and

(f) payment of the fees and Lenders' Expenses then due as specified in Section 2.6 hereof.

3.3 Covenant to Deliver. Borrower agrees to deliver to Collateral Agent and the Lenders each item required to be delivered to Collateral Agent under this Agreement as a condition precedent to any Credit Extension. Borrower expressly agrees that a Credit Extension made prior to the receipt by Collateral Agent or any Lender of any such item shall not constitute a waiver by Collateral Agent or any Lender of Borrower's obligation to deliver such item, and any such Credit Extension in the absence of a required item shall be made in each Lender's sole discretion.

3.4 Procedures for Borrowing.

(a) Term Loans. Subject to the prior satisfaction of all other applicable conditions to the making of a Term Loan set forth in this Agreement, to obtain a Term Loan, Borrower shall notify the Lenders (which notice shall be irrevocable) by electronic mail, facsimile, or telephone by 12:00 noon Eastern time three (3) Business Days prior to the date the Term Loan is to be made. Together with any such electronic, facsimile or telephonic notification, Borrower shall deliver to the Lenders by electronic mail or facsimile a completed Disbursement Letter (and the Loan Payment/Advance Request Form, with respect to SVB) executed by a Responsible Officer or his or her designee. The Lenders may rely on any telephone notice given by a person whom a Lender reasonably believes is a Responsible Officer or his or her designee. On the Funding Date, each Lender shall credit and/or transfer (as applicable) to the Designated Deposit Account, an amount equal to its Term Loan Commitment.

(b) Revolving Advances. Subject to the prior satisfaction of all other applicable conditions to the making of a Revolving Advance set forth in this Agreement, to obtain a Revolving Advance, Borrower shall notify the Lenders (which notice shall be irrevocable) by electronic mail, facsimile, or telephone by 12:00 noon Eastern time three (3) Business Days prior to the Funding Date of the Revolving Advance. Together with any such electronic, facsimile or telephonic notification, Borrower shall deliver to the Lenders by electronic mail or facsimile a completed Transaction Report, together with any schedules related thereto, and a completed Loan Payment/Advance Request executed by a Responsible Officer or his or her designee. The Lenders may rely on any telephone notice given by a person whom a Lender reasonably believes is a Responsible Officer or his or her designee. Bank, on behalf of Collateral Agent and Lenders, shall credit Revolving Advances to the Designated Deposit Account and such Revolving Advances shall be deemed to be Revolving Advances by each of the Lenders in the amount of their respective Revolving Line Commitment Percentages. Bank, Collateral Agent and the Lenders shall make reasonable efforts to make Revolving Advances on the Funding Date requested by Borrower. The Lenders shall reimburse Bank for Revolving Advances made by Bank. (The Lenders, Collateral Agent and Bank, as among themselves, agree that unless Lenders have already funded their respective Revolving Line Commitment Percentages of a Revolving Advance, Bank shall provide the Lenders with a participation settlement report by 12:00 noon Eastern time on the second Business Day of each week following the week in which a Revolving Advance has been funded by Bank and that such reimbursement shall occur by the third Business Day of such week; the Borrower is not a party to or a beneficiary of this sentence and it may be amended without Borrower's consent.) Bank,

on behalf of the Collateral Agent and the Lenders, may make Revolving Advances under this Agreement based on instructions from a Responsible Officer or his or her designee or without instructions if the Revolving Advances are necessary to meet Obligations which have become due.

4. CREATION OF SECURITY INTEREST

4.1 Grant of Security Interest. Borrower hereby grants Collateral Agent, for the ratable benefit of the Lenders, to secure the payment and performance in full of all of the Obligations, a continuing security interest in, and pledges to Collateral Agent, for the ratable benefit of the Lenders, the Collateral, wherever located, whether now owned or hereafter acquired or arising, and all proceeds and products thereof. Borrower represents, warrants, and covenants that the security interest granted herein is and shall at all times continue to be a first priority perfected security interest in the Collateral, subject only to Permitted Liens that are permitted by the terms of this Agreement to have priority to Collateral Agent's Lien. If Borrower shall acquire a commercial tort claim (as defined in the Code), Borrower, shall promptly notify Collateral Agent in a writing signed by Borrower, as the case may be, of the general details thereof (and further details as may be required by Collateral Agent) and grant to Collateral Agent, for the ratable benefit of the Lenders, in such writing a security interest therein and in the proceeds thereof, all upon the terms of this Agreement, with such writing to be in form and substance reasonably satisfactory to Collateral Agent.

Borrower acknowledges that it previously has entered, and/or may in the future enter, into Bank Services Agreements with Bank. Regardless of the terms of any Bank Services Agreement, Borrower agrees that any amounts Borrower owes Bank thereunder shall be deemed to be Obligations hereunder and that it is the intent of Borrower and Bank to have all such Obligations secured by the first priority perfected security interest in the Collateral granted herein (subject only to Permitted Liens that may have superior priority to Bank's Lien in this Agreement).

If this Agreement is terminated, Collateral Agent's Lien in the Collateral shall continue until the Obligations (other than inchoate indemnity obligations) are repaid in full in cash. Upon payment in full in cash of the Obligations (other than inchoate indemnity obligations) and at such time as the Lenders' obligation to make Credit Extensions has terminated, Collateral Agent shall, at the sole cost and expense of Borrower, release its Liens in the Collateral and all rights therein shall revert to Borrower. In the event (x) all Obligations (other than inchoate indemnity obligations), except for Bank Services, are satisfied in full, and (y) this Agreement is terminated, Collateral Agent shall terminate the security interest granted herein upon Borrower providing cash collateral acceptable to Bank in its good faith business judgment for Bank Services, if any. In the event such Bank Services consist of outstanding Letters of Credit, Borrower shall provide to Bank cash collateral in an amount equal to (x) if such Letters of Credit are denominated in Dollars, then one hundred five percent (105%); and (y) if such Letters of Credit are denominated in a Foreign Currency, then one hundred ten percent (110%), of the Dollar Equivalent of the face amount of all such Letters of Credit plus all interest, fees, and costs due or to become due in connection therewith (as estimated by Bank in its good faith business judgment), to secure all of the Obligations relating to such Letters of Credit.

4.2 Authorization to File Financing Statements. Borrower hereby authorizes Collateral Agent to file financing statements or take any other action required to perfect Collateral Agent's security interests in the Collateral, without notice to Borrower, with all appropriate jurisdictions to perfect or protect Collateral Agent's interest or rights under the Loan Documents, including a notice that any disposition of the Collateral, except to the extent permitted by the terms of this Agreement, by Borrower, or any other Person, shall be deemed to violate the rights of Collateral Agent under the Code.

4.3 Pledge of Collateral. Borrower hereby pledges, assigns and grants to Collateral Agent, for the ratable benefit of the Lenders, a security interest in all the Shares, together with all proceeds and substitutions thereof, all cash, stock and other moneys and property paid thereon, all rights to subscribe for securities declared or granted in connection therewith, and all other cash and noncash proceeds of the foregoing, as security for the performance of the Obligations. Promptly but in no event more than five (5) Business Days following Collateral Agent's request, Borrower shall cause the certificate or certificates for the Shares will be delivered to Collateral Agent, accompanied by an instrument of assignment duly executed in blank by Borrower. To the extent required by the terms and conditions governing the Shares, Borrower shall cause the books of each entity whose Shares are part of the Collateral and any transfer agent to reflect the pledge of the Shares. Upon the occurrence and during the continuance of an Event of Default hereunder, Collateral Agent may effect the transfer of any securities included in the Collateral (including but not limited to the Shares) into the name of Collateral Agent and cause new (as applicable) certificates representing such securities to be issued in the name of Collateral Agent or its transferee. Borrower will execute and deliver such documents, and take or cause to be taken such actions, as Collateral Agent may reasonably request to perfect or continue the perfection of Collateral Agent's security interest in the Shares. Unless an Event of Default shall have occurred and be continuing, Borrower shall be entitled to exercise any voting rights with respect to the Shares and to give consents, waivers and ratifications in respect thereof, provided that no vote shall be cast or consent, waiver or ratification given or action taken which would be inconsistent with any of the terms of this Agreement or which would constitute or create any violation of any of such terms. All such rights to vote and give consents, waivers and ratifications shall terminate upon the occurrence and continuance of an Event of Default.

5. REPRESENTATIONS AND WARRANTIES

Borrower represents and warrants to Collateral Agent and the Lenders as follows:

5.1 Due Organization, Authorization: Power and Authority. Borrower and each of its Subsidiaries is duly existing and in good standing as a Registered Organization in its jurisdictions of organization or formation and Borrower and each of its Subsidiaries is qualified and licensed to do business and is in good standing in any jurisdiction in which the conduct of its businesses or its ownership of property requires that it be qualified except where the failure to do so could not reasonably be expected to have a Material Adverse Change. In connection with this Agreement, Borrower and each of its Subsidiaries has delivered to Collateral Agent a completed perfection certificate signed by an officer of Borrower or such Subsidiary (each a "**Perfection Certificate**" and collectively, the "**Perfection Certificates**"). Borrower represents and warrants that (a) Borrower and each of its Subsidiaries' exact legal name is that which is indicated on its respective Perfection Certificate and on the signature page of each Loan Document to which it is

a party; (b) Borrower and each of its Subsidiaries is an organization of the type and is organized in the jurisdiction set forth on its respective Perfection Certificate; (c) each Perfection Certificate accurately sets forth each of Borrower's and its Subsidiaries' organizational identification number or accurately states that Borrower or such Subsidiary has none; (d) each Perfection Certificate accurately sets forth Borrower's and each of its Subsidiaries' place of business, or, if more than one, its chief executive office as well as Borrower's and each of its Subsidiaries' mailing address (if different than its chief executive office); (e) Borrower and each of its Subsidiaries (and each of its respective predecessors) have not, in the past five (5) years, changed its jurisdiction of organization, organizational structure or type, or any organizational number assigned by its jurisdiction; and (f) all other information set forth on the Perfection Certificates pertaining to Borrower and each of its Subsidiaries, is accurate and complete (it being understood and agreed that Borrower and each of its Subsidiaries may from time to time update certain information in the Perfection Certificates (including the information set forth in clause (d) above) after the Effective Date to the extent permitted by one or more specific provisions in this Agreement), provided, however, that Borrower may provide updates solely with respect to immaterial, registered Intellectual Property set forth in the Perfection Certificate on a quarterly basis and any representation with respect to such Intellectual Property in such quarterly updates shall be accurate and complete in all material respects as of the Effective Date, or thereafter, as of the last quarterly update; such updated Perfection Certificates subject to the review and approval of Collateral Agent. If Borrower or any of its Subsidiaries is not now a Registered Organization but later becomes one, Borrower shall notify Collateral Agent of such occurrence and provide Collateral Agent with such Person's organizational identification number within five (5) Business Days of receiving such organizational identification number.

The execution, delivery and performance by Borrower and each of its Subsidiaries of the Loan Documents to which it is a party have been duly authorized, and do not (i) conflict with any of Borrower's or such Subsidiaries' organizational documents, including its respective Operating Documents, (ii) contravene, conflict with, constitute a default under or violate any material Requirement of Law applicable thereto, (iii) contravene, conflict or violate any applicable order, writ, judgment, injunction, decree, determination or award of any Governmental Authority by which Borrower or such Subsidiary, or any of their property or assets may be bound or affected, (iv) require any action by, filing, registration, or qualification with, or Governmental Approval from, any Governmental Authority (except such Governmental Approvals which have already been obtained and are in full force and effect) or are being obtained pursuant to Section 6.1(b), or (v) constitute an event of default under any material agreement by which Borrower or any of such Subsidiaries, or their respective properties, is bound. Neither Borrower nor any of its Subsidiaries is in default under any agreement to which it is a party or by which it or any of its assets is bound in which such default could reasonably be expected to have a Material Adverse Change.

5.2 Collateral.

(a) Borrower and each of its Subsidiaries have good title to, have rights in, and the power to transfer each item of the Collateral upon which it purports to grant a Lien under the Loan Documents, free and clear of any and all Liens except Permitted Liens, and neither Borrower nor any of its Subsidiaries have any Deposit Accounts, Securities Accounts, Commodity Accounts or other investment accounts other than the Collateral Accounts or the

other investment accounts, if any, described in the Perfection Certificates delivered to Collateral Agent in connection herewith (as the same may be updated from time to time) or of which Borrower or such Subsidiary has given Collateral Agent notice in accordance with Section 6.6, and, if held by Borrower or any domestic U.S. Subsidiary, taken such actions as are necessary to give Collateral Agent a perfected security interest therein. The Accounts are bona fide, existing obligations of the Account Debtors.

(b) On the Effective Date, and except as disclosed on the Perfection Certificate (i) the Collateral is not in the possession of any third party bailee (such as a warehouse), and (ii) no such third party bailee possesses components of the Collateral in excess of Two Hundred Fifty Thousand Dollars ($250,000.00). None of the components of the Collateral shall be maintained at locations other than as disclosed in the Perfection Certificates on the Effective Date or as permitted pursuant to Section 6.11.

(c) All Inventory is in all material respects of good and marketable quality, free from material defects.

(d) Borrower and each of its Subsidiaries is the sole owner of the Intellectual Property each respectively purports to own, free and clear of all Liens other than Permitted Liens. Except as noted on the Perfection Certificates or as notified in writing to Collateral Agent, neither Borrower nor any of its Subsidiaries is a party to, nor is bound by, any material license or other material agreement with respect to which Borrower or such Subsidiary is the licensee that (i) prohibits or otherwise restricts Borrower or its Subsidiaries from granting a security interest in Borrower's or such Subsidiaries' interest in such material license or material agreement or any other property, or (ii) for which a default under or termination of could interfere with Collateral Agent's or any Lender's right to sell any Collateral. Borrower shall provide written notice to Collateral Agent and each Lender within ten (10) days of Borrower or any of its Subsidiaries entering into or becoming bound by any license or agreement with respect to which Borrower or any Subsidiary is the licensee (other than over-the-counter software that is commercially available to the public).

5.3 Litigation. Except as disclosed (i) on the Perfection Certificates, or (ii) in accordance with Section 6.9 hereof, there are no actions, suits, investigations, or proceedings pending or, to the knowledge of the Responsible Officers, threatened in writing by or against Borrower or any of its Subsidiaries involving more than Two Hundred Fifty Thousand Dollars ($250,000.00).

5.4 No Material Deterioration in Financial Condition; Financial Statements. All consolidated financial statements for Borrower and its Subsidiaries, delivered to Collateral Agent fairly present, in conformity with GAAP, in all material respects the consolidated financial condition of Borrower and its Subsidiaries, and the consolidated results of operations of Borrower and its Subsidiaries. There has not been any material deterioration in the consolidated financial condition of Borrower and its Subsidiaries since the date of the most recent financial statements submitted to any Lender.

5.5 Solvency. Borrower and each of its Subsidiaries is Solvent.

5.6 Regulatory Compliance. Neither Borrower nor any of its Subsidiaries is an "investment company" or a company "controlled" by an "investment company" under the Investment Company Act of 1940, as amended. Neither Borrower nor any of its Subsidiaries is engaged as one of its important activities in extending credit for margin stock (under Regulations X, T and U of the Federal Reserve Board of Governors). Borrower and each of its Subsidiaries has complied in all material respects with the Federal Fair Labor Standards Act. Neither Borrower nor any of its Subsidiaries is a "holding company" or an "affiliate" of a "holding company" or a "subsidiary company" of a "holding company" as each term is defined and used in the Public Utility Holding Company Act of 2005. Neither Borrower nor any of its Subsidiaries has violated any laws, ordinances or rules, the violation of which could reasonably be expected to have a Material Adverse Change. Neither Borrower's nor any of its Subsidiaries' properties or assets has been used by Borrower or such Subsidiary or, to Borrower's knowledge, by previous Persons, in disposing, producing, storing, treating, or transporting any hazardous substance other than in material compliance with applicable laws. Borrower and each of its Subsidiaries has obtained all consents, approvals and authorizations of, made all declarations or filings with, and given all notices to, all Governmental Authorities that are necessary to continue their respective businesses as currently conducted.

None of Borrower, any of its Subsidiaries, or any of Borrower's or its Subsidiaries' Affiliates or any of their respective agents acting or benefiting in any capacity in connection with the transactions contemplated by this Agreement is (i) in violation of any Anti-Terrorism Law, (ii) engaging in or conspiring to engage in any transaction that evades or avoids, or has the purpose of evading or avoiding or attempts to violate, any of the prohibitions set forth in any Anti-Terrorism Law, or (iii) is a Blocked Person. None of Borrower, any of its Subsidiaries, or to the knowledge of Borrower and any of their Affiliates or agents, acting or benefiting in any capacity in connection with the transactions contemplated by this Agreement, (x) conducts any business or engages in making or receiving any contribution of funds, goods or services to or for the benefit of any Blocked Person, or (y) deals in, or otherwise engages in any transaction relating to, any property or interest in property blocked pursuant to Executive Order No. 13224, any similar executive order or other Anti-Terrorism Law.

5.7 Investments. Neither Borrower nor any of its Subsidiaries owns any stock, shares, partnership interests or other equity securities except for Permitted Investments.

5.8 Tax Returns and Payments; Pension Contributions. Borrower and each of its Subsidiaries has timely filed all required tax returns and reports, and Borrower and each of its Subsidiaries, has timely paid all foreign, federal, state, and local taxes, assessments, deposits and contributions owed by Borrower and such Subsidiaries, in all jurisdictions in which Borrower or any such Subsidiary is subject to taxes, including the United States, unless such taxes are being contested in accordance with the following sentence. Borrower and each of its Subsidiaries, may defer payment of any contested taxes, provided that Borrower or such Subsidiary, (a) in good faith contests its obligation to pay the taxes by appropriate proceedings promptly and diligently instituted and conducted, (b) notifies Collateral Agent in writing of the commencement of, and any material development in, the proceedings, and (c) posts bonds or takes any other steps required to prevent the Governmental Authority levying such contested taxes from obtaining a Lien upon any of the Collateral that is other than a "**Permitted Lien.**" Neither Borrower nor any of its Subsidiaries is aware of any claims or adjustments proposed for any of Borrower's or such

Subsidiaries', prior tax years which could result in additional taxes becoming due and payable by Borrower or its Subsidiaries. Borrower and each of its Subsidiaries have paid all amounts necessary to fund all present pension, profit sharing and deferred compensation plans in accordance with their terms, and neither Borrower nor any of its Subsidiaries have, withdrawn from participation in, and have not permitted partial or complete termination of, or permitted the occurrence of any other event with respect to, any such plan which could reasonably be expected to result in any liability of Borrower or its Subsidiaries, including any liability to the Pension Benefit Guaranty Corporation or its successors or any other Governmental Authority.

5.9 Use of Proceeds. Borrower shall use the proceeds of the Credit Extensions solely as working capital and to fund its general business requirements in accordance with the provisions of this Agreement, and not for personal, family, household or agricultural purposes. A portion of the proceeds of the Term A Loans shall be used by Borrower to repay the Existing Indebtedness in full on the Effective Date.

5.10 Shares. Borrower has full power and authority to create a first lien on the Shares and no disability or contractual obligation exists that would prohibit Borrower from pledging the Shares pursuant to this Agreement. To Borrower's knowledge, there are no subscriptions, warrants, rights of first refusal or other restrictions on transfer relative to, or options exercisable with respect to the Shares. The Shares have been and will be duly authorized and validly issued, and are fully paid and non-assessable. To Borrower's knowledge, the Shares are not the subject of any present or threatened suit, action, arbitration, administrative or other proceeding, and Borrower knows of no reasonable grounds for the institution of any such proceedings.

5.11 Accounts Receivable.

(a) For each Account with respect to which Revolving Advances are requested, on the date each Revolving Advance is requested and made, such Account shall be an Eligible Account.

(b) All statements made and all unpaid balances appearing in all invoices, instruments and other documents evidencing the Eligible Accounts are and shall be true and correct and all such invoices, instruments and other documents, and all of Borrower's Books are genuine and in all respects what they purport to be. Whether or not an Event of Default has occurred and is continuing, Collateral Agent may notify any Account Debtor owing Borrower money of Collateral Agent's security interest in such funds and verify the amount of such Eligible Account (provided that unless an Event of Default has occurred and is continuing, Collateral Agent shall provide prior written notice to Borrower before any such notification). All sales and other transactions underlying or giving rise to each Eligible Account shall comply in all material respects with all applicable laws and governmental rules and regulations. Borrower has no knowledge of any actual or imminent Insolvency Proceeding of any Account Debtor whose accounts are Eligible Accounts in any Transaction Report. To the best of Borrower's knowledge, all signatures and endorsements on all documents, instruments, and agreements relating to all Eligible Accounts are genuine, and all such documents, instruments and agreements are legally enforceable in accordance with their terms.

5.12 Full Disclosure. No written representation, warranty or other statement of Borrower or any of its Subsidiaries in any certificate or written statement given to Collateral Agent or any Lender, as of the date such representation, warranty, or other statement was made, taken together with all such written certificates and written statements given to Collateral Agent or any Lender, contains any untrue statement of a material fact or omits to state a material fact necessary to make the statements contained in the certificates or statements not misleading (it being recognized that the projections and forecasts provided by Borrower in good faith and based upon reasonable assumptions are not viewed as facts and that actual results during the period or periods covered by such projections and forecasts may differ from the projected or forecasted results).

5.13 Definition of "Knowledge." For purposes of the Loan Documents, whenever a representation or warranty is made to Borrower's knowledge or awareness, to the "best of" Borrower's knowledge, or with a similar qualification, knowledge or awareness means the actual knowledge, after reasonable investigation, of the Responsible Officers.

6. AFFIRMATIVE COVENANTS

Borrower shall, and shall cause each of its Subsidiaries to, do all of the following:

6.1 Government Compliance.

(a) Maintain its and all its Subsidiaries' legal existence and good standing in their respective jurisdictions of organization and maintain qualification in each jurisdiction in which the failure to so qualify could reasonably be expected to have a Material Adverse Change. Comply with all laws, ordinances and regulations to which Borrower or any of its Subsidiaries is subject, the noncompliance with which could reasonably be expected to have a Material Adverse Change.

(b) Obtain and keep in full force and effect, all of the material Governmental Approvals necessary for the performance by Borrower and its Subsidiaries of their respective businesses and obligations under the Loan Documents and the grant of a security interest to Collateral Agent for the ratable benefit of the Lenders, in all of the Collateral. Borrower shall promptly provide copies to Collateral Agent of any material Governmental Approvals obtained by Borrower or any of its Subsidiaries.

6.2 Financial Statements, Reports, Certificates.

(a) Deliver to each Lender:

(i) as soon as available, but no later than thirty (30) days after the last day of each month, a company prepared consolidated and consolidating balance sheet, income statement and cash flow statement covering the consolidated operations of Borrower and its Subsidiaries for such month certified by a Responsible Officer and in a form reasonably acceptable to Collateral Agent;

(ii) as soon as available, but no later than one hundred eighty (180) days after the last day of Borrower's fiscal year or within five (5) days of filing with the SEC,

audited consolidated financial statements prepared under GAAP, consistently applied, together with an unqualified opinion on the financial statements from an independent certified public accounting firm acceptable to Collateral Agent in its reasonable discretion (provided that a "going concern" or like qualification, in and of itself, will not render such opinion unacceptable to Lenders);

(iii) as soon as available after approval thereof by Borrower's Board of Directors, but no later than forty-five (45) days after the last day of each of Borrower's fiscal years, Borrower's annual financial projections for the entire current fiscal year as approved by Borrower's Board of Directors, which such annual financial projections shall be set forth in a month-by-month format (such annual financial projections as originally delivered to Collateral Agent and the Lenders are referred to herein as the "Annual Projections"; provided that, any revisions of the Annual Projections approved by Borrower's Board of Directors shall be delivered to Collateral Agent and the Lenders no later than seven (7) days after such approval);

(iv) within five (5) days of delivery, copies of all statements, reports and notices made available to Borrower's security holders or holders of Subordinated Debt;

(v) in the event that Borrower becomes subject to the reporting requirements under the Securities Exchange Act of 1934, as amended, within five (5) days of filing, all reports on Form 10-K, 10-Q and 8-K filed with the Securities and Exchange Commission,

(vi) prompt notice of (A) any material amendments of or other changes to the Operating Documents of Borrower or any of its Subsidiaries and (B) prior to the Equity Event, any material changes to the capitalization table of Borrower, in each case, together with any copies reflecting such amendments or changes with respect thereto;

(vii) prompt notice of any event that could reasonably be expected to materially and adversely affect the value of the material Intellectual Property;

(viii) as soon as available, but no later than thirty (30) days after the last day of each month, copies of the month-end account statements for each Collateral Account maintained by Borrower or its Subsidiaries, which statements may be provided to Collateral Agent and each Lender by Borrower or directly from the applicable institution(s);

(ix) within thirty (30) days after the end of each month, (A) monthly accounts receivable agings, aged by invoice date, (B) monthly accounts payable agings, aged by invoice date, and outstanding or held check registers, if any, (C) monthly reconciliations of accounts receivable agings (aged by invoice date), transaction reports and general ledger, and (D) monthly deferred revenue reports (if applicable); provided, however, if Borrower has an outstanding balance on the Revolving Line and Net Cash is less than One Million Dollars ($1,000,000.00), Borrower shall provide such reports no later than Monday of each week with respect to the previous week;

(x) a Transaction Report (and any schedules related thereto) with (A) each request for a Revolving Advance and (B) if Borrower has an outstanding balance on the Revolving Line, either (1) monthly within thirty (30) days after the last day of each month when

Net Cash as of such date is equal to or greater than One Million Dollars ($1,000,000.00) or (2) no later than Monday of each week with respect to the previous week if Net Cash is less than One Million Dollars ($1,000,000.00); and

(xi) other information as reasonably requested by Collateral Agent or any Lender.

Notwithstanding the foregoing, documents required to be delivered pursuant to the terms hereof (to the extent any such documents are included in materials otherwise filed with the SEC) may be delivered electronically and if so delivered, shall be deemed to have been delivered on the date on which Borrower posts such documents, or provides a link thereto, on Borrower's website on the internet at Borrower's website address.

(b) Concurrently with the delivery of the financial statements specified in Section 6.2(a)(i) above but no later than thirty (30) days after the last day of each month, deliver to each Lender, a duly completed Compliance Certificate signed by a Responsible Officer.

(c) Keep proper books of record and account in accordance with GAAP in all material respects, in which full, true and correct entries shall be made of all dealings and transactions in relation to its business and activities.

6.3 Inventory; Returns. Keep all Inventory in good and marketable condition, free from material defects. Returns and allowances between Borrower, or any of its Subsidiaries, and their respective Account Debtors shall follow Borrower's, or such Subsidiary's, customary practices as they exist at the Effective Date. Borrower must promptly notify Collateral Agent and the Lenders of all returns, recoveries, disputes and claims that involve more than Two Hundred Fifty Thousand Dollars ($250,000.00) individually or in the aggregate in any calendar year.

6.4 Taxes; Pensions. Timely file and require each of its Subsidiaries to timely file, all required tax returns and reports and timely pay, and require each of its Subsidiaries to timely file, all foreign, federal, state, and local taxes, assessments, deposits and contributions owed by Borrower or its Subsidiaries, except for deferred payment of any taxes contested pursuant to the terms of Section 5.8 hereof, and shall deliver to Lenders, on demand, appropriate certificates attesting to such payments, and pay all amounts necessary to fund all present pension, profit sharing and deferred compensation plans in accordance with the terms of such plans.

6.5 Insurance. Keep Borrower's and its Subsidiaries' business and the Collateral insured for risks and in amounts standard for companies in Borrower's and its Subsidiaries' industry and location and as Collateral Agent may reasonably request. Insurance policies shall be in a form, with companies, and in amounts that are reasonably satisfactory to Collateral Agent and Lenders. All property policies of Borrower shall have a lender's loss payable endorsement showing Collateral Agent as lender loss payee and waive subrogation rights against Collateral Agent, and all liability policies shall show, or have endorsements showing, Collateral Agent, as additional insured. The Collateral Agent shall be named as lender loss payee and/or additional insured with respect to any such insurance providing coverage in respect of any Collateral, and each provider of any such insurance shall agree, by endorsement upon the policy or policies issued by it or by independent instruments furnished to the Collateral Agent, that it will give the

Collateral Agent thirty (30) days prior written notice before any such policy or policies shall be materially altered or canceled. At Collateral Agent's request, Borrower shall deliver certified copies of policies and evidence of all premium payments. Proceeds payable under any policy of Borrower shall, at Collateral Agent's option, be payable to Collateral Agent, for the ratable benefit of the Lenders, on account of the Obligations. Notwithstanding the foregoing, (a) so long as no Event of Default has occurred and is continuing, Borrower shall have the option of applying the proceeds of any casualty policy up to Five Hundred Thousand Dollars ($500,000.00) with respect to any loss, but not exceeding Five Hundred Thousand Dollars ($500,000.00), in the aggregate for all losses under all casualty policies in any one year, toward the replacement or repair of destroyed or damaged property; provided that any such replaced or repaired property (i) shall be of equal or like value as the replaced or repaired Collateral and (ii) shall be deemed Collateral in which Collateral Agent has been granted a first priority security interest, and (b) after the occurrence and during the continuance of an Event of Default, all proceeds payable under such casualty policy shall, at the option of Collateral Agent, be payable to Collateral Agent, for the ratable benefit of the Lenders, on account of the Obligations. If Borrower or any of its Subsidiaries fails to obtain insurance as required under this Section 6.5 or to pay any amount or furnish any required proof of payment to third persons, Collateral Agent and/or any Lender may make, at Borrower's expense, all or part of such payment or obtain such insurance policies required in this Section 6.5, and take any action under the policies Collateral Agent or such Lender deems prudent.

6.6 Operating Accounts.

(a) Maintain all of Borrower's and its domestic U.S. Subsidiaries' Collateral Accounts with Bank or its Affiliates in accounts which are subject to a Control Agreement in favor of Collateral Agent.

(b) Borrower shall provide Collateral Agent five (5) days' prior written notice before Borrower or any of its domestic U.S. Subsidiaries establishes any Collateral Account at or with any Person other than Bank or its Affiliates. In addition, subject to the terms of the Post Closing Letter, for each Collateral Account that Borrower or any of its domestic U.S. Subsidiaries, at any time maintains, Borrower or such Subsidiary shall cause the applicable bank or financial institution at or with which such Collateral Account is maintained to execute and deliver a Control Agreement or other appropriate instrument with respect to such Collateral Account to perfect Collateral Agent's Lien in such Collateral Account in accordance with the terms hereunder prior to the establishment of such Collateral Account, which Control Agreement may not be terminated without prior written consent of Collateral Agent. The provisions of the previous sentence shall not apply to deposit accounts exclusively used for payroll, payroll taxes and other employee wage and benefit payments to or for the benefit of Borrower's, or any of its Subsidiaries', employees and identified to Collateral Agent by Borrower as such in the Perfection Certificates or, after the Effective Date, with Collateral Agent's consent after written notice from Borrower to Collateral Agent.

(c) Neither Borrower nor any of its Subsidiaries shall maintain any Collateral Accounts except Collateral Accounts maintained in accordance with Sections 6.6(a) and (b).

6.7 Protection of Intellectual Property Rights. Borrower and each of its Subsidiaries shall: (a) use commercially reasonable efforts to protect, defend and maintain the validity and enforceability of its Intellectual Property that is material to Borrower's business; (b) promptly advise Collateral Agent in writing of material infringement by a third party of its Intellectual Property; and (c) not allow any Intellectual Property material to Borrower's business to be abandoned, forfeited or dedicated to the public without Collateral Agent's prior written consent.

6.8 Litigation Cooperation. Commencing on the Effective Date and continuing through the termination of this Agreement, make available to Collateral Agent and the Lenders, without expense to Collateral Agent or the Lenders, Borrower and each of Borrower's officers, employees and agents and Borrower's Books, to the extent that Collateral Agent or any Lender may reasonably deem them necessary to prosecute or defend any third-party suit or proceeding instituted by or against Collateral Agent or any Lender with respect to any Collateral or relating to Borrower.

6.9 Notices of Litigation and Default. Borrower will give prompt written notice to Collateral Agent and the Lenders of any litigation or governmental proceedings pending or threatened (in writing) against Borrower or any of its Subsidiaries, which could reasonably be expected to result in damages or costs to Borrower or any of its Subsidiaries of Two Hundred Fifty Thousand Dollars ($250,000.00) or more or which could reasonably be expected to have a Material Adverse Change. Without limiting or contradicting any other more specific provision of this Agreement, promptly (and in any event within three (3) Business Days) upon Borrower becoming aware of the existence of any Event of Default or event which, with the giving of notice or passage of time, or both, would constitute an Event of Default, Borrower shall give written notice to Collateral Agent and the Lenders of such occurrence, which such notice shall include a reasonably detailed description of such Event of Default or event which, with the giving of notice or passage of time, or both, would constitute an Event of Default.

6.10 Financial Covenant. If the Term D Loans have been advanced to Borrower, commencing with the last day of the fiscal month in which the Term D Loans were advanced and the last day of each fiscal month thereafter, Borrower and its Subsidiaries on a consolidated basis shall have trailing six months of consolidated revenues (in accordance with GAAP) of at least Twenty-Four Million Dollars ($24,000,000.00), such amount to be subject to adjustment with the mutual agreement of Borrower, Collateral Agent and Lenders following receipt of the Annual Projections for the fiscal years ending December 31, 2017, December 31, 2018 and December 31, 2019; provided, however, that upon the occurrence of an Equity Event, Borrower shall not be required to comply with this covenant.

6.11 Landlord Waivers; Bailee Waivers. In the event that Borrower or any of its domestic U.S. Subsidiaries, after the Effective Date, intends to add any new offices or business locations, including warehouses, or otherwise store any portion of the Collateral with, or deliver any portion of the Collateral to, a bailee, in each case pursuant to Section 7.2, then Borrower or such Subsidiary will first notify the Collateral Agent and, in the event that the Collateral at any new location is valued (or is reasonably expected to have value) in excess of Two Hundred Fifty Thousand Dollars ($250,000.00) in the aggregate, (a) obtain the written consent of the Collateral Agent and (b) cause such bailee or landlord, as applicable, to execute and deliver a bailee waiver

or landlord waiver, as applicable, in form and substance reasonably satisfactory to Collateral Agent prior to the addition of any new offices of business locations, or any such storage with or delivery to any such bailee, as the case may be.

6.12 Creation/Acquisition of Subsidiaries. In the event Borrower, or any of its Subsidiaries creates or acquires any Subsidiary, Borrower shall provide prior written notice to Collateral Agent and each Lender of the creation or acquisition of such new Subsidiary and take all such action as may be reasonably required by Collateral Agent or any Lender to cause each such Subsidiary to become a co-Borrower hereunder or to guarantee the Obligations of Borrower under the Loan Documents and, in each case, grant a continuing pledge and security interest in and to the assets of such Subsidiary (substantially as described on Exhibit A hereto); and Borrower (or its Subsidiary, as applicable) shall grant and pledge to Collateral Agent, for the ratable benefit of the Lenders, a perfected security interest in the Shares of each such newly created Subsidiary; provided, however, that solely in the circumstance in which Borrower or any Subsidiary creates or acquires a Foreign Subsidiary in an acquisition permitted by Section 7.7 hereof or otherwise approved by the Required Lenders, (i) such Foreign Subsidiary shall not be required to guarantee the Obligations of Borrower under the Loan Documents and grant a continuing pledge and security interest in and to the assets of such Foreign Subsidiary, and (ii) Borrower shall not be required to grant and pledge to Collateral Agent, for the ratable benefit of Lenders, a perfected security interest in more than sixty-five percent (65%) of the Shares of such Foreign Subsidiary, if Borrower demonstrates to the reasonable satisfaction of Collateral Agent that such Foreign Subsidiary providing such guarantee or pledge and security interest or Borrower providing a perfected security interest in more than sixty five percent (65%) of the Shares would create a present and existing adverse tax consequence to Borrower under the U.S. Internal Revenue Code (each, an "**Excluded Foreign Subsidiary**"). Lenders agree that each Foreign Subsidiary described in the Perfection Certificate as of the Effective Date is an Excluded Foreign Subsidiary.

6.13 Further Assurances.

(a) Execute any further instruments and take further action as Collateral Agent or any Lender reasonably requests to perfect or continue Collateral Agent's Lien in the Collateral or to effect the purposes of this Agreement.

(b) Deliver to Collateral Agent and Lenders, within five (5) days after the same are sent or received, copies of all material correspondence, reports, documents and other filings with any Governmental Authority that could reasonably be expected to have a material adverse effect on any of the Governmental Approvals material to Borrower's business or otherwise could reasonably be expected to have a Material Adverse Change.

6.14 Accounts Receivable.

(a) Schedules and Documents Relating to Accounts. Borrower shall deliver to Collateral Agent, with a copy to Lenders, transaction reports and schedules of collections, as provided in Section 6.2, on Collateral Agent's standard forms; provided, however, that Borrower's failure to execute and deliver the same shall not affect or limit Collateral Agent's Lien and other rights in all of Borrower's Accounts, nor shall Collateral Agent's failure to

advance or lend against a specific Account affect or limit Collateral Agent's Lien and other rights therein. If requested by Collateral Agent or any Lender, Borrower shall furnish Collateral Agent, with a copy to Lenders, with copies (or, at Collateral Agent's request, originals) of all contracts, orders, invoices, and other similar documents, and all shipping instructions, delivery receipts, bills of lading, and other evidence of delivery, for any goods the sale or disposition of which gave rise to such Accounts. In addition, Borrower shall deliver to Collateral Agent, with a copy to Lenders, on any request, the originals of all instruments, chattel paper, security agreements, guarantees and other documents and property evidencing or securing any Accounts, in the same form as received, with all necessary indorsements, and copies of all credit memos.

(b) Disputes. Borrower shall promptly notify Collateral Agent and each Lender of all disputes or claims relating to Accounts in excess of Two Hundred Fifty Thousand Dollars ($250,000.00). Borrower may forgive (completely or partially), compromise, or settle any Account for less than payment in full, or agree to do any of the foregoing so long as (i) Borrower does so in good faith, in a commercially reasonable manner, in the ordinary course of business, in arm's-length transactions, and reports the same to Collateral Agent, with a copy to Lenders, in the Compliance Certificate; (ii) no Event of Default has occurred and is continuing; and (iii) after taking into account all such discounts, settlements and forgiveness, the total outstanding Revolving Advances will not exceed the lesser of the Revolving Line or the Availability Amount.

(c) Collection of Accounts. Borrower shall have the right to collect all Accounts, unless and until an Event of Default has occurred and is continuing. Borrower shall direct all Account Debtors to deliver or transmit all proceeds of Accounts into a lockbox account, or via electronic deposit capture into a "blocked account" as specified by Collateral Agent (either such account, the "**Cash Collateral Account**"). Whether or not an Event of Default has occurred and is continuing, Borrower shall immediately deliver all payments on and proceeds of Accounts to the Cash Collateral Account (i) to be applied to immediately reduce the Obligations when Net Cash is less than One Million Dollars ($1,000,000.00), or (ii) to be transferred on a daily basis to Borrower's operating account with Bank when Net Cash is equal to or greater than One Million Dollars ($1,000,000.00).

(d) Returns. Provided no Event of Default has occurred and is continuing, if any Account Debtor returns any Inventory to Borrower, Borrower shall promptly (i) determine the reason for such return, (ii) issue a credit memorandum to the Account Debtor in the appropriate amount, and (iii) provide a copy of such credit memorandum to Collateral Agent, with a copy to Lenders. In the event any attempted return occurs after the occurrence and during the continuance of any Event of Default, Borrower shall hold the returned Inventory in trust for Collateral Agent, and immediately notify Collateral Agent and Lenders of the return of the Inventory.

(e) Verification. Collateral Agent and Lenders may, from time to time, verify directly with the respective Account Debtors the validity, amount and other matters relating to the Accounts, either in the name of Borrower, Collateral Agent or such Lender or such other name as Collateral Agent or such Lender may choose, and notify any Account Debtor of Collateral Agent's security interest in such Account.

(f) No Liability. Neither Collateral Agent nor any Lender shall be responsible or liable for any shortage or discrepancy in, damage to, or loss or destruction of, any goods, the sale or other disposition of which gives rise to an Account, or for any error, act, omission, or delay of any kind occurring in the settlement, failure to settle, collection or failure to collect any Account, or for settling any Account in good faith for less than the full amount thereof, nor shall Collateral Agent or any Lender be deemed to be responsible for any of Borrower's obligations under any contract or agreement giving rise to an Account. Nothing herein shall, however, relieve Collateral Agent or any Lender from liability for its own gross negligence or willful misconduct.

6.15 Remittance of Proceeds. Except as otherwise provided in Section 6.14(c) and for insurance proceeds permitted to be applied in accordance with Section 6.5, deliver, in kind, all proceeds arising from the disposition of any Collateral not permitted under Section 7.1 to Collateral Agent, for the ratable benefit of Lenders, according to their Revolving Line Commitment Percentage, in the original form in which received by Borrower not later than the following Business Day after receipt by Borrower, to be applied to the Obligations (a) prior to an Event of Default, pursuant to the terms of Section 2.4(e) hereof, and (b) after the occurrence and during the continuance of an Event of Default, pursuant to the terms of Section 9.4 hereof; provided that, if no Event of Default has occurred and is continuing, Borrower shall not be obligated to remit to Bank the proceeds of the sale of worn out or obsolete Equipment disposed of by Borrower in good faith in an arm's length transaction for an aggregate purchase price of Two Hundred Thousand Dollars ($200,000.00) or less (for all such transactions in any fiscal year). Borrower agrees that it will not commingle proceeds of Collateral with any of Borrower's other funds or property, but will hold such proceeds separate and apart from such other funds and property and in an express trust for Collateral Agent. Nothing in this Section limits the restrictions on disposition of Collateral set forth elsewhere in this Agreement.

6.16 Access to Collateral; Books and Records. At reasonable times, on one (1) Business Days' notice (provided no notice is required if an Event of Default has occurred and is continuing), Collateral Agent and Lenders or their agents, shall have the right to inspect the Collateral and the right to audit and copy Borrower's Books. The foregoing inspections and audits shall be conducted at Borrower's expense and no more often than once every twelve (12) months if Lenders have made Revolving Advances unless an Event of Default has occurred and is continuing in which case such inspections and audits shall occur as often as Collateral Agent shall determine is necessary and regardless of whether Lenders have made Revolving Advances. The charge therefor shall be $850 per person per day (or such higher amount as shall represent Collateral Agent's or any Lender's then-current standard charge for the same), plus reasonable out-of-pocket expenses. In the event Borrower and Collateral Agent or any Lender schedule an audit more than ten (10) days in advance, and Borrower cancels or seeks to reschedules the audit with less than ten (10) days written notice to Collateral Agent or any such Lender, then (without limiting any of Collateral Agent's rights or remedies) Borrower shall pay Collateral Agent or such Lender a fee of $1,000 plus any out-of-pocket expenses incurred by Collateral Agent or such lender to compensate Collateral Agent or such Lender for the anticipated costs and expenses of the cancellation or rescheduling.

7. NEGATIVE COVENANTS

Borrower shall not, and shall not permit any of its Subsidiaries, to do any of the following without the prior written consent of the Required Lenders:

7.1 Dispositions. Convey, sell, lease, transfer, assign, or otherwise dispose of (collectively, "**Transfer**"), or permit any of its Subsidiaries to Transfer, all or any part of its business or property, except for (a) Transfers of Inventory in the ordinary course of business or to Foreign Subsidiaries pursuant to transfer pricing arrangements in the ordinary course of business and consistent with past practices; (b) Transfers of worn out or obsolete Equipment; (c) Transfers in connection with Permitted Liens, Permitted Investments and Permitted Licenses; (d) Transfers of cash payments to trade creditors in the ordinary course provided that such payments are (i) reflected in the Annual Projections or as approved by Borrower's Board of Directors and (ii) not otherwise prohibited by this Agreement; (e) Transfers constituting Investments permitted pursuant to clause (h) of the definition of Permitted Investments; and (f) other Transfers not to exceed Two Hundred Thousand Fifty Dollars ($250,000.00) in any fiscal year that are not otherwise prohibited by this Agreement.

7.2 Changes in Business, Management, Ownership, or Business Locations. (a) Engage in or permit any of its Subsidiaries to engage in any business other than the businesses engaged in by Borrower as of the Effective Date or reasonably related thereto; (b) liquidate or dissolve; or (c) (i) any Key Person shall cease to be actively engaged in the management of Borrower unless written notice thereof is provided to Collateral Agent within five (5) days of such change, or (ii) enter into any transaction or series of related transactions in which the stockholders of Borrower who were not stockholders immediately prior to the first such transaction own more than forty nine percent (49%) of the voting stock of Borrower immediately after giving effect to such transaction or related series of such transactions (other than by the sale of Borrower's equity securities in a public offering, a private placement of public equity or to venture capital investors so long as Borrower identifies to Collateral Agent the venture capital investors prior to the closing of the transaction). Borrower shall not, without at least twenty (20) days' prior written notice to Collateral Agent: (A) add any new offices or business locations, including warehouses (unless such new offices or business locations contain less than One Hundred Thousand Dollars ($100,000.00) in Collateral); (B) change its jurisdiction of organization, (C) change its organizational structure or type, (D) change its legal name, or (E) change any organizational number (if any) assigned by its jurisdiction of organization.

7.3 Mergers or Acquisitions. Merge or consolidate, or permit any of its Subsidiaries to merge or consolidate, with any other Person, or acquire, or permit any of its Subsidiaries to acquire, all or substantially all of the capital stock, shares or property of another Person. A Subsidiary may merge or consolidate into another Subsidiary (provided such surviving Subsidiary is a "co-Borrower" hereunder or has provided a secured Guaranty of Borrower's Obligations hereunder) or with (or into) Borrower provided Borrower is the surviving legal entity, and as long as no Event of Default is occurring prior thereto or arises as a result therefrom. Without limiting the foregoing, Borrower shall not, without Collateral Agent's prior written consent, enter into any binding contractual arrangement with any Person to attempt to facilitate a merger or acquisition of Borrower, unless (i) no Event of Default exists when such agreement is entered into by Borrower, (ii) such agreement does not give such Person the right to claim any fees, payments or damages from Borrower in excess of Two Hundred Fifty Thousand Dollars ($250,000.00), and (iii) Borrower notifies Collateral Agent in advance of entering into such an agreement.

7.4 Indebtedness. Create, incur, assume, or be liable for any Indebtedness, or permit any Subsidiary to do so, other than Permitted Indebtedness.

7.5 Encumbrance. Create, incur, allow, or suffer any Lien on any of its property, or assign or convey any right to receive income, including the sale of any Accounts, or permit any of its Subsidiaries to do so, except for Permitted Liens, or permit any Collateral not to be subject to the first priority security interest granted herein (except for Permitted Liens that are permitted by the terms of this Agreement to have priority over Collateral Agent's Lien), or enter into any agreement, document, instrument or other arrangement (except with or in favor of Collateral Agent, for the ratable benefit of the Lenders) with any Person which directly or indirectly prohibits or has the effect of prohibiting Borrower, or any of its Subsidiaries, from assigning, mortgaging, pledging, granting a security interest in or upon, or encumbering any of Borrower's or such Subsidiary's Intellectual Property, except as is otherwise permitted in Section 7.1 hereof and the definition of "**Permitted Liens**" herein.

7.6 Maintenance of Collateral Accounts. Maintain any Collateral Account except pursuant to the terms of Section 6.6 hereof.

7.7 Distributions; Investments. (a) Pay any dividends (other than (i) dividends payable solely in capital stock or (ii) cash in lieu of fractional shares in an amount not to exceed Ten Thousand Dollars ($10,000.00) in the aggregate per fiscal year) or make any distribution or payment in respect of or redeem, retire or purchase any capital stock (other than repurchases pursuant to the terms of employee stock purchase plans, employee restricted stock agreements, stockholder rights plans, employee, director or consultant stock option plans, or similar plans, provided such repurchases do not exceed Two Hundred Fifty Thousand Dollars ($250,000.00) in the aggregate per fiscal year) or (b) directly or indirectly make any Investment other than Permitted Investments, or permit any of its Subsidiaries to do so.

7.8 Transactions with Affiliates. Directly or indirectly enter into or permit to exist any material transaction with any Affiliate of Borrower or any of its Subsidiaries, except for (a) transactions that are in the ordinary course of Borrower's or such Subsidiary's business, upon fair and reasonable terms that are no less favorable to Borrower or such Subsidiary than would be obtained in an arm's length transaction with a non-affiliated Person, (b) Subordinated Debt or equity investments by Borrower's investors in Borrower or its Subsidiaries, (c) Transfers of Inventory by Borrower to Foreign Subsidiaries pursuant to transfer pricing arrangements consistent with past practices and in the ordinary course of business, and (d) transactions described in clause (h) of the definition of Permitted Investment.

7.9 Subordinated Debt. (a) Make or permit any payment on any Subordinated Debt, except under the terms of the subordination, intercreditor, or other similar agreement to which such Subordinated Debt is subject, or (b) amend any provision in any document relating to the Subordinated Debt which would increase the amount thereof or adversely affect the subordination thereof to Obligations owed to the Lenders.

7.10 Compliance. Become an "investment company" or a company controlled by an "investment company", under the Investment Company Act of 1940, as amended, or undertake as one of its important activities extending credit to purchase or carry margin stock (as defined in Regulation U of the Board of Governors of the Federal Reserve System), or use the proceeds of any Credit Extension for that purpose; fail to meet the minimum funding requirements of ERISA, permit a Reportable Event or Prohibited Transaction, as defined in ERISA, to occur; fail to comply with the Federal Fair Labor Standards Act or violate any other law or regulation, if the violation could reasonably be expected to have a Material Adverse Change, or permit any of its Subsidiaries to do so; withdraw or permit any Subsidiary to withdraw from participation in, permit partial or complete termination of, or permit the occurrence of any other event with respect to, any present pension, profit sharing and deferred compensation plan which could reasonably be expected to result in any liability of Borrower or any of its Subsidiaries, including any liability to the Pension Benefit Guaranty Corporation or its successors or any other Governmental Authority.

7.11 Compliance with Anti-Terrorism Laws. Collateral Agent hereby notifies Borrower and each of its Subsidiaries that pursuant to the requirements of Anti-Terrorism Laws, and Collateral Agent's policies and practices, Collateral Agent is required to obtain, verify and record certain information and documentation that identifies Borrower and each of its Subsidiaries and their principals, which information includes the name and address of Borrower and each of its Subsidiaries and their principals and such other information that will allow Collateral Agent to identify such party in accordance with Anti-Terrorism Laws. Neither Borrower nor any of its Subsidiaries shall, nor shall Borrower or any of its Subsidiaries permit any Affiliate to, directly or indirectly, knowingly enter into any documents, instruments, agreements or contracts with any Person listed on the OFAC Lists. Borrower and each of its Subsidiaries shall immediately notify Collateral Agent if Borrower or such Subsidiary has knowledge that Borrower, or any Subsidiary or Affiliate of Borrower, is listed on the OFAC Lists or (a) is convicted on, (b) pleads nolo contendere to, (c) is indicted on, or (d) is arraigned and held over on charges involving money laundering or predicate crimes to money laundering. Neither Borrower nor any of its Subsidiaries shall, nor shall Borrower or any of its Subsidiaries, permit any Affiliate to, directly or indirectly, (i) conduct any business or engage in any transaction or dealing with any Blocked Person, including, without limitation, the making or receiving of any contribution of funds, goods or services to or for the benefit of any Blocked Person, (ii) deal in, or otherwise engage in any transaction relating to, any property or interests in property blocked pursuant to Executive Order No. 13224 or any similar executive order or other Anti-Terrorism Law, or (iii) engage in or conspire to engage in any transaction that evades or avoids, or has the purpose of evading or avoiding, or attempts to violate, any of the prohibitions set forth in Executive Order No. 13224 or other Anti-Terrorism Law.

7.12 Cash and Cash Equivalents held by Foreign Subsidiaries. The aggregate value of cash and Cash Equivalents held by all Foreign Subsidiaries of Borrower to exceed Seven Hundred Seventy-Five Thousand Dollars ($775,000.00).

7.13 Value of Assets held by Foreign Subsidiaries. The aggregate value of the assets owned by the Foreign Subsidiaries of Borrower shall not exceed twenty percent (20%) of the aggregate value of all assets owned by the Borrower and its Subsidiaries.

8. EVENTS OF DEFAULT

Any one of the following shall constitute an event of default (an "**Event of Default**") under this Agreement:

8.1 Payment Default. Borrower fails to (a) make any payment of principal or interest on any Credit Extension on its due date, or (b) pay any other Obligations within three (3) Business Days after such Obligations are due and payable (which three (3) Business Day grace period shall not apply to payments due on the Maturity Date or the date of acceleration pursuant to Section 9.1 (a) hereof). During the cure period, the failure to cure the payment default is not an Event of Default (but no Credit Extension will be made during the cure period);

8.2 Covenant Default.

(a) Borrower or any of its Subsidiaries fails or neglects to perform any obligation in Sections 6.2 (Financial Statements, Reports, Certificates), 6.4 (Taxes), 6.5 (Insurance), 6.6 (Operating Accounts), 6.7 (Protection of Intellectual Property Rights), 6.9 (Notice of Litigation and Default), 6.10 (Financial Covenant), 6.11 (Landlord Waivers; Bailee Waivers), 6.12 (Creation/Acquisition of Subsidiaries) or 6.13 (Further Assurances) or Borrower violates any covenant in Section 7; or

(b) Borrower, or any of its Subsidiaries, fails or neglects to perform, keep, or observe any other term, provision, condition, covenant or agreement contained in this Agreement or any Loan Documents, and as to any default (other than those specified in this Section 8) under such other term, provision, condition, covenant or agreement that can be cured, has failed to cure the default within ten (10) days after the occurrence thereof; provided, however, that if the default cannot by its nature be cured within the ten (10) day period or cannot after diligent attempts by Borrower be cured within such ten (10) day period, and such default is likely to be cured within a reasonable time, then Borrower shall have an additional period (which shall not in any case exceed thirty (30) days) to attempt to cure such default, and within such reasonable time period the failure to cure the default shall not be deemed an Event of Default (but no Credit Extensions shall be made during such cure period). Grace periods provided under this Section shall not apply, among other things, to financial covenants or any other covenants set forth in subsection (a) above;

8.3 Investor Abandonment. If Collateral Agent and Lenders determine in their good faith judgment that (i) Borrower will not be able to satisfy the Obligations as they become due and payable and (ii) none of Borrower's principal investors (defined as each investor that has designated a member of Borrower's Board of Directors) intends to fund such amounts as may be to enable Borrower to satisfy the Obligations as they become due and payable;

8.4 Attachment; Levy; Restraint on Business.

(a) (i) The service of process seeking to attach, by trustee or similar process, any funds of Borrower or any of its Subsidiaries or of any entity under control of Borrower or its Subsidiaries on deposit with any Lender or any Lender's Affiliate or any bank or other institution at which Borrower or any of its Subsidiaries maintains a Collateral Account, or (ii) a notice of lien, levy, or assessment is filed against Borrower or any of its Subsidiaries or their respective

assets by any government agency, and the same under subclauses (i) and (ii) hereof are not, within ten (10) days after the occurrence thereof, discharged or stayed (whether through the posting of a bond or otherwise); provided, however, no Credit Extensions shall be made during any ten (10) day cure period; and

(b) (i) any material portion of Borrower's or any of its Subsidiaries' assets is attached, seized, levied on, or comes into possession of a trustee or receiver, or (ii) any court order enjoins, restrains, or prevents Borrower or any of its Subsidiaries from conducting any part of its business;

8.5 Insolvency. (a) Borrower or any of its Subsidiaries is or becomes Insolvent; (b) Borrower or any of its Subsidiaries begins an Insolvency Proceeding; or (c) an Insolvency Proceeding is begun against Borrower or any of its Subsidiaries and not dismissed or stayed within forty-five (45) days (but no Credit Extensions shall be made while Borrower or any Subsidiary is Insolvent and/or until any Insolvency Proceeding is dismissed);

8.6 Other Agreements. There is a default in any agreement to which Borrower or any of its Subsidiaries is a party with a third party or parties resulting in a right by such third party or parties, whether or not exercised, to accelerate the maturity of any Indebtedness in an amount in excess of Two Hundred Fifty Thousand Dollars ($250,000.00) or that could reasonably be expected to have a Material Adverse Change;

8.7 Judgments. One or more judgments, orders, or decrees for the payment of money in an amount, individually or in the aggregate, of at least One Hundred Thousand Dollars ($100,000.00) (not covered by independent third-party insurance as to which liability has been accepted by such insurance carrier) shall be rendered against Borrower or any of its Subsidiaries and shall remain unsatisfied, unvacated, or unstayed for a period of twenty (20) days after the entry thereof (provided that no Credit Extensions will be made prior to the satisfaction, vacation, or stay of such judgment, order or decree);

8.8 Misrepresentations. Borrower or any of its Subsidiaries or any Person acting for Borrower or any of its Subsidiaries makes any representation, warranty, or other statement now or later in this Agreement, any Loan Document or in any writing delivered to Collateral Agent and/or Lenders or to induce Collateral Agent and/or the Lenders to enter this Agreement or any Loan Document, and such representation, warranty, or other statement is incorrect in any material respect when made;

8.9 Subordinated Debt. A default or breach occurs under any agreement between Borrower or any of its Subsidiaries and any creditor of Borrower or any of its Subsidiaries that signed a subordination, intercreditor, or other similar agreement with Collateral Agent or the Lenders, or any creditor that has signed such an agreement with Collateral Agent or the Lenders breaches any terms of such agreement;

8.10 Guaranty. (a) Any Guaranty terminates or ceases for any reason to be in full force and effect; (b) any Guarantor does not perform any obligation or covenant under any Guaranty; (c) any circumstance described in Sections 8.3, 8.4, 8.5, 8.7, or 8.8 occurs with respect to any Guarantor; or (d) the liquidation, winding up, or termination of existence of any Guarantor;

8.11 Governmental Approvals. Any Governmental Approval shall have been revoked, rescinded, suspended, modified in an adverse manner, or not renewed in the ordinary course for a full term and such revocation, rescission, suspension, modification or non-renewal has resulted in or could reasonably be expected to result in a Material Adverse Change; or

8.12 Lien Priority. Any Lien created hereunder or by any other Loan Document shall at any time fail to constitute a valid and perfected Lien on any of the Collateral purported to be secured thereby, subject to no prior or equal Lien, other than Permitted Liens which are permitted to have priority in accordance with the terms of this Agreement.

9. RIGHTS AND REMEDIES

9.1 Rights and Remedies.

(a) Upon the occurrence and during the continuance of an Event of Default, Collateral Agent may, and at the written direction of Required Lenders shall, without notice or demand, do any or all of the following: (i) deliver notice of the Event of Default to Borrower, (ii) by notice to Borrower declare all Obligations immediately due and payable (but if an Event of Default described in Section 8.5 occurs all Obligations shall be immediately due and payable without any action by Collateral Agent or the Lenders) or (iii) by notice to Borrower suspend or terminate the obligations, if any, of the Lenders to advance money or extend credit for Borrower's benefit under this Agreement or under any other agreement between Borrower and Collateral Agent and/or the Lenders (but if an Event of Default described in Section 8.5 occurs all obligations, if any, of the Lenders to advance money or extend credit for Borrower's benefit under this Agreement or under any other agreement between Borrower and Collateral Agent and/or the Lenders shall be immediately terminated without any action by Collateral Agent or the Lenders).

(b) Without limiting the rights of Collateral Agent and the Lenders set forth in Section 9.1(a) above, upon the occurrence and during the continuance of an Event of Default, Collateral Agent shall have the right, without notice or demand, to do any or all of the following:

(i) foreclose upon and/or sell or otherwise liquidate, the Collateral;

(ii) apply to the Obligations any (a) balances and deposits of Borrower that Collateral Agent or any Lender holds or controls, or (b) any amount held or controlled by Collateral Agent or any Lender owing to or for the credit or the account of Borrower; and/or

(iii) commence and prosecute an Insolvency Proceeding or consent to Borrower commencing any Insolvency Proceeding.

(c) Without limiting the rights of Collateral Agent and the Lenders set forth in Sections 9.1(a) and (b) above, upon the occurrence and during the continuance of an Event of Default, Collateral Agent shall have the right, without notice or demand, to do any or all of the following:

(i) settle or adjust disputes and claims directly with Account Debtors for amounts on terms and in any order that Collateral Agent considers advisable, notify any Person owing Borrower money of Collateral Agent's security interest in such funds, and verify the amount of such account;

(ii) make any payments and do any acts it considers necessary or reasonable to protect the Collateral and/or its security interest in the Collateral. Borrower shall assemble the Collateral if Collateral Agent requests and make it available in a location as Collateral Agent reasonably designates. Collateral Agent may enter premises where the Collateral is located, take and maintain possession of any part of the Collateral, and pay, purchase, contest, or compromise any Lien which appears to be prior or superior to its security interest and pay all expenses incurred. Borrower grants Collateral Agent a license to enter and occupy any of its premises, without charge, to exercise any of Collateral Agent's rights or remedies;

(iii) ship, reclaim, recover, store, finish, maintain, repair, prepare for sale, and/or advertise for sale, the Collateral. Collateral Agent is hereby granted a non-exclusive, royalty-free license or other right to use, without charge, Borrower's and each of its Subsidiaries' labels, patents, copyrights, mask works, rights of use of any name, trade secrets, trade names, trademarks, service marks, and advertising matter, or any similar property as it pertains to the Collateral, in completing production of, advertising for sale, and selling any Collateral and, in connection with Collateral Agent's exercise of its rights under this Section 9.1, Borrower's and each of its Subsidiaries' rights under all licenses and all franchise agreements inure to Collateral Agent, for the benefit of the Lenders;

(iv) place a "hold" on any account maintained with Collateral Agent or the Lenders and/or deliver a notice of exclusive control, any entitlement order, or other directions or instructions pursuant to any Control Agreement or similar agreements providing control of any Collateral;

(v) demand and receive possession of Borrower's Books;

(vi) appoint a receiver to seize, manage and realize any of the Collateral, and such receiver shall have any right and authority as any competent court will grant or authorize in accordance with any applicable law, including any power or authority to manage the business of Borrower or any of its Subsidiaries;

(vii) subject to clauses 9.1(a) and (b), exercise all rights and remedies available to Collateral Agent and each Lender under the Loan Documents or at law or equity, including all remedies provided under the Code (including disposal of the Collateral pursuant to the terms thereof);

(viii) for any Letters of Credit, demand that Borrower (i) deposit cash with Bank in an amount equal to (x) if such Letters of Credit are denominated in Dollars, then one hundred five percent (105%); and (y) if such Letters of Credit are denominated in a Foreign Currency, then one hundred ten percent (110%), of the Dollar Equivalent of the aggregate face amount of all Letters of Credit remaining undrawn (plus all interest, fees, and costs due or to

become due in connection therewith (as estimated by Bank in its good faith business judgment)), to secure all of the Obligations relating to such Letters of Credit, as collateral security for the repayment of any future drawings under such Letters of Credit, and Borrower shall forthwith deposit and pay such amounts, and (ii) pay in advance all letter of credit fees scheduled to be paid or payable over the remaining term of any Letters of Credit; and

(ix) terminate any FX Contracts.

Notwithstanding any provision of this Section 9.1 to the contrary, upon the occurrence of any Event of Default, Collateral Agent shall have the right to exercise any and all remedies referenced in this Section 9.1 without the written consent of Required Lenders following the occurrence of an Exigent Circumstance. As used in the immediately preceding sentence, "**Exigent Circumstance**" means any event or circumstance that, in the reasonable judgment of Collateral Agent, imminently threatens the ability of Collateral Agent to realize upon all or any material portion of the Collateral, such as, without limitation, fraudulent removal, concealment, or abscondment thereof, destruction or material waste thereof, or failure of Borrower or any of its Subsidiaries after reasonable demand to maintain or reinstate adequate casualty insurance coverage, or which, in the judgment of Collateral Agent, could reasonably be expected to result in a material diminution in value of the Collateral.

9.2 Power of Attorney. Borrower hereby irrevocably appoints Collateral Agent as its lawful attorney-in-fact, exercisable upon the occurrence and during the continuance of an Event of Default, to: (a) endorse Borrower's or any of its Subsidiaries' name on any checks or other forms of payment or security; (b) sign Borrower's or any of its Subsidiaries' name on any invoice or bill of lading for any Account or drafts against Account Debtors; (c) settle and adjust disputes and claims about the Accounts directly with Account Debtors, for amounts and on terms Collateral Agent determines reasonable; (d) make, settle, and adjust all claims under Borrower's insurance policies; (e) pay, contest or settle any Lien, charge, encumbrance, security interest, and adverse claim in or to the Collateral, or any judgment based thereon, or otherwise take any action to terminate or discharge the same; and (f) transfer the Collateral into the name of Collateral Agent or a third party as the Code or any applicable law permits. Borrower hereby appoints Collateral Agent as its lawful attorney-in-fact to sign Borrower's or any of its Subsidiaries' name on any documents necessary to perfect or continue the perfection of Collateral Agent's security interest in the Collateral regardless of whether an Event of Default has occurred until all Obligations (other than inchoate indemnity obligations) have been satisfied in full and Collateral Agent and the Lenders are under no further obligation to make Credit Extensions hereunder. Collateral Agent's foregoing appointment as Borrower's or any of its Subsidiaries' attorney in fact, and all of Collateral Agent's rights and powers, coupled with an interest, are irrevocable until all Obligations (other than inchoate indemnity obligations) have been fully repaid and performed and Collateral Agent's and the Lenders' obligation to provide Credit Extensions terminates.

9.3 Protective Payments. If Borrower or any of its Subsidiaries fail to obtain the insurance called for by Section 6.5 or fails to pay any premium thereon or fails to pay any other amount which Borrower or any of its Subsidiaries is obligated to pay under this Agreement or any other Loan Document, Collateral Agent may obtain such insurance or make such payment, and all amounts so paid by Collateral Agent are Lenders' Expenses and immediately due and

payable, bearing interest at the Default Rate, and secured by the Collateral. Collateral Agent will make reasonable efforts to provide Borrower with notice of Collateral Agent obtaining such insurance or making such payment at the time it is obtained or paid or within a reasonable time thereafter. No such payments by Collateral Agent are deemed an agreement to make similar payments in the future or Collateral Agent's waiver of any Event of Default.

9.4 Application of Payments and Proceeds. Notwithstanding anything to the contrary contained in this Agreement, upon the occurrence and during the continuance of an Event of Default, (a) Borrower irrevocably waives the right to direct the application of any and all payments at any time or times thereafter received by Collateral Agent from or on behalf of Borrower or any of its Subsidiaries of all or any part of the Obligations, and, as between Borrower on the one hand and Collateral Agent and Lenders on the other, Collateral Agent shall have the continuing and exclusive right to apply and to reapply any and all payments received against the Obligations in such manner as Collateral Agent may deem advisable notwithstanding any previous application by Collateral Agent, and (b) the proceeds of any sale of, or other realization upon all or any part of the Collateral shall be applied: first, to the Lenders' Expenses; second, to accrued and unpaid interest on the Obligations (including any interest which, but for the provisions of the United States Bankruptcy Code, would have accrued on such amounts); third, to the principal amount of the Obligations outstanding; and fourth, to any other indebtedness or obligations of Borrower owing to Collateral Agent or any Lender under the Loan Documents. Any balance remaining shall be delivered to Borrower or to whoever may be lawfully entitled to receive such balance or as a court of competent jurisdiction may direct. In carrying out the foregoing, (x) amounts received shall be applied in the numerical order provided until exhausted prior to the application to the next succeeding category, and (y) each of the Persons entitled to receive a payment in any particular category shall receive an amount equal to its pro rata share of amounts available to be applied pursuant thereto for such category. Any reference in this Agreement to an allocation between or sharing by the Lenders of any right, interest or obligation "ratably," "proportionally" or in similar terms shall refer to Pro Rata Share unless expressly provided otherwise. Collateral Agent, or if applicable, each Lender, shall promptly remit to the other Lenders such sums as may be necessary to ensure the ratable repayment of each Lender's portion of any Term Loan, Revolving Advance and the ratable distribution of interest, fees and reimbursements paid or made by Borrower. Notwithstanding the foregoing, a Lender receiving a scheduled payment shall not be responsible for determining whether the other Lenders also received their scheduled payment on such date; provided, however, if it is later determined that a Lender received more than its ratable share of scheduled payments made on any date or dates, then such Lender shall remit to Collateral Agent or other Lenders such sums as may be necessary to ensure the ratable payment of such scheduled payments, as instructed by Collateral Agent. If any payment or distribution of any kind or character, whether in cash, properties or securities, shall be received by a Lender in excess of its ratable share, then the portion of such payment or distribution in excess of such Lender's ratable share shall be received by such Lender in trust for and shall be promptly paid over to the other Lender for application to the payments of amounts due on the other Lenders' claims. To the extent any payment for the account of Borrower is required to be returned as a voidable transfer or otherwise, the Lenders shall contribute to one another as is necessary to ensure that such return of payment is on a pro rata basis. If any Lender shall obtain possession of any Collateral, it shall hold such Collateral for itself and as agent and bailee for Collateral Agent and other Lenders for purposes of perfecting Collateral Agent's security interest therein.

9.5 Liability for Collateral. So long as Collateral Agent and the Lenders comply with reasonable banking practices regarding the safekeeping of the Collateral in the possession or under the control of Collateral Agent and the Lenders, Collateral Agent and the Lenders shall not be liable or responsible for: (a) the safekeeping of the Collateral; (b) any loss or damage to the Collateral; (c) any diminution in the value of the Collateral; or (d) any act or default of any carrier, warehouseman, bailee, or other Person. Borrower bears all risk of loss, damage or destruction of the Collateral.

9.6 No Waiver; Remedies Cumulative. Failure by Collateral Agent or any Lender, at any time or times, to require strict performance by Borrower of any provision of this Agreement or any other Loan Document shall not waive, affect, or diminish any right of Collateral Agent or any Lender thereafter to demand strict performance and compliance herewith or therewith. No waiver hereunder shall be effective unless signed by Collateral Agent and the Required Lenders and then is only effective for the specific instance and purpose for which it is given. The rights and remedies of Collateral Agent and the Lenders under this Agreement and the other Loan Documents are cumulative. Collateral Agent and the Lenders have all rights and remedies provided under the Code, any applicable law, by law, or in equity. The exercise by Collateral Agent or any Lender of one right or remedy is not an election, and Collateral Agent's or any Lender's waiver of any Event of Default is not a continuing waiver. Collateral Agent's or any Lender's delay in exercising any remedy is not a waiver, election, or acquiescence.

9.7 Demand Waiver. Borrower waives, to the fullest extent permitted by law, demand, notice of default or dishonor, notice of payment and nonpayment, notice of any default, nonpayment at maturity, release, compromise, settlement, extension, or renewal of accounts, documents, instruments, chattel paper, and guarantees held by Collateral Agent or any Lender on which Borrower or any Subsidiary is liable.

10. NOTICES

All notices, consents, requests, approvals, demands, or other communication (collectively, "**Communication**") by any party to this Agreement or any other Loan Document must be in writing and shall be deemed to have been validly served, given, or delivered: (a) upon the earlier of actual receipt and three (3) Business Days after deposit in the U.S. mail, first class, registered or certified mail return receipt requested, with proper postage prepaid; (b) upon transmission, when sent by facsimile transmission; (c) one (1) Business Day after deposit with a reputable overnight courier with all charges prepaid; or (d) when delivered, if hand-delivered by messenger, all of which shall be addressed to the party to be notified and sent to the address, facsimile number, or email address indicated below. Any of Collateral Agent, Lender or Borrower may change its mailing address or facsimile number by giving the other party written notice thereof in accordance with the terms of this Section 10.

If to Borrower: SI-BONE, INC.
3055 Olin Avenue, Suite 2200
San Jose, California 95128
Attn: Chief Financial Officer
Fax: (408) 557-8312 Email: lfrancis@si-bone.com

with a copy (which shall not constitute notice) to:	GUNNDERSON DETTMER STOUGH VILLENEUVE FRANKLIN & HACHIGIAN, LLP 1200 Seaport Blvd. Redwood City, CA 94063 Attn: Bennett L. Yee Fax: (650) 321-2400 Email: byee@gunder.com COOLEY LLP 3175 Hanover Street Palo Alto, California 94304-1130 Attn: John B. Hale Fax: (650) 849-7400 Email: jhale@cooley.com
If to Collateral Agent:	OXFORD FINANCE LLC 133 North Fairfax Street Alexandria, Virginia 22314 Attention: Legal Department Fax: (703) 519-5225 Email: LegalDepartment@oxfordfinance.com
with a copy to	SILICON VALLEY BANK 2400 Hanover Street Palo Alto, California 94304 Attn: Shawn Parry Email: SParry@svb.com
with a copy (which shall not constitute notice) to:	DLA PIPER LLP (US) 4365 Executive Drive, Suite 1100 San Diego, California 92121-2133 Attn: Troy Zander Fax: (858) 638-5086 Email: troy.zander@dlapiper.com

11. CHOICE OF LAW, VENUE AND JURY TRIAL WAIVER, AND JUDICIAL REFERENCE

California law governs the Loan Documents without regard to principles of conflicts of law. Borrower, Collateral Agent and each Lender each submit to the exclusive jurisdiction of the State and Federal courts in Santa Clara County, California; provided, however, that nothing in this Agreement shall be deemed to operate to preclude Collateral Agent or any Lender from bringing suit or taking other legal action in any other jurisdiction to realize on the Collateral or any other security for the Obligations, or to enforce a judgment or other court order in favor of Collateral Agent or any Lender. Borrower expressly submits and consents in advance to such jurisdiction in any action or suit commenced in any such court, and Borrower hereby waives any objection that it may have based upon lack of personal jurisdiction, improper venue, or forum non conveniens and hereby consents to the granting of such legal or equitable relief as is deemed

appropriate by such court. Borrower hereby waives personal service of the summons, complaints, and other process issued in such action or suit and agrees that service of such summons, complaints, and other process may be made by registered or certified mail addressed to Borrower at the address set forth in, or subsequently provided by Borrower in accordance with, Section 10 of this Agreement and that service so made shall be deemed completed upon the earlier to occur of Borrower's actual receipt thereof or three (3) days after deposit in the U.S. mails, proper postage prepaid.

TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, BORROWER, COLLATERAL AGENT AND EACH LENDER EACH WAIVE THEIR RIGHT TO A JURY TRIAL OF ANY CLAIM OR CAUSE OF ACTION ARISING OUT OF OR BASED UPON THIS AGREEMENT, THE LOAN DOCUMENTS OR ANY CONTEMPLATED TRANSACTION, INCLUDING CONTRACT, TORT, BREACH OF DUTY AND ALL OTHER CLAIMS. THIS WAIVER IS A MATERIAL INDUCEMENT FOR EACH PARTY TO ENTER INTO THIS AGREEMENT. EACH PARTY HAS REVIEWED THIS WAIVER WITH ITS COUNSEL.

WITHOUT INTENDING IN ANY WAY TO LIMIT THE PARTIES' AGREEMENT TO WAIVE THEIR RESPECTIVE RIGHT TO A TRIAL BY JURY, if the above waiver of the right to a trial by jury is not enforceable, the parties hereto agree that any and all disputes or controversies of any nature between them arising at any time shall be decided by a reference to a private judge, mutually selected by the parties (or, if they cannot agree, by the Presiding Judge of the Santa Clara County, California Superior Court) appointed in accordance with California Code of Civil Procedure Section 638 (or pursuant to comparable provisions of federal law if the dispute falls within the exclusive jurisdiction of the federal courts), sitting without a jury, in Santa Clara County, California; and the parties hereby submit to the jurisdiction of such court. The reference proceedings shall be conducted pursuant to and in accordance with the provisions of California Code of Civil Procedure §§ 638 through 645.1, inclusive. The private judge shall have the power, among others, to grant provisional relief, including without limitation, entering temporary restraining orders, issuing preliminary and permanent injunctions and appointing receivers. All such proceedings shall be closed to the public and confidential and all records relating thereto shall be permanently sealed. If during the course of any dispute, a party desires to seek provisional relief, but a judge has not been appointed at that point pursuant to the judicial reference procedures, then such party may apply to the Santa Clara County, California Superior Court for such relief. The proceeding before the private judge shall be conducted in the same manner as it would be before a court under the rules of evidence applicable to judicial proceedings. The parties shall be entitled to discovery which shall be conducted in the same manner as it would be before a court under the rules of discovery applicable to judicial proceedings. The private judge shall oversee discovery and may enforce all discovery rules and orders applicable to judicial proceedings in the same manner as a trial court judge. The parties agree that the selected or appointed private judge shall have the power to decide all issues in the action or proceeding, whether of fact or of law, and shall report a statement of decision thereon pursuant to California Code of Civil Procedure § 644(a). Nothing in this paragraph shall limit the right of any party at any time to exercise self-help remedies, foreclose against collateral, or obtain provisional remedies. The private judge shall also determine all issues relating to the applicability, interpretation, and enforceability of this paragraph.

12. GENERAL PROVISIONS

12.1 Successors and Assigns. This Agreement binds and is for the benefit of the successors and permitted assigns of each party. Borrower may not transfer, pledge or assign this Agreement or any rights or obligations under it without Collateral Agent's and each Lender's prior written consent (which may be granted or withheld in Collateral Agent's and each Lender's discretion, subject to Section 12.6). The Lenders have the right, without the consent of or notice to Borrower, to sell, transfer, assign, pledge, negotiate, or grant participation in (**any** such sale, transfer, assignment, negotiation, or grant of a participation, a "**Lender Transfer**") all or any part of, or any interest in, the Lenders' obligations, rights, and benefits under this Agreement and the other Loan Documents; provided, however, that any such Lender Transfer (other than a transfer, pledge, sale or assignment to an Eligible Assignee) of its obligations, rights, and benefits under this Agreement and the other Loan Documents shall require the prior written consent of the Required Lenders (such approved assignee, an "**Approved Lender**"). Borrower and Collateral Agent shall be entitled to continue to deal solely and directly with such Lender in connection with the interests so assigned until Collateral Agent shall have received and accepted an effective assignment agreement in form satisfactory to Collateral Agent executed, delivered and fully completed by the applicable parties thereto, and shall have received such other information regarding such Eligible Assignee or Approved Lender as Collateral Agent reasonably shall require. Notwithstanding anything to the contrary contained herein, so long as no Event of Default has occurred and is continuing, no Lender Transfer (other than a Lender Transfer (i) in respect of the Warrants or (ii) in connection with (x) assignments by a Lender due to a forced divestiture at the request of any regulatory agency; or (y) upon the occurrence of a default, event of default or similar occurrence with respect to a Lender's own financing or securitization transactions) shall be permitted, without Borrower's consent, to any Person which is an Affiliate or Subsidiary of Borrower, a direct competitor of Borrower or a vulture hedge fund, each as determined by Collateral Agent.

12.2 Indemnification. Borrower agrees to indemnify, defend and hold Collateral Agent and the Lenders and their respective directors, officers, employees, agents, attorneys, or any other Person affiliated with or representing Collateral Agent or the Lenders (each, an "**Indemnified Person**") harmless against: (a) all obligations, demands, claims, and liabilities (collectively, "**Claims**") asserted by any other party in connection with; related to; following; or arising from, out of or under, the transactions contemplated by the Loan Documents; and (b) all losses or Lenders' Expenses incurred, or paid by Indemnified Person in connection with; related to; following; or arising from, out of or under, the transactions contemplated by the Loan Documents between Collateral Agent, and/or the Lenders and Borrower (including reasonable attorneys' fees and expenses), except for Claims and/or losses directly caused by such Indemnified Person's gross negligence or willful misconduct. Borrower hereby further indemnifies, defends and holds each Indemnified Person harmless from and against any and all liabilities, obligations, losses, damages, penalties, actions, judgments, suits, claims, costs, expenses and disbursements of any kind or nature whatsoever (including the fees and disbursements of counsel for such Indemnified Person) in connection with any investigative, response, remedial, administrative or judicial matter or proceeding, whether or not such Indemnified Person shall be designated a party thereto and including any such proceeding initiated by or on behalf of Borrower, and the reasonable expenses of investigation by engineers, environmental consultants and similar technical personnel and any commission, fee or

compensation claimed by any broker (other than any broker retained by Collateral Agent or Lenders) asserting any right to payment for the transactions contemplated hereby which may be imposed on, incurred by or asserted against such Indemnified Person as a result of or in connection with the transactions contemplated hereby and the use or intended use of the proceeds of the loan proceeds except for liabilities, obligations, losses, damages, penalties, actions, judgments, suits, claims, costs, expenses and disbursements directly caused by such Indemnified Person's gross negligence or willful misconduct.

12.3 Time of Essence. Time is of the essence for the performance of all Obligations in this Agreement.

12.4 Severability of Provisions. Each provision of this Agreement is severable from every other provision in determining the enforceability of any provision.

12.5 Correction of Loan Documents. Collateral Agent and the Lenders may correct patent errors and fill in any blanks in this Agreement and the other Loan Documents consistent with the agreement of the parties.

12.6 Amendments in Writing; Integration. (a) No amendment, modification, termination or waiver of any provision of this Agreement or any other Loan Document, no approval or consent thereunder, or any consent to any departure by Borrower or any of its Subsidiaries therefrom, shall in any event be effective unless the same shall be in writing and signed by Borrower, Collateral Agent and the Required Lenders provided that:

(i) no such amendment, waiver or other modification that would have the effect of increasing or reducing a Lender's Term Loan Commitment, Term Loan Commitment Percentage or Revolving Line Commitment Percentage shall be effective as to such Lender without such Lender's written consent;

(ii) no such amendment, waiver or modification that would affect the rights and duties of Collateral Agent shall be effective without Collateral Agent's written consent or signature;

(iii) no such amendment, waiver or other modification shall, unless signed by all the Lenders directly affected thereby, (A) reduce the principal of, rate of interest on or any fees with respect to any Term Loan or forgive any principal, interest (other than default interest) or fees (other than late charges) with respect to any Term Loan or Revolving Advance (B) postpone the date fixed for, or waive, any payment of principal of any Term Loan or Revolving Advance or of interest on any Term Loan or Revolving Advance (other than default interest) or any fees provided for hereunder (other than late charges or for any termination of any commitment); (C) change the definition of the term "**Required Lenders**" or the percentage of Lenders which shall be required for the Lenders to take any action hereunder; (D) release all or substantially all of any material portion of the Collateral, authorize Borrower to sell or otherwise dispose of all or substantially all or any material portion of the Collateral or release any Guarantor of all or any portion of the Obligations or its guaranty obligations with respect thereto, except, in each case with respect to this clause (D), as otherwise may be expressly permitted under this Agreement or the other Loan Documents (including in connection with any

disposition permitted hereunder); (E) amend, waive or otherwise modify this Section 12.6 or the definitions of the terms used in this Section 12.6 insofar as the definitions affect the substance of this Section 12.6; (F) consent to the assignment, delegation or other transfer by Borrower of any of its rights and obligations under any Loan Document or release Borrower of its payment obligations under any Loan Document, except, in each case with respect to this clause (F), pursuant to a merger or consolidation permitted pursuant to this Agreement; (G) amend any of the provisions of Section 9.4 or amend any of the definitions of Pro Rata Share, Term Loan Commitment Percentage or Revolving Line Commitment Percentage or that provide for the Lenders to receive their Pro Rata Shares of any fees, payments, setoffs or proceeds of Collateral hereunder; (H) subordinate the Liens granted in favor of Collateral Agent securing the Obligations; or (I) amend any of the provisions of Section 12.10. It is hereby understood and agreed that all Lenders shall be deemed directly affected by an amendment, waiver or other modification of the type described in the preceding clauses (C), (D), (E), (F), (G) and (H) of the preceding sentence;

(iv) the provisions of the foregoing clauses (i), (ii) and (iii) are subject to the provisions of any interlender or agency agreement among the Lenders and Collateral Agent pursuant to which any Lender may agree to give its consent in connection with any amendment, waiver or modification of the Loan Documents only in the event of the unanimous agreement of all Lenders.

(b) Other than as expressly provided for in Section 12.6(a)(i)-(iii), Collateral Agent may, if requested by the Required Lenders, from time to time designate covenants in this Agreement less restrictive by notification to a representative of Borrower.

(c) This Agreement and the Loan Documents represent the entire agreement about this subject matter and supersede prior negotiations or agreements. All prior agreements, understandings, representations, warranties, and negotiations between the parties about the subject matter of this Agreement and the Loan Documents merge into this Agreement and the Loan Documents.

12.7 Counterparts. This Agreement may be executed in any number of counterparts and by different parties on separate counterparts, each of which, when executed and delivered, is an original, and all taken together, constitute one Agreement.

12.8 Survival. All covenants, representations and warranties made in this Agreement continue in full force and effect until this Agreement has terminated pursuant to its terms and all Obligations (other than inchoate indemnity obligations and any other obligations which, by their terms, are to survive the termination of this Agreement) have been satisfied. Without limiting the foregoing, except as otherwise provided in Section 4.1, the grant of security interest by Borrower in Section 4.1 shall survive until the termination of all Bank Services Agreements. The obligation of Borrower in Section 12.2 to indemnify each Lender and Collateral Agent, as well as the confidentiality provisions in Section 12.9 below, shall survive until the statute of limitations with respect to such claim or cause of action shall have run.

12.9 Confidentiality. In handling any confidential information of Borrower, the Lenders and Collateral Agent shall exercise the same degree of care that it exercises for their

own proprietary information, but disclosure of information may be made: (a) subject to the terms and conditions of this Agreement, to the Lenders' and Collateral Agent's Subsidiaries or Affiliates, or in connection with a Lender's own financing or securitization transactions and upon the occurrence of a default, event of default or similar occurrence with respect to such financing or securitization transaction; (b) to prospective transferees (other than those identified in (a) above) or purchasers of any interest in the Credit Extensions (provided, however, the Lenders and Collateral Agent shall, except upon the occurrence and during the continuance of an Event of Default, obtain such prospective transferee's or purchaser's agreement to the terms of this provision or to similar confidentiality terms); (c) as required by law, regulation, subpoena, or other order; (d) to Lenders' or Collateral Agent's regulators or as otherwise required in connection with an examination or audit; (e) as Collateral Agent reasonably considers appropriate in exercising remedies under the Loan Documents; and (f) to third party service providers of the Lenders and/or Collateral Agent so long as such service providers have executed a confidentiality agreement with the Lenders and Collateral Agent with terms no less restrictive than those contained herein. Confidential information does not include information that either: (i) is in the public domain or in the Lenders' and/or Collateral Agent's possession when disclosed to the Lenders and/or Collateral Agent, or becomes part of the public domain after disclosure to the Lenders and/or Collateral Agent; or (ii) is disclosed to the Lenders and/or Collateral Agent by a third party, if the Lenders and/or Collateral Agent does not know that the third party is prohibited from disclosing the information. Collateral Agent and the Lenders may use confidential information for any purpose, including, without limitation, for the development of client databases, reporting purposes, and market analysis. The provisions of the immediately preceding sentence shall survive the termination of this Agreement. The agreements provided under this Section 12.9 supersede all prior agreements, understanding, representations, warranties, and negotiations between the parties about the subject matter of this Section 12.9.

12.10 Right of Set Off. Borrower hereby grants to Collateral Agent and to each Lender, a lien, security interest and right of set off as security for all Obligations to Collateral Agent and each Lender hereunder, whether now existing or hereafter arising upon and against all deposits, credits, collateral and property, now or hereafter in the possession, custody, safekeeping or control of Collateral Agent or the Lenders or any entity under the control of Collateral Agent or the Lenders (including a Collateral Agent affiliate) or in transit to any of them. At any time after the occurrence and during the continuance of an Event of Default, without demand or notice, Collateral Agent or the Lenders may set off the same or any part thereof and apply the same to any liability or obligation of Borrower even though unmatured and regardless of the adequacy of any other collateral securing the Obligations. ANY AND ALL RIGHTS TO REQUIRE COLLATERAL AGENT TO EXERCISE ITS RIGHTS OR REMEDIES WITH RESPECT TO ANY OTHER COLLATERAL WHICH SECURES THE OBLIGATIONS, PRIOR TO EXERCISING ITS RIGHT OF SETOFF WITH RESPECT TO SUCH DEPOSITS, CREDITS OR OTHER PROPERTY OF BORROWER ARE HEREBY KNOWINGLY, VOLUNTARILY AND IRREVOCABLY WAIVED.

12.11 Silicon Valley Bank as Agent. Collateral Agent hereby appoints Silicon Valley Bank ("**SVB**") as its agent (and SVB hereby accepts such appointment) for the purpose of perfecting Collateral Agent's Liens in assets which, in accordance with Article 8 or Article 9, as applicable, of the Code can be perfected by possession or control, including without limitation, all deposit accounts maintained at SVB.

12.12 Cooperation of Borrower. If necessary, Borrower agrees to (i) execute any documents (including new Secured Promissory Notes) reasonably required to effectuate and acknowledge each assignment of a Term Loan Commitment, Term Loan or Revolving Line Commitment to an assignee in accordance with Section 12.1, (ii) make Borrower's management available to meet with Collateral Agent and prospective participants and assignees of Term Loan Commitments, Revolving Line Commitments or Credit Extensions (which meetings shall be conducted no more often than twice every twelve months unless an Event of Default has occurred and is continuing), and (iii) assist Collateral Agent or the Lenders in the preparation of information relating to the financial affairs of Borrower as any prospective participant or assignee of a Term Loan Commitment, Term Loan or Revolving Line Commitment reasonably may request. Subject to the provisions of Section 12.9, Borrower authorizes each Lender to disclose to any prospective participant or assignee of a Term Loan Commitment, any and all information in such Lender's possession concerning Borrower and its financial affairs which has been delivered to such Lender by or on behalf of Borrower pursuant to this Agreement, or which has been delivered to such Lender by or on behalf of Borrower in connection with such Lender's credit evaluation of Borrower prior to entering into this Agreement.

13. DEFINITIONS

13.1 Definitions. As used in this Agreement, the following terms have the following meanings:

"**Account**" is any "account" as defined in the Code with such additions to such term as may hereafter be made, and includes, without limitation, all accounts receivable and other sums owing to Borrower.

"**Account Debtor**" is any "account debtor" as defined in the Code with such additions to such term as may hereafter be made.

"**Additional Prepayment Fee**" so long as SVB is a Lender and all, but not less than all, of the Term Loans are prepaid in full prior to the Maturity Date, whether by mandatory or voluntary prepayment, acceleration or otherwise, an additional fee payable to SVB solely for its own account in an amount an equal to Four Hundred Forty-Five Thousand Dollars ($445,000.00).

"**Affiliate**" of any Person is a Person that owns or controls directly or indirectly the Person, any Person that controls or is controlled by or is under common control with the Person, and each of that Person's senior executive officers, directors, partners and, for any Person that is a limited liability company, that Person's managers and members.

"**Agreement**" is defined in the preamble hereof.

"**Amortization Date**" is April 1, 2017 with respect to the Term A Loans, Term B Loans and the Term C Loans; provided, however, that if the Term D Loans are made, then the Amortization Date for all Term Loans shall be October 1, 2017.

"**Annual Projections**" is defined in Section 6.2(a).

"**Anti-Terrorism Laws**" are any laws relating to terrorism or money laundering, including Executive Order No. 13224 (effective September 24, 2001), the USA PATRIOT Act, the laws comprising or implementing the Bank Secrecy Act, and the laws administered by OFAC.

"**Approved Fund**" is any (i) investment company, fund, trust, securitization vehicle or conduit that is (or will be) engaged in making, purchasing, holding or otherwise investing in commercial loans and similar extensions of credit in the ordinary course of its business or (ii) any Person (other than a natural person) which temporarily warehouses loans for any Lender or any entity described in the preceding clause (i) and that, with respect to each of the preceding clauses (i) and (ii), is administered or managed by (a) a Lender, (b) an Affiliate of a Lender or (c) a Person (other than a natural person) or an Affiliate of a Person (other than a natural person) that administers or manages a Lender.

"**Approved Lender**" is defined in Section 12.1.

"**Availability Amount**" is (a) the lesser of (i) the Revolving Line or (ii) the amount available under the Borrowing Base minus (b) the outstanding principal balance of any Revolving Advances.

"**Bank Services**" are any products, credit services, and/or financial accommodations previously, now, or hereafter provided to Borrower or any of its Subsidiaries by Bank or any Bank Affiliate, including, without limitation, any letters of credit, cash management services (including, without limitation, merchant services, direct deposit of payroll, business credit cards, and check cashing services), interest rate swap arrangements, and foreign exchange services as any such products or services may be identified in Bank's various agreements related thereto (each, a "**Bank Services Agreement**").

"**Bank**" is defined in the preamble hereof.

"**Basic Rate**" is, with respect to a Term Loan, the per annum rate of interest (based on a year of three hundred sixty (360) days) equal to the greater of (i) eleven percent (1 1%) and (ii) the sum of (a) the "prime rate" reported in the Wall Street Journal on the date occurring on the last Business Day of the month that immediately precedes the month in which the interest will accrue, plus (b) seven and seventy-five hundredths percent (7.75%), and, with respect to a Revolving Advance, the per annum rate of interest (based on a year of three hundred sixty (360) days) equal to the sum of (a) the "prime rate" reported in the Wall Street Journal on the date occurring on the last Business Day of the month that immediately precedes the month in which the interest will accrue, plus (b) three percent (3%). Without limiting the foregoing, the Basic Rate as of the Effective Date through October 31, 2015 shall be eleven percent (11%) in respect of the Term A Loan and six and twenty-five hundredths percent (6.25%) in respect of any Revolving Advances.

"**Blocked Person**" is any Person: (a) listed in the annex to, or is otherwise subject to the provisions of, Executive Order No. 13224, (b) a Person owned or controlled by, or acting for or on behalf of, any Person that is listed in the annex to, or is otherwise subject to the provisions of, Executive Order No. 13224, (c) a Person with which any Lender is prohibited from dealing or

otherwise engaging in any transaction by any Anti-Terrorism Law, (d) a Person that commits, threatens or conspires to commit or supports "terrorism" as defined in Executive Order No. 13224, or (e) a Person that is named a "specially designated national" or "blocked person" on the most current list published by OFAC or other similar list.

"**Borrower**" is defined in the preamble hereof.

"**Borrower's Books**" are Borrower's or any of its Subsidiaries' books and records including ledgers, federal, and state tax returns, records regarding Borrower's or its Subsidiaries' assets or liabilities, the Collateral, business operations or financial condition, and all computer programs or storage or any equipment containing such information.

"**Borrowing Base**" is eighty percent (80%) of Eligible Accounts, as determined by Lenders from Borrower's most recent Transaction Report; provided, however, that Lenders may decrease the foregoing percentage in their good faith business judgment based on events, conditions, contingencies, or risks which, as determined by Lenders, may adversely affect Collateral.

"**Business Day**" is any day that is not a Saturday, Sunday or a day on which Collateral Agent is closed. "**Cash Collateral Account**" is defined in Section 6.14(c).

"**Cash Equivalents**" are (a) marketable direct obligations issued or unconditionally guaranteed by the United States or any agency or any State thereof having maturities of not more than one (1) year from the date of acquisition; (b) commercial paper maturing no more than one (1) year after its creation and having the highest rating from either Standard & Poor's Ratings Group or Moody's Investors Service, Inc., and (c) certificates of deposit maturing no more than one (1) year after issue provided that the account in which any such certificate of deposit is maintained is subject to a Control Agreement in favor of Collateral Agent. For the avoidance of doubt, the direct purchase by Borrower or any of its Subsidiaries of any Auction Rate Securities, or purchasing participations in, or entering into any type of swap or other derivative transaction, or otherwise holding or engaging in any ownership interest in any type of Auction Rate Security by Borrower or any of its Subsidiaries shall be conclusively determined by the Lenders as an ineligible Cash Equivalent, and any such transaction shall expressly violate each other provision of this Agreement governing Permitted Investments. Notwithstanding the foregoing, Cash Equivalents does not include and Borrower, and each of its Subsidiaries, are prohibited from purchasing, purchasing participations in, entering into any type of swap or other equivalent derivative transaction, or otherwise holding or engaging in any ownership interest in any type of debt instrument, including, without limitation, any corporate or municipal bonds with a long-term nominal maturity for which the interest rate is reset through a dutch auction and more commonly referred to as an auction rate security (each, an "**Auction Rate Security**").

"**Claims**" are defined in Section 12.2.

"**Code**" is the Uniform Commercial Code, as the same may, from time to time, be enacted and in effect in the State of California; provided, that, to the extent that the Code is used to define any term herein or in any Loan Document and such term is defined differently in different Articles or Divisions of the Code, the definition of such term contained in Article or

Division 9 shall govern; provided further, that in the event that, by reason of mandatory provisions of law, any or all of the attachment, perfection, or priority of, or remedies with respect to, Collateral Agent's Lien on any Collateral is governed by the Uniform Commercial Code in effect in a jurisdiction other than the State of California, the term "**Code**" shall mean the Uniform Commercial Code as enacted and in effect in such other jurisdiction solely for purposes of the provisions thereof relating to such attachment, perfection, priority, or remedies and for purposes of definitions relating to such provisions.

"**Collateral**" is any and all properties, rights and assets of Borrower described on Exhibit A.

"**Collateral Account**" is any Deposit Account, Securities Account, or Commodity Account, or any other bank account maintained by Borrower or any Subsidiary at any time.

"**Collateral Agent**" is, Oxford, not in its individual capacity, but solely in its capacity as agent on behalf of and for the benefit of the Lenders.

"**Commodity Account**" is any "commodity account" as defined in the Code with such additions to such term as may hereafter be made.

"**Communication**" is defined in Section 10.

"**Compliance Certificate**" is that certain certificate in the form attached hereto as Exhibit C.

"**Contingent Obligation**" is, for any Person, any direct or indirect liability, contingent or not, of that Person for (a) any indebtedness, lease, dividend, letter of credit or other obligation of another such as an obligation directly or indirectly guaranteed, endorsed, co-made, discounted or sold with recourse by that Person, or for which that Person is directly or indirectly liable; (b) any obligations for undrawn letters of credit for the account of that Person; and (c) all obligations from any interest rate, currency or commodity swap agreement, interest rate cap or collar agreement, or other agreement or arrangement designated to protect a Person against fluctuation in interest rates, currency exchange rates or commodity prices; but "**Contingent Obligation**" does not include endorsements in the ordinary course of business. The amount of a Contingent Obligation is the stated or determined amount of the primary obligation for which the Contingent Obligation is made or, if not determinable, the maximum reasonably anticipated liability for it determined by the Person in good faith; but the amount may not exceed the maximum of the obligations under any guarantee or other support arrangement.

"**Control Agreement**" is any control agreement entered into among the depository institution at which Borrower or any of its Subsidiaries maintains a Deposit Account or the securities intermediary or commodity intermediary at which Borrower or any of its Subsidiaries maintains a Securities Account or a Commodity Account, Borrower and such Subsidiary, and Collateral Agent pursuant to which Collateral Agent obtains control (within the meaning of the Code) for the benefit of the Lenders over such Deposit Account, Securities Account, or Commodity Account.

"**Copyrights**" are any and all copyright rights, copyright applications, copyright registrations and like protections in each work of authorship and derivative work thereof, whether published or unpublished and whether or not the same also constitutes a trade secret.

"**Credit Extension**" is any Term Loan, any Revolving Advance or any other extension of credit by Collateral Agent or Lenders for Borrower's benefit.

"**Default Rate**" is defined in Section 2.3(b).

"**Deferred Revenue**" is all amounts received or invoiced in advance of performance under contracts and not yet recognized as revenue.

"**Deposit Account**" is any "deposit account" as defined in the Code with such additions to such term as may hereafter be made.

"**Designated Deposit Account**" is Borrower's deposit account, account number 3301139905, maintained with Bank.

"**Disbursement Letter**" is that certain form attached hereto as Exhibit B-1.

"**Dollar Equivalent**" is, at any time, (a) with respect to any amount denominated in Dollars, such amount, and (b) with respect to any amount denominated in a Foreign Currency, the equivalent amount therefor in Dollars as determined by Bank at such time on the basis of the then-prevailing rate of exchange in San Francisco, California, for sales of the Foreign Currency for transfer to the country issuing such Foreign Currency.

"**Dollars,**" "dollars" and "$" each mean lawful money of the United States. "**Effective Date**" is defined in the preamble of this Agreement.

"**Eligible Assignee**" is (i) a Lender, (ii) an Affiliate of a Lender, (iii) an Approved Fund and (iv) any commercial bank, savings and loan association or savings bank or any other entity which is an "accredited investor" (as defined in Regulation D under the Securities Act of 1933, as amended) and which extends credit or buys loans as one of its businesses, including insurance companies, mutual funds, lease financing companies and commercial finance companies, in each case, which either (A) has a rating of BBB or higher from Standard & Poor's Rating Group and a rating of Baa2 or higher from Moody's Investors Service, Inc. at the date that it becomes a Lender or (B) has total assets in excess of Five Billion Dollars ($5,000,000,000.00), and in each case of clauses (i) through (iv), which, through its applicable lending office, is capable of lending to Borrower without the imposition of any withholding or similar taxes; provided that notwithstanding the foregoing,

"**Eligible Assignee**" shall not include, unless an Event of Default has occurred and is continuing, (i) Borrower or any of Borrower's Affiliates or Subsidiaries or (ii) a direct competitor of Borrower or a vulture hedge fund, each as determined by Collateral Agent. Notwithstanding the foregoing, (x) in connection with assignments by a Lender due to a forced divestiture at the request of any regulatory agency, the restrictions set forth herein shall not apply and Eligible Assignee shall mean any Person or party and (y) in connection with a Lender's own financing or securitization transactions, the restrictions set forth herein shall not apply and

Eligible Assignee shall mean any Person or party providing such financing or formed to undertake such securitization transaction and any transferee of such Person or party upon the occurrence of a default, event of default or similar occurrence with respect to such financing or securitization transaction; provided that no such sale, transfer, pledge or assignment under this clause (y) shall release such Lender from any of its obligations hereunder or substitute any such Person or party for such Lender as a party hereto until Collateral Agent shall have received and accepted an effective assignment agreement from such Person or party in form satisfactory to Collateral Agent executed, delivered and fully completed by the applicable parties thereto, and shall have received such other information regarding such Eligible Assignee as Collateral Agent reasonably shall require.

"**Equipment**" is all "equipment" as defined in the Code with such additions to such term as may hereafter be made, and includes without limitation all machinery, fixtures, goods, vehicles (including motor vehicles and trailers), and any interest in any of the foregoing.

"**Eligible Accounts**" means Accounts which arise in the ordinary course of Borrower's business that meet all Borrower's representations and warranties in Section 5.11. Collateral Agent and Lenders reserve the right at any time after the Effective Date to adjust any of the criteria set forth below and to establish new criteria in their good faith business judgment. Unless Collateral Agent otherwise agrees in writing, Eligible Accounts shall not include:

(a) Accounts for which the Account Debtor is Borrower's Affiliate, officer, employee, or agent;

(b) Accounts that the Account Debtor has not paid within ninety (90) days of invoice date regardless of invoice payment period terms;

(c) Accounts with credit balances over ninety (90) days from invoice date;

(d) Accounts owing from an Account Debtor, in which fifty percent (50%) or more of the Accounts have not been paid within ninety (90) days of invoice date;

(e) Accounts owing from an Account Debtor which does not have its principal place of business in the United States unless otherwise approved in writing by Collateral Agent in its sole discretion on a case by case basis;

(f) Accounts billed and/or payable outside of the United States (sometimes called foreign invoiced accounts);

(g) Accounts owing from an Account Debtor to the extent that Borrower is indebted or obligated in any manner to the Account Debtor (as creditor, lessor, supplier or otherwise sometimes called "contra" accounts, accounts payable, customer deposits or credit accounts).

(h) Accounts owing from an Account Debtor which is a United States government entity or any department, agency, or instrumentality thereof unless Borrower has assigned its payment rights to Collateral Agent and the assignment has been acknowledged under the Federal Assignment of Claims Act of 1940, as amended;

(i) Accounts for demonstration or promotional equipment, or in which goods are consigned, or sold on a "sale guaranteed", "sale or return", "sale on approval", or other terms if Account Debtor's payment may be conditional;

(j) Accounts owing from an Account Debtor where goods or services have not yet been rendered to the Account Debtor (sometimes called memo billings or pre billings);

(k) Accounts subject to contractual arrangements between Borrower and an Account Debtor where payments shall be scheduled or due according to completion or fulfillment requirements where the Account Debtor has a right of offset for damages suffered as a result of Borrower's failure to perform in accordance with the contract (sometimes called contracts accounts receivable, progress billings, milestone billings, or fulfillment contracts);

(l) Accounts owing from an Account Debtor the amount of which may be subject to withholding based on the Account Debtor's satisfaction of Borrower's complete performance (but only to the extent of the amount withheld; sometimes called retainage billings);

(m) Accounts subject to trust provisions, subrogation rights of a bonding company, or a statutory trust;

(n) Accounts owing from an Account Debtor that has been invoiced for goods that have not been shipped to the Account Debtor unless Collateral Agent, Borrower, and the Account Debtor have entered into an agreement acceptable to Collateral Agent in its sole discretion wherein the Account Debtor acknowledges that (i) it has title to and has ownership of the goods wherever located, (ii) a bona fide sale of the goods has occurred, and (iii) it owes payment for such goods in accordance with invoices from Borrower (sometimes called "bill and hold" accounts);

(o) Accounts for which the Account Debtor has not been invoiced;

(p) Accounts that represent non trade receivables or that are derived by means other than in the ordinary course of Borrower's business;

(q) Accounts arising from chargebacks, debit memos or others payment deductions taken by an Account Debtor;

(r) Accounts arising from product returns and/or exchanges (sometimes called "warranty" or "RMA" accounts);

(s) Accounts in which the Account Debtor disputes liability or makes any claim (but only up to the disputed or claimed amount), or if the Account Debtor is subject to an Insolvency Proceeding, or becomes insolvent, or goes out of business;

(t) Accounts owing from an Account Debtor with respect to which Borrower has received Deferred Revenue (but only to the extent of such Deferred Revenue);

(u) Accounts owing from an Account Debtor, whose total obligations to Borrower exceed twenty five percent (25%) of all Accounts, for the amounts that exceed that percentage, unless otherwise approved in writing by Collateral Agent in its sole discretion on a case by case basis; and

(v) Accounts for which Collateral Agent in its good faith business judgment determines collection to be doubtful, including, without limitation, accounts represented by "refreshed" or "recycled" invoices.

"**Equity Event**" is the receipt by Borrower after the Effective Date of unrestricted net cash proceeds of not less than Sixty-Five Million Dollars ($65,000,000.00) pursuant to an initial public offering of equity securities of Borrower.

"**ERISA**" is the Employee Retirement Income Security Act of 1974, as amended, and its regulations.

"**Existing Indebtedness**" is the indebtedness of Borrower to Silicon Valley Bank in the aggregate principal outstanding amount as of the Effective Date of approximately Sixteen Million Two Hundred Forty-Nine Thousand Seven Hundred Ten and 07/100 Dollars ($16,249,710.07) pursuant to that certain Loan and Security Agreement, dated September 13, 2012, entered into by and between Silicon Valley Bank and Borrower, as amended.

"**Event of Default**" is defined in Section 8.

"**Excluded Foreign Subsidiary**" is defined in Section 6.12.

"**Foreign Currency**" means lawful money of a country other than the United States.

"**Foreign Subsidiary**" is a Subsidiary that is not an entity organized under the laws of the United States or any territory thereof.

"**Fourth Draw Period Revenue Event**" is the achievement by Borrower after the Effective Date of trailing six months of consolidated revenues (in accordance with GAAP) of at least Twenty-Four Million Dollars ($24,000,000.00), at the end of any fiscal month, as determined by Collateral Agent based upon written evidence satisfactory to Collateral Agent.

"**Fourth Draw Period**" is the period commencing on the date of the occurrence of the Fourth Draw Period Revenue Event and ending on the earliest of (i) thirty (30) days following the occurrence of the Fourth Draw Period Revenue Event, (ii) December 31, 2016 and (iii) the occurrence of an Event of Default; provided, however, that the Fourth Draw Period shall not commence if on the date of the occurrence of the Fourth Draw Period Revenue Event an Event of Default has occurred and is continuing.

"**Funding Date**" is any date on which a Credit Extension is made to or on account of Borrower which shall be a Business Day.

"**FX Contract**" is any foreign exchange contract by and between Borrower and Bank under which Borrower commits to purchase from or sell to Bank a specific amount of Foreign Currency on a specified date.

"**GAAP**" is generally accepted accounting principles set forth in the opinions and pronouncements of the Accounting Principles Board of the American Institute of Certified Public Accountants and statements and pronouncements of the Financial Accounting Standards Board or in such other statements by such other Person as may be approved by a significant segment of the accounting profession in the United States, which are applicable to the circumstances as of the date of determination.

"**General Intangibles**" are all "general intangibles" as defined in the Code in effect on the date hereof with such additions to such term as may hereafter be made, and includes without limitation, all copyright rights, copyright applications, copyright registrations and like protections in each work of authorship and derivative work, whether published or unpublished, any patents, trademarks, service marks and, to the extent permitted under applicable law, any applications therefor, whether registered or not, any trade secret rights, including any rights to unpatented inventions, payment intangibles, royalties, contract rights, goodwill, franchise agreements, purchase orders, customer lists, route lists, telephone numbers, domain names, claims, income and other tax refunds, security and other deposits, options to purchase or sell real or personal property, rights in all litigation presently or hereafter pending (whether in contract, tort or otherwise), insurance policies (including without limitation key man, property damage, and business interruption insurance), payments of insurance and rights to payment of any kind.

"**Governmental Approval**" is any consent, authorization, approval, order, license, franchise, permit, certificate, accreditation, registration, filing or notice, of, issued by, from or to, or other act by or in respect of, any Governmental Authority.

"**Governmental Authority**" is any nation or government, any state or other political subdivision thereof, any agency, authority, instrumentality, regulatory body, court, central bank or other entity exercising executive, legislative, judicial, taxing, regulatory or administrative functions of or pertaining to government, any securities exchange and any self-regulatory organization.

"**Guarantor**" is any Person providing a Guaranty in favor of Collateral Agent.

"**Guaranty**" is any guarantee of all or any part of the Obligations, as the same may from time to time be amended, restated, modified or otherwise supplemented.

"**Indebtedness**" is (a) indebtedness for borrowed money or the deferred price of property or services, such as reimbursement and other obligations for surety bonds and letters of credit, (b) obligations evidenced by notes, bonds, debentures or similar instruments, (c) capital lease obligations, and (d) Contingent Obligations.

"**Indemnified Person**" is defined in Section 12.2.

"**Insolvency Proceeding**" is any proceeding by or against any Person under the United States Bankruptcy Code, or any other bankruptcy or insolvency law, including assignments for the benefit of creditors, compositions, extensions generally with its creditors, or proceedings seeking reorganization, arrangement, or other relief.

"**Insolvent**" means not Solvent.

"**Intellectual Property**" means all of Borrower's or any Subsidiary's right, title and interest in and to the following:

(a) its Copyrights, Trademarks and Patents;

(b) any and all trade secrets and trade secret rights, including, without limitation, any rights to unpatented inventions, know-how, operating manuals;

(c) any and all source code;

(d) any and all design rights which may be available to Borrower;

(e) any and all claims for damages by way of past, present and future infringement of any of the foregoing, with the right, but not the obligation, to sue for and collect such damages for said use or infringement of the Intellectual Property rights identified above; and

(f) all amendments, renewals and extensions of any of the Copyrights, Trademarks or Patents.

"**Inventory**" is all "inventory" as defined in the Code in effect on the date hereof with such additions to such term as may hereafter be made, and includes without limitation all merchandise, raw materials, parts, supplies, packing and shipping materials, work in process and finished products, including without limitation such inventory as is temporarily out of any Person's custody or possession or in transit and including any returned goods and any documents of title representing any of the above.

"**Investment**" is any beneficial ownership interest in any Person (including stock, partnership interest or other securities), and any loan, advance, payment or capital contribution to any Person.

"**Key Person**" is each of Borrower's (i) Chief Executive Officer, who is Jeffrey Dunn as of the Effective Date, (ii) Chief Financial Officer, who is Laura Francis as of the Effective Date and (iii) Chief Medical Officer, who is Mark A. Reiley, MD as of the Effective Date.

"**Lender**" is any one of the Lenders.

"**Lenders**" are the Persons identified on Schedule 1.1 hereto and each assignee that becomes a party to this Agreement pursuant to Section 12.1.

"**Lenders' Expenses**" are all audit fees and expenses, costs, and expenses (including reasonable attorneys' fees and expenses, as well as appraisal fees, fees incurred on account of lien searches, inspection fees, and filing fees) for preparing, amending, negotiating, administering, defending and enforcing the Loan Documents (including, without limitation, those incurred in connection with appeals or Insolvency Proceedings) or otherwise incurred by Collateral Agent and/or the Lenders in connection with the Loan Documents.

"**Letter of Credit**" is a standby or commercial letter of credit issued by Bank upon request of Borrower based upon an application, guarantee, indemnity, or similar agreement.

"**Lien**" is a claim, mortgage, deed of trust, levy, charge, pledge, security interest, or other encumbrance of any kind, whether voluntarily incurred or arising by operation of law or otherwise against any property.

"**Loan Documents**" are, collectively, this Agreement, the Warrants, the Perfection Certificates, each Compliance Certificate, each Disbursement Letter, each Loan Payment/Advance Request Form and any Bank Services Agreement, the Post Closing Letter, any subordination agreements, any note, or notes or guaranties executed by Borrower or any other Person, and any other present or future agreement entered into by Borrower, any Guarantor or any other Person for the benefit of the Lenders and Collateral Agent in connection with this Agreement; all as amended, restated, or otherwise modified.

"**Loan Payment/Advance Request Form**" is that certain form attached hereto as Exhibit B-2.

"**Material Adverse Change**" is (a) a material impairment in the perfection or priority of Collateral Agent's Lien in the Collateral or in the value of such Collateral; (b) a material adverse change in the business, operations or condition (financial or otherwise) or prospects of Borrower or any Subsidiary; or (c) a material impairment of the prospect of repayment of any portion of the Obligations.

"**Maturity Date**" is December 1, 2019.

"**Net Cash**" is Borrower's unrestricted cash maintained with Bank or Bank's Affiliates (subject to a Control Agreement) minus the aggregate outstanding amount of Revolving Advances.

"**Obligations**" are all of Borrower's obligations to pay when due any debts, principal, interest, Lenders' Expenses, the Prepayment Fee, the Additional Prepayment Fee, and other amounts Borrower owes the Lenders now or later, in connection with, related to, following, or arising from, out of or under, this Agreement or, the other Loan Documents (other than the Warrants), or otherwise, including, without limitation, all obligations relating to letters of credit (including reimbursement obligations for drawn and undrawn letters of credit), cash management services, and foreign exchange contracts, if any, and including interest accruing after Insolvency Proceedings begin (whether or not allowed) and debts, liabilities, or obligations of Borrower assigned to the Lenders and/or Collateral Agent, and the performance of Borrower's duties under the Loan Documents (other than the Warrants).

"**OFAC**" is the U.S. Department of Treasury Office of Foreign Assets Control.

"**OFAC Lists**" are, collectively, the Specially Designated Nationals and Blocked Persons List maintained by OFAC pursuant to Executive Order No. 13224, 66 Fed. Reg. 49079 (Sept. 25, 2001) and/or any other list of terrorists or other restricted Persons maintained pursuant to any of the rules and regulations of OFAC or pursuant to any other applicable Executive Orders.

"**Operating Documents**" are, for any Person, such Person's formation documents, as certified by the Secretary of State (or equivalent agency) of such Person's jurisdiction of organization on a date that is no earlier than thirty (30) days prior to the Effective Date, and, (a) if such Person is a corporation, its bylaws in current form, (b) if such Person is a limited liability company, its limited liability company agreement (or similar agreement), and (c) if such Person is a partnership, its partnership agreement (or similar agreement), each of the foregoing with all current amendments or modifications thereto.

"**Overadvance**" is defined in Section 2.3(c).

"**Patents**" means all patents, patent applications and like protections including without limitation improvements, divisions, continuations, renewals, reissues, extensions and continuations-in-part of the same.

"**Payment Date**" is the first (1st) calendar day of each calendar month, commencing on December 1, 2015. "**Perfection Certificate**" and "**Perfection Certificates**" is defined in Section 5.1.

"**Permitted Indebtedness**" is:

(a) Borrower's Indebtedness to the Lenders and Collateral Agent under this Agreement and the other Loan Documents;

(b) Indebtedness existing on the Effective Date and disclosed on the Perfection Certificate(s);

(c) Subordinated Debt;

(d) unsecured Indebtedness to trade creditors incurred in the ordinary course of business;

(e) Indebtedness consisting of capitalized lease obligations and purchase money Indebtedness, in each case incurred by Borrower or any of its Subsidiaries to finance the acquisition, repair, improvement or construction of fixed or capital assets of such person, provided that (i) the aggregate outstanding principal amount of all such Indebtedness does not exceed Two Hundred Fifty Thousand Dollars ($250,000.00) at any time and (ii) the principal amount of such Indebtedness does not exceed the lower of the cost or fair market value of the property so acquired or built or of such repairs or improvements financed with such Indebtedness (each measured at the time of such acquisition, repair, improvement or construction is made);

(f) Indebtedness incurred as a result of endorsing negotiable instruments received in the ordinary course of Borrower's business;

(g) other unsecured Indebtedness not otherwise enumerated herein not to exceed One Hundred Thousand Dollars ($100,000.00) in the aggregate outstanding at any time;

(h) Indebtedness of a Foreign Subsidiary to Borrower in connection with a Permitted Investment described in clause (f) or (g) of the definition of Permitted Investments by Borrower in such Foreign Subsidiary; and

(i) extensions, refinancings, modifications, amendments and restatements of any items of Permitted Indebtedness (a) through (e) above, provided that the principal amount thereof is not increased or the terms thereof are not modified to impose materially more burdensome terms upon Borrower, or its Subsidiary, as the case may be.

"**Permitted Investments**" are:

(a) Investments disclosed on the Perfection Certificate(s) and existing on the Effective Date;

(b) (i) Investments consisting of cash and Cash Equivalents, and (ii) any other Investments permitted by Borrower's investment policy, as amended from time to time, provided that such investment policy (and any such amendment thereto) has been approved in writing by Collateral Agent;

(c) Investments consisting of the endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of Borrower;

(d) Investments consisting of deposit accounts in which Collateral Agent has a perfected security interest (if required pursuant to Section 6.6);

(e) Investments in connection with Transfers permitted by Section 7.1;

(f) Investments by Borrower in Subsidiaries that are not co-Borrowers not to exceed (i) prior to the occurrence of an Equity Event, (A) Three Million Two Hundred Thousand Dollars ($3,200,000.00) in the aggregate in any fiscal year and (B) One Million Dollars ($1,000,000.00) in the aggregate in any fiscal quarter, and (ii) following the occurrence of an Equity Event, (A) Five Million Dollars ($5,000,000.00) in the aggregate in any fiscal year and (B) Two Million Dollars ($2,000,000.00) in the aggregate in any fiscal quarter;

(g) Investments consisting of Transfers of Inventory by Borrower to Subsidiaries that are not co-Borrowers pursuant to transfer pricing arrangements consistent with past practices and in the ordinary course and any related intercompany balances;

(h) Investments consisting of the forgiveness, cancellation or waiver by Borrower (including in the form of a capital contribution) of Indebtedness owed by a Foreign Subsidiary to Borrower, which Indebtedness constitutes intercompany balances arising from the transfer of Inventory pursuant to transfer pricing arrangements consistent with past practices and in the ordinary course;

(i) Investments consisting of (i) travel advances and employee relocation loans and other employee loans and advances in the ordinary course of business, and (ii) loans to employees, officers or directors relating to the purchase of equity securities of Borrower or its Subsidiaries pursuant to employee stock purchase plans or agreements approved by Borrower's Board of Directors; not to exceed One Hundred Thousand Dollars ($100,000.00) in the aggregate for (i) and (ii) in any fiscal year;

(j) Investments (including debt obligations) received in connection with the bankruptcy or reorganization of customers or suppliers and in settlement of delinquent obligations of, and other disputes with, customers or suppliers arising in the ordinary course of business;

(k) Investments consisting of notes receivable of, or prepaid royalties and other credit extensions, to customers and suppliers who are not Affiliates, in the ordinary course of business;

(l) non-cash Investments in joint ventures or strategic alliances in the ordinary course of Borrower's business consisting of the non-exclusive licensing of technology, the development of technology or the providing of technical support; and

(m) other Investments not otherwise enumerated herein not to exceed One Hundred Thousand Dollars ($100,000.00) in the aggregate during any fiscal year.

"**Permitted Licenses**" are (A) licenses of over-the-counter software that is commercially available to the public, and (B) non-exclusive and exclusive licenses for the use of the Intellectual Property of Borrower or any of its Subsidiaries entered into in the ordinary course of business, provided, that, with respect to each such license described in clause (B), (i) no Event of Default has occurred or is continuing at the time of such license; (ii) the license constitutes an arms-length transaction, the terms of which, on their face, do not provide for a sale or assignment of any Intellectual Property and do not restrict the ability of Borrower or any of its Subsidiaries, as applicable, to pledge, grant a security interest in or lien on, or assign or otherwise Transfer any Intellectual Property; (iii) in the case of any exclusive license, (x) Borrower delivers ten (10) days' prior written notice and a brief summary of the terms of the proposed license to Collateral Agent and the Lenders and delivers to Collateral Agent and the Lenders copies of the final executed licensing documents in connection with the exclusive license promptly upon consummation thereof, and (y) any such license could not result in a legal transfer of title of the licensed property but may be exclusive in respects other than territory and may be exclusive as to territory only as to discrete geographical areas outside of the United States; and (iv) all upfront payments, royalties, milestone payments or other proceeds arising from the licensing agreement that are payable to Borrower or any of its Subsidiaries are paid to a Deposit Account that is governed by a Control Agreement.

"**Permitted Liens**" are:

(a) Liens existing on the Effective Date and disclosed on the Perfection Certificates or arising under this Agreement and the other Loan Documents;

(b) Liens for taxes, fees, assessments or other government charges or levies, either (i) not due and payable or (ii) being contested in good faith and for which Borrower maintains adequate reserves on its Books, provided that no notice of any such Lien has been filed or recorded under the Internal Revenue Code of 1986, as amended, and the Treasury Regulations adopted thereunder;

(c) liens securing Indebtedness permitted under clause (e) of the definition of "Permitted Indebtedness," provided that (i) such liens exist prior to the acquisition of, or attach substantially simultaneous with, or within twenty (20) days after the, acquisition, lease, repair, improvement or construction of, such property financed or leased by such Indebtedness and (ii) such liens do not extend to any property of Borrower other than the property (and proceeds thereof) acquired, leased or built, or the improvements or repairs, financed by such Indebtedness;

(d) Liens of carriers, warehousemen, suppliers, or other Persons that are possessory in nature arising in the ordinary course of business so long as such Liens attach only to Inventory, securing liabilities in the aggregate amount not to exceed Twenty Five Thousand Dollars ($25,000.00), and which are not delinquent or remain payable without penalty or which are being contested in good faith and by appropriate proceedings which proceedings have the effect of preventing the forfeiture or sale of the property subject thereto;

(e) Liens to secure payment of workers' compensation, employment insurance, old-age pensions, social security and other like obligations incurred in the ordinary course of business (other than Liens imposed by ERISA);

(f) Liens incurred in the extension, renewal or refinancing of the indebtedness secured by Liens described in (a) through (c), but any extension, renewal or replacement Lien must be limited to the property encumbered by the existing Lien and the principal amount of the indebtedness may not increase;

(g) leases or subleases of real property granted in the ordinary course of Borrower's business (or, if referring to another Person, in the ordinary course of such Person's business), and leases, subleases, non-exclusive licenses or sublicenses of personal property (other than Intellectual Property) granted in the ordinary course of Borrower's business (or, if referring to another Person, in the ordinary course of such Person's business), if the leases, subleases, licenses and sublicenses do not prohibit granting Collateral Agent or any Lender a security interest therein;

(h) banker's liens, rights of setoff and Liens in favor of financial institutions incurred in the ordinary course of business arising in connection with Borrower's deposit accounts or securities accounts held at such institutions solely to secure payment of fees and similar costs and expenses and provided such accounts are maintained in compliance with Section 6.6(b) hereof;

(i) Liens arising from judgments, decrees or attachments in circumstances not constituting an Event of Default under Section 8.4 or 8.7; and

(j) Liens consisting of Permitted Licenses.

"**Person**" is any individual, sole proprietorship, partnership, limited liability company, joint venture, company, trust, unincorporated organization, association, corporation, institution, public benefit corporation, firm, joint stock company, estate, entity or government agency.

"**Post Closing Letter**" is that certain Post Closing Letter dated as of the Effective Date by and between Collateral Agent, Lenders and Borrower.

"**Prepayment Fee**" is, with respect to any Term Loan subject to prepayment prior to the Maturity Date, whether by mandatory or voluntary prepayment, acceleration or otherwise, an additional fee payable to the Lenders in amount equal to:

(i) for a prepayment made on or after the Funding Date of such Term Loan through and including the first anniversary of the Funding Date of such Term Loan, three percent (3%) of the principal amount of such Term Loan prepaid;

(ii) for a prepayment made after the date which is after the first anniversary of the Funding Date of such Term Loan through and including the second anniversary of the Funding Date of such Term Loan, two percent (2%) of the principal amount of the Term Loans prepaid; and

(iii) for a prepayment made after the date which is after the second anniversary of the Funding Date of such Term Loan and prior to the Maturity Date, one percent (1%) of the principal amount of the Term Loans prepaid.

"**Pro Rata Share**" is, as of any date of determination, with respect to each Lender, a percentage (expressed as a decimal, rounded to the ninth decimal place) determined by dividing the outstanding principal amount of Term Loans held by such Lender by the aggregate outstanding principal amount of all Term Loans.

"**Registered Organization**" is any "registered organization" as defined in the Code with such additions to such term as may hereafter be made.

"**Required Lenders**" means (i) for so long as all of the Persons that are Lenders on the Effective Date (each an "**Original Lender**") have not assigned or transferred any of their interests in their Term Loan or their Revolving Line Commitment, Lenders holding one hundred percent (100%) of the aggregate outstanding principal balance of the Term Loan and the Revolving Line Commitment, or (ii) at any time from and after any Original Lender has assigned or transferred any interest in its Term Loan or its Revolving Line Commitment, Lenders holding at least sixty six percent (66%) of the aggregate outstanding principal balance of the Term Loan and the Revolving Line Commitment and, in respect of this clause (ii), (A) each Original Lender that has not assigned or transferred any portion of its Term Loan and Revolving Line Commitment, (B) each assignee or transferee of an Original Lender's interest in the Term Loan or Revolving Line Commitment, but only to the extent that such assignee or transferee is an Affiliate or Approved Fund of such Original Lender, and (C) any Person providing financing to any Person described in clauses (A) and (B) above; provided, however, that this clause (C) shall only apply upon the occurrence of a default, event of default or similar occurrence with respect to such financing.

"**Requirement of Law**" is as to any Person, the organizational or governing documents of such Person, and any law (statutory or common), treaty, rule or regulation or determination of an arbitrator or a court or other Governmental Authority, in each case applicable to or binding upon such Person or any of its property or to which such Person or any of its property is subject.

"**Reserves**" means, as of any date of determination, such amounts as Collateral Agent may from time to time establish and revise in its good faith business judgment, reducing the

amount of Advances and other financial accommodations which would otherwise be available to Borrower (a) to reflect events, conditions, contingencies or risks which, as determined by Collateral Agent in its good faith business judgment, do or may adversely affect (i) the Collateral or any other property which is security for the Obligations or its value (including without limitation any increase in delinquencies of Accounts), (ii) the assets, business or prospects of Borrower or any Guarantor, or (iii) the security interests and other rights of Collateral Agent in the Collateral (including the enforceability, perfection and priority thereof); or (b) to reflect Collateral Agent's reasonable belief that any collateral report or financial information furnished by or on behalf of Borrower or any Guarantor to the Lenders is or may have been incomplete, inaccurate or misleading in any material respect; or (c) in respect of any state of facts which Collateral Agent determines constitutes an Event of Default or may, with notice or passage of time or both, constitute an Event of Default.

"**Responsible Officer**" is any of the President, Chief Executive Officer or Chief Financial Officer of Borrower acting alone.

"**Revolving Advance**" and "**Revolving Advances**" means a cash advance or cash advances under the Revolving Line.

"**Revolving Line**" means a Revolving Advance or Revolving Advances of up to Four Million Dollars ($4,000,000.00).

"**Revolving Line Commitment**" is, for any Lender, the obligation of such Lender to make a Revolving Advance, up to the principal amount shown on Schedule 1.1. "**Revolving Line Commitments**" means the aggregate amount of such commitments of all Lenders.

"**Revolving Line Commitment Percentage**" is set forth on Schedule 1.1, as amended from time to time.

"**Revolving Line Termination Fee**" is defined in Section 2.6(c).

"**Second Draw Period**" is the period commencing on the Effective Date and ending on the earlier of (i) December 31, 2015 and (ii) the occurrence of an Event of Default.

"**Secured Promissory Note**" is defined in Section 2.5.

"**Secured Promissory Note Record**" is a record maintained by each Lender with respect to the outstanding Obligations owed by Borrower to Lender and credits made thereto.

"**Securities Account**" is any "securities account" as defined in the Code with such additions to such term as may hereafter be made.

"**Shares**" is one hundred percent (100%) of the issued and outstanding capital stock, membership units or other securities owned or held of record by Borrower or Borrower's Subsidiary, in any Subsidiary; provided that, in the event Borrower, demonstrates to Collateral Agent's reasonable satisfaction, that a pledge of more than sixty-five percent (65%) of the Shares of such Subsidiary which is a Foreign Subsidiary, creates a present and existing adverse tax consequence to Borrower under the U.S. Internal Revenue Code, "**Shares**" shall mean sixty-five percent (65%) of the issued and outstanding capital stock, membership units or other securities owned or held of record by Borrower or its Subsidiary in such Foreign Subsidiary.

"**Solvent**" is, with respect to any Person: the fair salable value of such Person's consolidated assets (including goodwill minus disposition costs) exceeds the fair value of such Person's liabilities; such Person is not left with unreasonably small capital after the transactions in this Agreement; and such Person is able to pay its debts (including trade debts) as they mature.

"**Subordinated Debt**" is indebtedness incurred by Borrower or any of its Subsidiaries subordinated to all Indebtedness of Borrower and/or its Subsidiaries to the Lenders (pursuant to a subordination, intercreditor, or other similar agreement in form and substance satisfactory to Collateral Agent and the Lenders entered into between Collateral Agent, Borrower, and/or any of its Subsidiaries, and the other creditor), on terms acceptable to Collateral Agent and the Lenders.

"**Subsidiary**" is, with respect to any Person, any Person of which more than fifty percent (50%) of the voting stock or other equity interests (in the case of Persons other than corporations) is owned or controlled, directly or indirectly, by such Person or through one or more intermediaries.

"**Term Loan**" is defined in Section 2.2(a)(iv) hereof.

"**Term A Loan**" is defined in Section 2.2(a)(i) hereof.

"**Term B Loan**" is defined in Section 2.2(a)(ii) hereof.

"**Term C Loan**" is defined in Section 2.2(a)(iii) hereof.

"**Term D Loan**" is defined in Section 2.2(a)(iv) hereof.

"**Term Loan Commitment**" is, for any Lender, the obligation of such Lender to make a Term Loan, up to the principal amount shown on Schedule 1.1. "**Term Loan Commitments**" means the aggregate amount of such commitments of all Lenders.

"**Term Loan Commitment Percentage**" is set forth on Schedule 1.1, as amended from time to time.

"**Third Draw Period**" is the period commencing on the date of the occurrence of the Third Draw Period Trigger Event and ending on the earliest of (i) thirty (30) days following the occurrence of the Third Draw Period Trigger Event, (ii) September 30, 2016 and (iii) the occurrence of an Event of Default; provided, however, that the Third Draw Period shall not commence if on the date of the occurrence of the Third Draw Period Trigger Event an Event of Default has occurred and is continuing.

"**Third Draw Period Trigger Event**" is the achievement by Borrower after the Effective Date of (i) trailing six months of consolidated revenues (in accordance with GAAP) of at least Twenty-One Million Dollars ($21,000,000.00), at the end of any fiscal month and (ii) Borrower's iFuse Implant System is a covered medical device by one or more health insurance companies such that the aggregate number of covered lives in respect of such medical device is at least one hundred and ten million (110,000,000), in each case as determined by Collateral Agent based upon written evidence satisfactory to Collateral Agent.

"**Trademarks**" means any trademark and servicemark rights, whether registered or not, applications to register and registrations of the same and like protections, and the entire goodwill of the business of Borrower connected with and symbolized by such trademarks.

"**Transaction Report**" is that certain report of transactions and schedule of collections in the form attached hereto as Exhibit E.

"**Transfer**" is defined in Section 7.1.

"**Warrants**" are those certain Warrants to Purchase Stock dated as of the Effective Date, or any date thereafter, issued by Borrower in favor of each Lender or such Lender's Affiliates.

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IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the Effective Date.

BORROWER:

SI-BONE, INC.

By /s/ Laura Francis
Name: Laura Francis
Title: CFO

COLLATERAL AGENT AND LENDER:

OXFORD FINANCE LLC

By _____
Name: _____
Title: _____

LENDER:

SILICON VALLEY BANK

By _____
Name: _____
Title: _____

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the Effective Date.

BORROWER:

SI-BONE, INC.

By _____
Name: _____
Title: _____

COLLATERAL AGENT AND LENDER:

OXFORD FINANCE LLC

By /s/ Mark Davis
Name: Mark Davis
Title: Vice President – Finance, Secretary & Treasurer

LENDER:

SILICON VALLEY BANK

By _____
Name: _____
Title: _____

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the Effective Date.

BORROWER:

SI-BONE, INC.

By _____
Name: _____
Title: _____

COLLATERAL AGENT AND LENDER:

OXFORD FINANCE LLC

By _____
Name: _____
Title: _____

LENDER:

SILICON VALLEY BANK

By /s/ Shawn Parry
Name: Shawn Parry
Title: Vice President

SCHEDULE 1.1

Lenders and Commitments

Term A Loans

Lender	Term A Loan Commitment	Term A Loan Commitment Percentage
OXFORD FINANCE LLC	$ 10,800,000.00	66.67%*
SILICON VALLEY BANK	$ 5,400,000.00	33.33%*
TOTAL	**$ 16,200,000.00**	**100.00%**

Term B Loans

Lender	Term B Loan Commitment	Term B Loan Commitment Percentage
OXFORD FINANCE LLC	$ 6,666,666.67	66.67%*
SILICON VALLEY BANK	$ 3,333,333.33	33.33%*
TOTAL	**$ 10,000,000.00**	**100.00%**

Term C Loans

Lender	Term C Loan Commitment	Term C Loan Commitment Percentage
OXFORD FINANCE LLC	$ 2,666,666.67	66.67%*
SILICON VALLEY BANK	$ 1,333,333.33	33.33%*
TOTAL	**$ 4,000,000.00**	**100.00%**

Term D Loans

Lender	Term D Loan Commitment	Term D Loan Commitment Percentage
OXFORD FINANCE LLC	$ 3,333,333.33	66.67%*
SILICON VALLEY BANK	$ 1,666,666.67	33.33%*
TOTAL	**$ 5,000,000.00**	**100.00%**

Aggregate (all Term Loans)

Lender	Term Loan Commitment	Term Loan Commitment Percentage
OXFORD FINANCE LLC	$ 23,466,666.67	66.67%*
SILICON VALLEY BANK	$ 11,733,333.33	33.33%*
TOTAL	**$ 35,200,000.00**	**100.00%**

Revolving Line

Lender	Revolving Line Commitment	Revolving Line Commitment Percentage
OXFORD FINANCE LLC	$ 2,666,666.67	66.67%*
SILICON VALLEY BANK	$ 1,333,333.33	33.33%*
TOTAL	**$ 4,000,000.00**	**100.00%**

* Each Commitment Percentage is rounded.

EXHIBIT A

Description of Collateral

The Collateral consists of all of Borrower's right, title and interest in and to the following personal property:

All goods, Accounts (including health-care receivables), Equipment, Inventory, contract rights or rights to payment of money, leases, license agreements, franchise agreements, General Intangibles (except as noted below), commercial tort claims, documents, instruments (including any promissory notes), chattel paper (whether tangible or electronic), cash, deposit accounts and other Collateral Accounts, all certificates of deposit, fixtures, letters of credit rights (whether or not the letter of credit is evidenced by a writing), securities, and all other investment property, supporting obligations, and financial assets, whether now owned or hereafter acquired, wherever located; and

All Borrower's Books relating to the foregoing, and any and all claims, rights and interests in any of the above and all substitutions for, additions, attachments, accessories, accessions and improvements to and replacements, products, proceeds and insurance proceeds of any or all of the foregoing.

Notwithstanding the foregoing, the Collateral does not include (i) any Intellectual Property; provided, however, the Collateral shall include all Accounts and all proceeds of Intellectual Property. If a judicial authority (including a U.S. Bankruptcy Court) would hold that a security interest in the underlying Intellectual Property is necessary to have a security interest in such Accounts and such property that are proceeds of Intellectual Property, then the Collateral shall automatically, and effective as of the Effective Date, include the Intellectual Property to the extent necessary to permit perfection of Collateral Agent's security interest in such Accounts and such other property of Borrower that are proceeds of the Intellectual Property; (ii) more than 65% of the total combined voting power of all classes of stock entitled to vote the shares of capital stock (the "**Shares**") of any Foreign Subsidiary if Borrower demonstrates to Collateral Agent's reasonable satisfaction that a pledge of more than 65% of the Shares of such Subsidiary creates a present and existing adverse tax consequence to Borrower under the U.S. Internal Revenue Code; and (iii) equipment subject to a lien described in clause (c) of the definition of Permitted Liens in connection with purchase money Indebtedness incurred by Borrower if the underlying agreement with respect to such purchase money Indebtedness does not permit Borrower to grant a lien with respect to such equipment in favor of Collateral Agent.

Pursuant to the terms of a certain negative pledge arrangement with Collateral Agent and the Lenders, Borrower has agreed not to encumber any of its Intellectual Property.

EXHIBIT B-1

Form of Disbursement Letter

[see attached]

DISBURSEMENT LETTER

[DATE]

The undersigned, being the duly elected and acting of SI-BONE, INC., a Delaware corporation with offices located at 3055 Olin Avenue, Suite 2200, San Jose, California 95128 ("**Borrower**"), does hereby certify to OXFORD FINANCE LLC ("**Oxford**" and "**Lender**"), as collateral agent (the "**Collateral Agent**") in connection with that certain Loan and Security Agreement dated as of October 20, 2015, by and among Borrower, Collateral Agent and the Lenders from time to time party thereto (the "**Loan Agreement**"; with other capitalized terms used below having the meanings ascribed thereto in the Loan Agreement) that:

1. The representations and warranties made by Borrower in Section 5 of the Loan Agreement and in the other Loan Documents are true and correct in all material respects as of the date hereof.

2. No event or condition has occurred that would constitute an Event of Default under the Loan Agreement or any other Loan Document.

3. Borrower is in compliance with the covenants and requirements contained in Sections 4, 6 and 7 of the Loan Agreement.

4. All conditions referred to in Section 3 of the Loan Agreement to the making of the Loan to be made on or about the date hereof have been satisfied or waived by Collateral Agent.

5. No Material Adverse Change has occurred.

6. The undersigned is a Responsible Officer.

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7. The proceeds of the Term [A] [B] [C] [D] Loan shall be disbursed as follows:

Disbursement from Oxford:	
Loan Amount	$ _____
Plus:	
—Deposit Received	$ _____
Less:	
—Existing Debt Payoff to be remitted to Silicon Valley Bank per the Payoff Letter dated October [14], 2015	($_____)
—Interim Interest	($_____)
—Lender's Legal Fees	($_____)*
Net Proceeds due from Oxford:	$ _____
Disbursement from SVB:	$ _____
Loan Amount	$ _____
Plus:	
—Deposit Received	$ _____
Less:	
—Interim Interest	($_____)
Net Proceeds due from Oxford:	$ _____
TOTAL TERM [A] [B] [C] [D] LOAN NET PROCEEDS FROM LENDERS	$ _____

8. The Term [A] [B] [C] [D] Loan shall amortize in accordance with the Amortization Table attached hereto.

9. The aggregate net proceeds of the Term Loans shall be transferred to the Designated Deposit Account as follows:

Account Name:	SI-BONE, INC.
Bank Name:	Silicon Valley Bank
Bank Address:	3003 Tasman Drive Santa Clara, California 95054
Account Number:	[Intentionally Omitted.]
ABA Number:	[Intentionally Omitted.]

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* Legal fees and costs are through the Effective Date. Post-closing legal fees and costs, payable after the Effective Date, to be invoiced and paid post-closing.

Dated as of the date first set forth above.

BORROWER:

SI-BONE, INC.

By _____
Name: _____
Title: _____

COLLATERAL AGENT AND LENDER:

OXFORD FINANCE LLC

By _____
Name: _____
Title: _____

LENDER:

SILICON VALLEY BANK

By _____
Name: _____
Title: _____

AMORTIZATION TABLE
(Term [A] [B] [C] [D] Loan)

[see attached]

EXHIBIT B-2

Loan Payment/Advance Request Form

DEADLINE FOR SAME DAY PROCESSING IS NOON PACIFIC TIME*

Fax To: Date: _____

_____

LOAN PAYMENT:

SI-BONE, INC.

From Account #_____ To Account #_____
(Deposit Account #) (Loan Account #)

Principal $_____ And/or Interest $_____

Authorized Signature: _____ Phone Number: _____

Print Name/Title: _____

LOAN ADVANCE:

Complete *Outgoing Wire Request* section below if all or a portion of the funds from this loan advance are for an outgoing wire.

From Account #_____ To Account #_____
(Loan Account #) (Deposit Account #)

All Borrower's representation and warranties in the Loan and Security Agreement are true, correct and complete in all material respects on the date of the request for an advance, provided, however, that such maternity qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof, and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date:

Authorized Signature: _____ Phone Number: _____

Print Name/Title: _____

OUTGOING WIRE REQUEST:
Complete only if all or a portion of funds from the loan advance above is to be wired.
Deadline for same day processing is noon, Pacific Time

Beneficiary Name: _____ Amount of Wire: $_____
Beneficiary Bank: _____ Account Number: _____
City and State: _____

Beneficiary Bank Transit (ABA) #_____ Beneficiary Bank Code (Swift, Sort, Chip, etc.): _____
(For International Wire Only)
Intermediary Bank: _____ Transit (ABA) #: _____
For Further Credit to: _____

Special Instruction: _____
By signing below, I (we) acknowledge and agree that my (our) funds transfer request shall be processed in accordance with and subject to the terms and conditions set forth in the agreement(s) covering funds transfer service(s), which agreement(s) were previously received and executed by me (us).

Authorized Signature: _____ 2nd Signature (if required): _____

Print Name/Title: _____ Print Name/Title: _____

Telephone #: _____ Telephone #: _____

EXHIBIT C

Compliance Certificate

TO: OXFORD FINANCE LLC, as Collateral Agent and Lender
SILICON VALLEY BANK, as Lender

FROM: SI-BONE, INC.

The undersigned authorized officer ("**Officer**") of SI-BONE, INC. ("**Borrower**"), hereby certifies that in accordance with the terms and conditions of the Loan and Security Agreement by and among Borrower, Collateral Agent, and the Lenders from time to time party thereto (the "**Loan Agreement;**" capitalized terms used but not otherwise defined herein shall have the meanings given them in the Loan Agreement),

(a) Borrower is in complete compliance for the period ending with all required covenants except as noted below;

(b) There are no Events of Default, except as noted below;

(c) Except as noted below, all representations and warranties of Borrower stated in the Loan Documents are true and correct in all material respects on this date and for the period described in (a), above; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date.

(d) Borrower, and each of Borrower's Subsidiaries, has timely filed all required tax returns and reports, Borrower, and each of Borrower's Subsidiaries, has timely paid all foreign, federal, state, and local taxes, assessments, deposits and contributions owed by Borrower, or Subsidiary, except as otherwise permitted pursuant to the terms of Section 5.8 of the Loan Agreement;

(e) No Liens have been levied or claims made against Borrower or any of its Subsidiaries relating to unpaid employee payroll or benefits of which Borrower has not previously provided written notification to Collateral Agent and the Lenders.

Attached are the required documents, if any, supporting our certification(s). The Officer, on behalf of Borrower, further certifies that the attached financial statements are prepared in accordance with Generally Accepted Accounting Principles (GAAP) and are consistently applied from one period to the next except as explained in an accompanying letter or footnotes and except, in the case of unaudited financial statements, for the absence of footnotes and subject to year-end audit adjustments as to the interim financial statements.

Please indicate compliance status since the last Compliance Certificate by circling Yes, No, or N/A under "Complies" column.

	Reporting Covenant	Requirement	Actual	Complies		
1)	Financial statements	Monthly within 30 days		Yes	No	N/A
2)	Annual (CPA Audited) statements Annual Financial	Within 180 days after FYE		Yes	No	N/A
3)	Projections/Budget (prepared on a monthly basis)	Annually (within 45 days of FYE), and when revised		Yes	No	N/A
4)	A/R & A/P agings	Monthly within 30 days		Yes	No	N/A
5)	8-K, 10-K and 10-Q Fillings	If applicable, within 5 days of filing		Yes	No	N/A
6)	Compliance Certificate	Monthly within 30 days		Yes	No	N/A
7)	Transaction Report	When required		Yes	No	N/A
8)	IP Report	When required		Yes	No	N/A
9)	Total amount of Borrower's cash and cash equivalents at the last day of the measurement period (together with a summary by Subsidiary – attach separate sheet if additional space is needed)		$_____	Yes	No	N/A
10)	Total amount of Borrower's Investment in each Subsidiary at the last day of the measurement period (attach separate sheet if additional space is needed)		$_____	Yes	No	N/A

Deposit and Securities Accounts

(Please list all accounts; attach separate sheet if additional space needed)

	Institution Name	Account Number	New Account?		Account Control Agreement in place?	
1)			Yes	No	Yes	No
2)			Yes	No	Yes	No
3)			Yes	No	Yes	No
4)			Yes	No	Yes	No

Financial Covenants

	Covenant	Requirement	Actual	Compliance	
1)	Minimum Revenues (trailing six months) (if applicable)	$[_____]	$[_____]	Yes	No

Other Matters

1)	Have there been any changes in management since the last Compliance Certificate?	Yes	No
2)	Have there been any transfers/sales/disposals/retirement of Collateral or IP prohibited by the Loan Agreement?	Yes	No
3)	Have there been any new or pending claims or causes of action against Borrower that involve more than Two Hundred Fifty Thousand Dollars ($250,000.00)?	Yes	No
4)	Have there been any material amendments of or, prior to the Equity Event, other changes to the capitalization table of Borrower and/or the Operating Documents of Borrower or any of its Subsidiaries? If yes, provide copies of any such amendments or changes with this Compliance Certificate.	Yes	No

Exceptions

Please explain any exceptions with respect to the certification above: (If no exceptions exist, state "**No exceptions.**" Attach separate sheet if additional space needed.)

SI-BONE, INC.

By _____
Name: _____
Title: _____

Date:

LENDER USE ONLY

Received by:_____ Date:_____

Verified by:_____ Date:_____

Compliance Status: Yes No

EXHIBIT D

Form of Secured Promissory Note

[see attached]

SECURED PROMISSORY NOTE
([Revolving Line] Term [A] [B] [C] [D] Loan)

$ Dated: [DATE]

FOR VALUE RECEIVED, the undersigned, SI-BONE, INC., a Delaware corporation with offices located at 3055 Olin Avenue, Suite 2200, San Jose, California 95128 ("**Borrower**") HEREBY PROMISES TO PAY to the order of [OXFORD FINANCE LLC][SILICON VALLEY BANK] ("**Lender**") the principal amount of [ ] MILLION DOLLARS ($) or such lesser amount as shall equal the outstanding principal balance of [Revolving Advances made under the Revolving Line] [the Term [A] [B] [C] [D] Loan] made to Borrower by Lender, plus interest on the aggregate unpaid principal amount of such [Revolving Advances] [Term [A] [B] [C] [D] Loan], at the rates and in accordance with the terms of the Loan and Security Agreement dated October 20, 2015 by and among Borrower, Lender, Oxford Finance LLC, as Collateral Agent, and the other Lenders from time to time party thereto (as amended, restated, supplemented or otherwise modified from time to time, the "**Loan Agreement**"). If not sooner paid, the entire principal amount and all accrued and unpaid interest hereunder shall be due and payable on the Maturity Date as set forth in the Loan Agreement. Any capitalized term not otherwise defined herein shall have the meaning attributed to such term in the Loan Agreement.

Principal, interest and all other amounts due with respect to the [Revolving Advances under the Revolving Line] [Term [A][B][C][D] Loan], are payable in lawful money of the United States of America to Lender as set forth in the Loan Agreement and this Secured Promissory Note (this "**Note**"). The principal amount of this Note and the interest rate applicable thereto, and all payments made with respect thereto, shall be recorded by Lender and, prior to any transfer hereof, endorsed on the grid attached hereto which is part of this Note.

The Loan Agreement, among other things, (a) provides for the making of a secured [Revolving Advances under the Revolving Line] [Term [A] [B] [C] [D] Loan] by Lender to Borrower, and (b) contains provisions for acceleration of the maturity hereof upon the happening of certain stated events.

This Note may not be prepaid except as set forth in [Section 2.3(a)] [Section 2.2 (c) and Section 2.2(d)] of the Loan Agreement.

This Note and the obligation of Borrower to repay the unpaid principal amount of [Revolving Advances under the Revolving Line] [the Term [A] [B] [C] [D] Loan], interest on [such Revolving Advances] [the Term [A] [B] [C] [D] Loan] and all other amounts due Lender under the Loan Agreement is secured under the Loan Agreement.

Presentment for payment, demand, notice of protest and all other demands and notices of any kind in connection with the execution, delivery, performance and enforcement of this Note are hereby waived.

Borrower shall pay all reasonable fees and expenses, including, without limitation, reasonable attorneys' fees and costs, incurred by Lender in the enforcement or attempt to enforce any of Borrower's obligations hereunder not performed when due.

This Note shall be governed by, and construed and interpreted in accordance with, the internal laws of the State of California.

The ownership of an interest in this Note shall be registered on a record of ownership maintained by Lender or its agent. Notwithstanding anything else in this Note to the contrary, the right to the principal of, and stated interest on, this Note may be transferred only if the transfer is registered on such record of ownership and the transferee is identified as the owner of an interest in the obligation. Borrower shall be entitled to treat the registered holder of this Note (as recorded on such record of ownership) as the owner in fact thereof for all purposes and shall not be bound to recognize any equitable or other claim to or interest in this Note on the part of any other person or entity.

[Balance of Page Intentionally Left Blank]

IN WITNESS WHEREOF, Borrower has caused this Note to be duly executed by one of its officers thereunto duly authorized on the date hereof.

BORROWER:

SI-BONE, INC.

By _____

Name: _____

Title: _____

LOAN INTEREST RATE AND PAYMENTS OF PRINCIPAL

Date	Principal Amount	Interest Rate	Scheduled Payment Amount	Notation By

EXHIBIT E

Form of Transaction Report

[Excel spreadsheet to be provided separately by Bank]

CORPORATE BORROWING CERTIFICATE

BORROWER: SI-BONE, INC. **DATE:** October 20, 2015

LENDERS: OXFORD FINANCE LLC, as Collateral Agent and Lender
SILICON VALLEY BANK, as Lender

I hereby certify as follows, as of the date set forth above:

1. I am the Secretary, Assistant Secretary or other officer of Borrower. My title is as set forth below.

2. Borrower's exact legal name is set forth above. Borrower is a corporation existing under the laws of the State of Delaware.

3. Attached hereto as Exhibit A and Exhibit B, respectively, are true, correct and complete copies of (i) Borrower's Certificate of Incorporation (including amendments), as filed with the Secretary of State of the state in which Borrower is incorporated as set forth in paragraph 2 above; and (ii) Borrower's Bylaws. Neither such Certificate of Incorporation nor such Bylaws have been amended, annulled, rescinded, revoked or supplemented, and such Certificate of Incorporation and such Bylaws remain in full force and effect as of the date hereof.

4. The following resolutions were duly and validly adopted by Borrower's Board of Directors at a duly held meeting of such directors (or pursuant to a unanimous written consent or other authorized corporate action). Such resolutions are in full force and effect as of the date hereof and have not been in any way modified, repealed, rescinded, amended or revoked, and the Lenders may rely on them until each Lender receives written notice of revocation from Borrower.

[*Balance of Page Intentionally Left Blank*]

RESOLVED, that **any one** of the following officers or employees of Borrower, whose names, titles and signatures are below, may act on behalf of Borrower:

Name	Title	Signature	Authorized to Add or Remove Signatories
_____	_____	_____	☐
_____	_____	_____	☐
_____	_____	_____	☐
_____	_____	_____	☐

RESOLVED FURTHER, that any one of the persons designated above with a checked box beside his or her name may, from time to time, add or remove any individuals to and from the above list of persons authorized to act on behalf of Borrower.

RESOLVED, that such individuals may, on behalf of Borrower:

Borrow Money. Borrow money from the Lenders.

Execute Loan Documents. Execute any loan documents any Lender requires.

Grant Security. Grant Collateral Agent a security interest in any of Borrower's assets.

Negotiate Items. Negotiate or discount all drafts, trade acceptances, promissory notes, or other indebtedness in which Borrower has an interest and receive cash or otherwise use the proceeds. Issue Warrants. Issue warrants for Borrower's capital stock.

Further Acts. Designate other individuals to request advances, pay fees and costs and execute other documents or agreements (including documents or agreement that waive Borrower's right to a jury trial) they believe to be necessary to effectuate such resolutions.

RESOLVED FURTHER, that all acts authorized by the above resolutions and any prior acts relating thereto are ratified.

[*Balance of Page Intentionally Left Blank*]

5. The persons listed above are Borrower's officers or employees with their titles and signatures shown next to their names.

By: _____
Name: _____
Title: _____

*** *If the Secretary, Assistant Secretary or other certifying officer executing above is designated by the resolutions set forth in paragraph 4 as one of the authorized signing officers, this Certificate must also be signed by a second authorized officer or director of Borrower.*

I, the of Borrower, hereby certify as to paragraphs 1 through 5 above, as

[print title]
of the date set forth above.

By: _____
Name: _____
Title: _____

EXHIBIT A

Certificate of Incorporation (including amendments)

[see attached]

EXHIBIT B

Bylaws

[see attached]

DEBTOR: **SI-BONE, INC.**
SECURED PARTY: **OXFORD FINANCE LLC,**
as Collateral Agent

EXHIBIT A TO UCC FINANCING STATEMENT

Description of Collateral

The Collateral consists of all of Debtor's right, title and interest in and to the following personal property:

All goods, Accounts (including health-care receivables), Equipment, Inventory, contract rights or rights to payment of money, leases, license agreements, franchise agreements, General Intangibles (except as noted below), commercial tort claims, documents, instruments (including any promissory notes), chattel paper (whether tangible or electronic), cash, deposit accounts and other Collateral Accounts, all certificates of deposit, fixtures, letters of credit rights (whether or not the letter of credit is evidenced by a writing), securities, and all other investment property, supporting obligations, and financial assets, whether now owned or hereafter acquired, wherever located; and

All Debtor's Books relating to the foregoing, and any and all claims, rights and interests in any of the above and all substitutions for, additions, attachments, accessories, accessions and improvements to and replacements, products, proceeds and insurance proceeds of any or all of the foregoing.

Notwithstanding the foregoing, the Collateral does not include (i) any Intellectual Property; provided, however, the Collateral shall include all Accounts and all proceeds of Intellectual Property. If a judicial authority (including a U.S. Bankruptcy Court) would hold that a security interest in the underlying Intellectual Property is necessary to have a security interest in such Accounts and such property that are proceeds of Intellectual Property, then the Collateral shall automatically, and effective as of the Effective Date, include the Intellectual Property to the extent necessary to permit perfection of Collateral Agent's security interest in such Accounts and such other property of Debtor that are proceeds of the Intellectual Property; (ii) more than 65% of the total combined voting power of all classes of stock entitled to vote the shares of capital stock (the "**Shares**") of any Foreign Subsidiary if Debtor demonstrates to Collateral Agent's reasonable satisfaction that a pledge of more than 65% of the Shares of such Subsidiary creates a present and existing adverse tax consequence to Debtor under the U.S. Internal Revenue Code; and (iii) equipment subject to a lien described in clause (c) of the definition of Permitted Liens in connection with purchase money Indebtedness incurred by Debtor if the underlying agreement with respect to such purchase money Indebtedness does not permit Debtor to grant a lien with respect to such equipment in favor of Collateral Agent.

Pursuant to the terms of a certain negative pledge arrangement with Collateral Agent and the Lenders, Debtor has agreed not to encumber any of its Intellectual Property.

Capitalized terms used but not defined herein have the meanings ascribed in the Uniform Commercial Code in effect in the State of California as in effect from time to time (the "**Code**") or, if not defined in the Code, then in the Loan and Security Agreement by and between Debtor, Secured Party and the other Lenders party thereto (as modified, amended and/or restated from time to time).

FIRST AMENDMENT TO
LOAN AND SECURITY AGREEMENT

THIS **FIRST AMENDMENT** to Loan and Security Agreement (this "**Amendment**") is entered into as of August 1, 2016, by and between OXFORD FINANCE LLC, a Delaware limited liability company with an office located at 133 North Fairfax Street, Alexandria, Virginia 22314 ("**Oxford**"), as collateral agent (in such capacity, "**Collateral Agent**"), the Lenders listed on Schedule 1.1 of the Loan Agreement (as defined below) or otherwise party thereto from time to time including Oxford in its capacity as a Lender and SILICON VALLEY BANK, a California corporation with an office located at 3003 Tasman Drive, Santa Clara, California 95054 ("**Bank**" or "**SVB**") (each a "**Lender**" and collectively, the "**Lenders**") and SI-BONE, INC., a Delaware corporation with offices located at 3055 Olin Avenue, Suite 2200, San Jose, California 95128 ("**Borrower**").

RECITALS

A. Collateral Agent, Lenders and Borrower have entered into that certain Loan and Security Agreement dated as of October 20, 2015 (as amended from time to time, the "**Loan Agreement**").

B. Lenders have extended credit to Borrower for the purposes permitted in the Loan Agreement.

C. Borrower has requested that Collateral Agent and Lenders (i) adjust the funding milestones and draw periods for the Term C Loans and the Term D Loans (as such terms are defined below) and the number of Warrants to be issued in respect thereof and (ii) make certain other revisions to the Loan Agreement as more fully set forth herein.

D. Collateral Agent and Lenders have agreed to modify such consent and to amend certain provisions of the Loan Agreement, but only to the extent, in accordance with the terms, subject to the conditions and in reliance upon the representations and warranties set forth below.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing recitals and other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, and intending to be legally bound, the parties hereto agree as follows:

1. Definitions. Capitalized terms used but not defined in this Amendment shall have the meanings given to them in the Loan Agreement.

2. Amendments to Loan Agreement.

2.1 Section 3.2 (Conditions Precedent to all Credit Extensions). The last clause of Section 3.2(e) of the Loan Agreement with respect to the issuance of the Warrants hereby is amended and restated as follows:

"; and, with respect to the Warrants, Warrants in favor of each Lender consistent with the Warrants issued on the Effective Date and having the same type/series of stock, exercise price and warrant coverage percentage; provided, however, that (i) with respect to the Warrants issued in connection with the Term C Loans, Borrower shall issue warrants exercisable for an aggregate of 174,844 shares of Borrower's Series 7 preferred stock at a per share strike price equal to the Series 7 preferred stock price per share and (ii) with respect to the Warrants issued in connection with the Term D Loans, Borrower shall issue warrants exercisable for an aggregate of 218,555 shares of Borrower's Series 7 preferred stock at a per share strike price equal to the Series 7 preferred stock price per share; and".

2.2 Section 13.1 (Definitions). The following terms and their respective definitions in Section 13.1 of the Loan Agreement hereby are amended and restated in their entirety as follows:

"**Fourth Draw Period**" is the period commencing on the date of the occurrence of the Fourth Draw Period Revenue Event and ending on the earliest of (i) thirty (30) days following the occurrence of the Fourth Draw Period Revenue Event, (ii) March 31, 2017 and (iii) the occurrence of an Event of Default; provided, however, that the Fourth Draw Period shall not commence if on the date of the occurrence of the Fourth Draw Period Revenue Event an Event of Default has occurred and is continuing.

"**Third Draw Period**" is the period commencing on October 1, 2016 and ending on the earlier of (i) December 31, 2016 and (ii) the occurrence of an Event of Default; provided, however, that the Third Draw Period shall not commence if on October 1, 2016 an Event of Default has occurred and is continuing.

2.3 Section 13.1 (Definitions). The defined term "Third Draw Period Trigger Event" in Section 13.1 of the Loan Agreement, and all references thereto, hereby are deleted.

3. Limitation of Amendment.

3.1 The amendments set forth in **Section 2** above, are effective for the purposes set forth herein and shall be limited precisely as written and shall not be deemed to (a) be a consent to any amendment, waiver or modification of any other term or condition of any Loan Document, or (b) otherwise prejudice any right or remedy which Collateral Agent or any Lender may now have or may have in the future under or in connection with any Loan Document.

3.2 This Amendment shall be construed in connection with and as part of the Loan Documents and all terms, conditions, representations, warranties, covenants and agreements set forth in the Loan Documents, except as herein amended, are hereby ratified and confirmed and shall remain in full force and effect.

4. Representations and Warranties. To induce Collateral Agent and Lenders to enter into this Amendment, Borrower hereby represents and warrants to Collateral Agent and Lenders as follows:

4.1 Immediately after giving effect to this Amendment (a) the representations and warranties contained in the Loan Documents are true, accurate and complete in all material respects as of the date hereof (except to the extent such representations and warranties relate to an earlier date, in which case they are true and correct as of such date), and (b) no Event of Default has occurred and is continuing;

4.2 Borrower has the power and authority to execute and deliver this Amendment and to perform its obligations under the Loan Agreement, as amended by this Amendment;

4.3 The organizational documents of Borrower delivered to Collateral Agent and Lenders on the Effective Date, or subsequent thereto, remain true, accurate and complete and have not been amended, supplemented or restated and are and continue to be in full force and effect;

4.4 The execution and delivery by Borrower of this Amendment and the performance by Borrower of its obligations under the Loan Agreement, as amended by this Amendment, have been duly authorized;

4.5 The execution and delivery by Borrower of this Amendment and the performance by Borrower of its obligations under the Loan Agreement, as amended by this Amendment, do not and will not contravene (a) any law or regulation binding on or affecting Borrower, (b) any contractual restriction with a Person binding on Borrower, (c) any order, judgment or decree of any court or other governmental or public body or authority, or subdivision thereof, binding on Borrower, or (d) the organizational documents of Borrower;

4.6 The execution and delivery by Borrower of this Amendment and the performance by Borrower of its obligations under the Loan Agreement, as amended by this Amendment, do not require any order, consent, approval, license, authorization or validation of, or filing, recording or registration with, or exemption by any governmental or public body or authority, or subdivision thereof, binding on Borrower; and

4.7 This Amendment has been duly executed and delivered by Borrower and is the binding obligation of Borrower, enforceable against Borrower in accordance with its terms, except as such enforceability may be limited by bankruptcy, insolvency, reorganization, liquidation, moratorium or other similar laws of general application and equitable principles relating to or affecting creditors' rights.

5. Counterparts. This Amendment may be executed in any number of counterparts and all of such counterparts taken together shall be deemed to constitute one and the same instrument.

6. Effectiveness. This Amendment shall be deemed effective upon (i) the due execution and delivery to Collateral Agent and Lenders of this Amendment by each party hereto, (ii) Borrower's payment of a loan modification fee in the aggregate amount of Twenty-Five Thousand Dollars ($25,000.00) to be shared between the Lenders in accordance with their Pro Rata Shares and (iii) Borrower's payment of all Lenders' Expenses incurred through the date of this Amendment.

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IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be duly executed and delivered as of the date first written above.

COLLATERAL AGENT:

OXFORD FINANCE LLC

By: */S/ Mark Davis*
Name: Mark Davis
Title: Vice President – Finance, Secretary & Treasurer

LENDER:

OXFORD FINANCE LLC

By: */S/ Mark Davis*
Name: Mark Davis
Title: Vice President – Finance, Secretary & Treasurer

LENDER:

SILICON VALLEY BANK

By: */S/ Shawn Parry*
Name: Shawn Parry
Title: Director

BORROWER:

SI-BONE, INC.

By: */S/ Laura Francis*
Name: Laura Francis
Title: CFO

[*Signature Page to First Amendment to Loan and Security Agreement*]

SECOND AMENDMENT TO
LOAN AND SECURITY AGREEMENT

THIS **SECOND AMENDMENT** to Loan and Security Agreement (this "**Amendment**") is entered into as of February 21, 2017, by and between OXFORD FINANCE LLC, a Delaware limited liability company with an office located at 133 North Fairfax Street, Alexandria, Virginia 22314 ("**Oxford**"), as collateral agent (in such capacity, "**Collateral Agent**"), the Lenders listed on Schedule 1.1 of the Loan Agreement (as defined below) or otherwise party thereto from time to time including Oxford in its capacity as a Lender and SILICON VALLEY BANK, a California corporation with an office located at 3003 Tasman Drive, Santa Clara, California 95054 ("**Bank**" or "**SVB**") (each a "**Lender**" and collectively, the "**Lenders**") and SI-BONE, INC., a Delaware corporation with offices located at 3055 Olin Avenue, Suite 2200, San Jose, California 95128 ("**Borrower**").

RECITALS

A. Collateral Agent, Lenders and Borrower have entered into that certain Loan and Security Agreement dated as of October 20, 2015, as amended by that certain First Amendment to Loan and Security Agreement dated as of August 1, 2016 (as amended from time to time, the "**Loan Agreement**").

B. Lenders have extended credit to Borrower for the purposes permitted in the Loan Agreement.

C. Borrower has requested that Collateral Agent and Lenders (i) adjust the funding milestone and draw period for the Term D Loans (as defined below) and (ii) make certain other revisions to the Loan Agreement as more fully set forth herein.

D. Collateral Agent and Lenders have agreed to modify such terms and to amend certain other provisions of the Loan Agreement, but only to the extent, in accordance with the terms, subject to the conditions and in reliance upon the representations and warranties set forth below.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing recitals and other good and valuable consideration, the receipt and adequacy of which is hereby acknowledged, and intending to be legally bound, the parties hereto agree as follows:

1. Definitions. Capitalized terms used but not defined in this Amendment shall have the meanings given to them in the Loan Agreement.

2. Amendments to Loan Agreement.

2.1 Section 2.2(b) (Repayment). The third sentence of Section 2.2(b) of the Loan Agreement hereby is amended and restated in its entirety as follows:

"Commencing on the Amortization Date, and continuing on the Payment Date of each month thereafter, Borrower shall make consecutive equal monthly payments of principal, together with applicable interest, in arrears, to each Lender, as calculated by Collateral Agent (which calculations shall be deemed correct absent manifest error) based upon: (1) the amount of such Lender's Term Loan, (2) the effective rate of interest, as determined in Section 2.4(a), and (3) a repayment schedule equal to twenty-seven (27) months."

2.2 Section 2.2(d) (Permitted Prepayment of Term Loans). The following new sentence hereby is added to the end of Section 2.2(d) of the Loan Agreement:

"Notwithstanding anything to the contrary in this Section 2.2(d), if the Terms Loans are prepaid pursuant to this Section 2.2(d) with the proceeds of a new credit facility provided by the Lenders, the Prepayment Fee shall not be due."

2.3 Section 6.10 (Financial Covenant). Section 6.10 of the Loan Agreement hereby is amended and restated in its entirety as follows:

"**Section 6.10 [Intentionally Omitted]**."

2.4 Section 8.2(a) (Covenant Default). Section 8.2(a) of the Loan Agreement hereby is amended by deleting the reference to Section 6.10 (Financial Covenant) from such section.

2.5 Section 13.1 (Definitions). The following terms and their respective definitions in Section 13.1 of the Loan Agreement hereby are added or amended and restated in their entirety, as applicable, as follows:

"**Amortization Date**" is October 1, 2017 with respect to all Term Loans.

"**Borrowing Base**" is an amount equal to (i) eighty percent (80%) of Eligible Accounts, as determined by Lenders from Borrower's most recent Transaction Report, minus (ii) Four Million Dollars ($4,000,000.00); provided, however, that (A) Lenders may decrease the foregoing percentage in clause (i) in their good faith business judgment based on events, conditions, contingencies, or risks which, as determined by Lenders, may adversely affect Collateral and (B) following the occurrence of a Second Amendment Equity Event, the reserve set forth in clause (ii) shall not be required.

"**Fourth Draw Period**" is the period commencing on the date of the occurrence of the Fourth Draw Period Revenue Event and ending on the earliest of (i) thirty (30) days following the occurrence of the Fourth Draw Period Revenue Event, (ii) (A) prior to the occurrence of a Second Amendment Equity Event, October 31, 2017 and (B) following the occurrence of a Second Amendment Equity Event, January 31, 2018 and (iii) the occurrence of an Event of Default; provided, however, that the Fourth Draw Period shall not commence if on the date of the occurrence of the Fourth Draw Period Revenue Event an Event of Default has occurred and is continuing.

"**Fourth Draw Period Revenue Event**" is the achievement by Borrower after the Effective Date of trailing six months of consolidated revenues (in accordance with GAAP) of at least Twenty-Five Million Dollars ($25,000,000.00), at the end of any fiscal month, as determined by Collateral Agent based upon written evidence satisfactory to Collateral Agent.

"**Prepayment Fee**" is, with respect to any Term Loan subject to prepayment prior to the Maturity Date, whether by mandatory or voluntary prepayment, acceleration or otherwise, an additional fee payable to the Lenders in an amount equal to three percent (3%) of the principal amount of such Term Loan prepaid.

"**Second Amendment Equity Event**" is the receipt by Borrower on or after February [21], 2017 of unrestricted net cash proceeds of not less than Five Million Dollars ($5,000,000.00) pursuant to the sale of equity securities of Borrower as determined by Collateral Agent based upon written evidence satisfactory to Collateral Agent.

2.6 Exhibit C (Compliance Certificate). Exhibit C of the Loan Agreement hereby is amended by deleting the Minimum Revenues financial covenant and a replacement Exhibit C is attached to this Amendment as Exhibit A.

3. Limitation of Amendment.

3.1 The amendments set forth in **Section 2** above, are effective for the purposes set forth herein and shall be limited precisely as written and shall not be deemed to (a) be a consent to any amendment, waiver or modification of any other term or condition of any Loan Document, or (b) otherwise prejudice any right or remedy which Collateral Agent or any Lender may now have or may have in the future under or in connection with any Loan Document.

3.2 This Amendment shall be construed in connection with and as part of the Loan Documents and all terms, conditions, representations, warranties, covenants and agreements set forth in the Loan Documents, except as herein amended, are hereby ratified and confirmed and shall remain in full force and effect.

4. Representations and Warranties. To induce Collateral Agent and Lenders to enter into this Amendment, Borrower hereby represents and warrants to Collateral Agent and Lenders as follows:

4.1 Immediately after giving effect to this Amendment (a) the representations and warranties contained in the Loan Documents are true, accurate and complete in all material respects as of the date hereof (except to the extent such representations and warranties relate to an earlier date, in which case they are true and correct as of such date), and (b) no Event of Default has occurred and is continuing;

4.2 Borrower has the power and authority to execute and deliver this Amendment and to perform its obligations under the Loan Agreement, as amended by this Amendment;

4.3 The organizational documents of Borrower delivered to Collateral Agent and Lenders on the Effective Date, or subsequent thereto, remain true, accurate and complete and have not been amended, supplemented or restated and are and continue to be in full force and effect;

4.4 The execution and delivery by Borrower of this Amendment and the performance by Borrower of its obligations under the Loan Agreement, as amended by this Amendment, have been duly authorized;

4.5 The execution and delivery by Borrower of this Amendment and the performance by Borrower of its obligations under the Loan Agreement, as amended by this Amendment, do not and will not contravene (a) any law or regulation binding on or affecting Borrower, (b) any contractual restriction with a Person binding on Borrower, (c) any order, judgment or decree of any court or other governmental or public body or authority, or subdivision thereof, binding on Borrower, or (d) the organizational documents of Borrower;

4.6 The execution and delivery by Borrower of this Amendment and the performance by Borrower of its obligations under the Loan Agreement, as amended by this Amendment, do not require any order, consent, approval, license, authorization or validation of, or filing, recording or registration with, or exemption by any governmental or public body or authority, or subdivision thereof, binding on Borrower; and

4.7 This Amendment has been duly executed and delivered by Borrower and is the binding obligation of Borrower, enforceable against Borrower in accordance with its terms, except as such enforceability may be limited by bankruptcy, insolvency, reorganization, liquidation, moratorium or other similar laws of general application and equitable principles relating to or affecting creditors' rights.

5. Counterparts. This Amendment may be executed in any number of counterparts and all of such counterparts taken together shall be deemed to constitute one and the same instrument.

6. Effectiveness. This Amendment shall be deemed effective upon (i) the due execution and delivery to Collateral Agent and Lenders of this Amendment by each party hereto, (ii) Borrower's payment of a loan modification fee in the aggregate amount of Twenty-Five Thousand Dollars ($25,000.00) to be shared between the Lenders in accordance with their Pro Rata Shares and (iii) Borrower's payment of all Lenders' Expenses incurred through the date of this Amendment.

[*Balance of Page Intentionally Left Blank*]

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be duly executed and delivered as of the date first written above.

COLLATERAL AGENT:

OXFORD FINANCE LLC

By: */S/ Mark Davis*
Name: Mark Davis
Title: Vice President – Finance, Secretary & Treasurer

LENDER:

OXFORD FINANCE LLC

By: */S/ Mark Davis*
Name: Mark Davis
Title: Vice President – Finance, Secretary & Treasurer

LENDER:

SILICON VALLEY BANK

By: */S/ Shawn Parry*
Name: Shawn Parry
Title: Director

BORROWER:

SI-BONE, INC.

By: */S/ Laura Francis*
Name: Laura Francis
Title: CFO

Exhibit A

Compliance Certificate

TO: OXFORD FINANCE LLC, as Collateral Agent and Lender
SILICON VALLEY BANK, as Lender

FROM: SI-BONE, INC.

The undersigned authorized officer ("**Officer**") of SI-BONE, INC. ("**Borrower**"), hereby certifies that in accordance with the terms and conditions of the Loan and Security Agreement by and among Borrower, Collateral Agent, and the Lenders from time to time party thereto (the "**Loan Agreement**;" capitalized terms used but not otherwise defined herein shall have the meanings given them in the Loan Agreement),

(a) Borrower is in complete compliance for the period ending with all required covenants except as noted below;

(b) There are no Events of Default, except as noted below;

(c) Except as noted below, all representations and warranties of Borrower stated in the Loan Documents are true and correct in all material respects on this date and for the period described in (a), above; provided, however, that such materiality qualifier shall not be applicable to any representations and warranties that already are qualified or modified by materiality in the text thereof; and provided, further that those representations and warranties expressly referring to a specific date shall be true, accurate and complete in all material respects as of such date.

(d) Borrower, and each of Borrower's Subsidiaries, has timely filed all required tax returns and reports, Borrower, and each of Borrower's Subsidiaries, has timely paid all foreign, federal, state, and local taxes, assessments, deposits and contributions owed by Borrower, or Subsidiary, except as otherwise permitted pursuant to the terms of Section 5.8 of the Loan Agreement;

(e) No Liens have been levied or claims made against Borrower or any of its Subsidiaries relating to unpaid employee payroll or benefits of which Borrower has not previously provided written notification to Collateral Agent and the Lenders.

Attached are the required documents, if any, supporting our certification(s). The Officer, on behalf of Borrower, further certifies that the attached financial statements are prepared in accordance with Generally Accepted Accounting Principles (GAAP) and are consistently applied from one period to the next except as explained in an accompanying letter or footnotes and except, in the case of unaudited financial statements, for the absence of footnotes and subject to year-end audit adjustments as to the interim financial statements.

Please indicate compliance status since the last Compliance Certificate by circling Yes, No, or N/A under "Complies" column.

	Reporting Covenant	Requirement	Actual	Complies		
1)	Financial statements	Monthly within 30 days		Yes	No	N/A
2)	Annual (CPA Audited) statements	Within 180 days after FYE		Yes	No	N/A
3)	Annual Financial Projections/Budget (prepared on a monthly basis)	Annually (within 45 days of FYE), and when revised		Yes	No	N/A

4)	A/R & A/P agings	Monthly within 30 days		Yes	No	N/A
5)	8-K, 10-K and 10-Q Filings	If applicable, within 5 days of filing		Yes	No	N/A
6)	Compliance Certificate	Monthly within 30 days		Yes	No	N/A
7)	Transaction Report	When required		Yes	No	N/A
8)	IP Report	When required		Yes	No	N/A
9)	Total amount of Borrower's cash and cash equivalents at the last day of the measurement period (together with a summary by Subsidiary – attach separate sheet if additional space is needed)		$_____	Yes	No	N/A
10)	Total amount of Borrower's Investment in each Subsidiary at the last day of the measurement period (attach separate sheet if additional space is needed)		$_____	Yes	No	N/A

Deposit and Securities Accounts

(Please list all accounts; attach separate sheet if additional space needed)

	Institution Name	Account Number	New Account?		Account Control Agreement in place?	
1)			Yes	No	Yes	No
2)			Yes	No	Yes	No
3)			Yes	No	Yes	No
4)			Yes	No	Yes	No

Other Matters

1)	Have there been any changes in management since the last Compliance Certificate?	Yes	No
2)	Have there been any transfers/sales/disposals/retirement of Collateral or IP prohibited by the Loan Agreement?	Yes	No
3)	Have there been any new or pending claims or causes of action against Borrower that involve more than Two Hundred Fifty Thousand Dollars ($250,000.00)?	Yes	No
4)	Have there been any material amendments of or, prior to the Equity Event, other changes to the capitalization table of Borrower and/or the Operating Documents of Borrower or any of its Subsidiaries? If yes, provide copies of any such amendments or changes with this Compliance Certificate.	Yes	No

Exceptions

Please explain any exceptions with respect to the certification above: (If no exceptions exist, state "No exceptions." Attach separate sheet if additional space needed.)

SI-BONE, INC.

By _____
Name: _____
Title: _____

Date:

LENDER USE ONLY

Received by: _____ Date:

Verified by: _____ Date:

Compliance Status: Yes No

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

Quality and Manufacturing Agreement

by and between

CEP Bio-Coat, LLC dba Orchid Detroit

and

SI-BONE, Inc.

This Quality and Manufacturing Agreement (this "Agreement"), effective April 18, 2016 ("Effective Date"), is by and between Orchid MPS Holdings, LLC ("Supplier") with its principal office at 1489 Cedar Street, Holt, MI 48842, and **SI-BONE, Inc.,** a Delaware corporation with its principal office at 3055 Olin Ave., Suite 2200, San Jose, CA 95128 ("Purchaser").

WHEREAS, the Purchaser develops and designs medical devices and from time to time may seek to have such devices manufactured for it by the Supplier; and

WHEREAS, the Supplier has expertise in the manufacture of medical devices and components and desires to provide manufacturing services for the Purchaser.

NOW, THEREFORE, in consideration of the mutual covenants contained herein, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. Definitions. Unless otherwise defined in this Agreement, as used herein, the following defined terms shall have the meanings given them below.

1.1. "Affiliate" means any entity which directly or indirectly controls, is controlled by, or is under common control with the referenced party. For purposes of this Section 1.1, "control," when used with respect to any entity, means the power to direct or cause the direction of the management and policies of such entity, directly or indirectly, whether through ownership of voting securities or by contract or otherwise, and the terms and "controlled by" and "under common control" have meanings correlative to the foregoing.

1.2. "Bankruptcy Event" means the institution of voluntary or involuntary proceedings by or against a person or entity in bankruptcy or under any insolvency law, or the appointment of a receiver or custodian for such person or entity, or the institution of proceedings by or against such person or entity for corporate reorganization or the dissolution of such person or entity, which proceedings, if involuntary, shall not have been dismissed within sixty (60) days after the date of filing, or an assignment by such person or entity for the benefit of its creditors.

1.3. "Default" has the meaning given in Section 10.3.

1.4. "Forecast" has the meaning given in Section 3.4.

1.5. "Intellectual Property" means any inventions, improvements, developments, or innovations (including all rights to patents, copyrights, trademarks, and trade secrets and know-how inherent therein and appurtenant thereto) and other creative works (whether or not patentable or copyrightable, conceived or made or reduced to practice), know-how, technical

information, pending patent applications, registrations, divisions and continuations thereof, registered and unregistered copyrights, and all associated goodwill, designs, drawings, specifications, vendor lists, manufacturing methods and processes, and all other information pertinent to this Agreement, which is proprietary to a party.

1.6. "Order" has the meaning given in Section 3.5.

1.7. "Process" means the methods and all referenced procedures used in the manufacture of any Product.

1.8. "Product" means the product or products to be manufactured hereunder pursuant to mutual agreement of the parties and as described in the Specifications for such Product.

1.9. "Product Device Master Record" means the Product Device Master Record for the Product required by the Regulatory Authorities, as it may be revised and in effect from time to time.

1.10. "Purchase Price" has the meaning given in Section 3.1.

1.11. "Regulatory Authority" means the Food and Drug Administration of the United States (the "FDA") or, any successor agency or, if applicable in the context, the government agency performing the same regulatory functions as the FDA in another country.

1.12. "Specifications" means the specifications for the Product as provided in the Product Device Master Record.

2. Supply Rights.

2.1. Manufacture and Supply. Subject to the terms and conditions of this Agreement, the Supplier shall manufacture the Products for and supply them to the Purchaser.

2.2. Third Party Supplier. All Products must be manufactured and assembled solely by the Supplier. Supplier will not engage any third parties to provide services or goods relating to this Agreement without Purchaser's prior written approval. If use of a third party supplier is agreed upon by the Purchaser, the Supplier shall have a Quality Agreement, giving effect to each of the affirmative obligations regarding quality assurance set forth herein, with any third party supplier used for production, packaging, testing, sterilization, processing, or release. Upon the Customer's request, the Supplier will provide a copy of the Quality Agreement.

3. Orders, Prices, Terms, Delivery, Forecast and Inventory.

3.1. Purchase Price. Purchaser shall pay the amounts set forth on Purchase Orders (as described below), and specifying in reasonable detail the Product(s) covered thereby, the applicable pricing ("Purchase Price"). Pricing shall be in US dollars. Supplier shall pay all contributions, taxes and premiums payable under federal, state and local laws measured upon the payroll of employees and agents engaged in the performance of work under this Agreement. Except as otherwise agreed to in writing by the parties, adjustments to the Price shall be made no more than once every twelve (12) months. The parties will meet annually to review changes in production costs, and Supplier shall share a reasonably detailed analysis of Supplier's direct and indirect costs incurred in the manufacture of the Products. In connection with such annual cost review meeting, Supplier may submit a written request for a price increase if is direct costs have increased by more than [*] from its direct costs over the preceding supply year. Purchaser may submit a written request for a price decrease if Supplier's direct costs have decreased by more than [*] from its direct costs over the preceding supply year. New prices will be effective immediately upon being agreed to in writing by both parties or at such other time as may be agreed to in writing by both parties. Pricing may be modified upon any changes to the Specifications of the Products made by Purchaser.

3.2. Orders, Shipping Terms, and Inconsistencies. All shipments of Products shall be F.O.B. Origin, and shall be accompanied by a packing slip that describes the Products and states the Order number. Purchaser shall pay all shipping costs. Title to and all risk of loss or damage shall pass to Purchaser upon shipment of the Products from the Supplier to Purchaser's designated point of delivery. If there is any conflict or inconsistency between this Agreement and any Purchase Order, Order release, confirmation, acceptance or any similar document, the terms of this Agreement shall govern and control.

3.3. Payment. Supplier shall invoice Purchaser for each Product no earlier than its date of shipment. Purchaser shall pay the Purchase Price shown on each undisputed invoice within [*] of its receipt of the same.

3.4. Forecasts. Purchaser shall provide to the Supplier no later than the fifteenth day of each calendar quarter, a non-binding (except as otherwise specified herein) rolling estimate by month of the Purchaser's requirements for orders and deliveries of the Products for [*] period ("Forecast"). Each Forecast shall update prior Forecasts as well as provide estimates for the time period added to the Forecast over the prior Forecast.

3.5. Orders. The Purchaser will submit binding firm purchase orders (the "Order(s)" or "Purchase Order(s)") for Products to the Supplier by mail, facsimile, or electronically. Each Order shall contain the following information: (i) a description of the Product by part and revision number; (ii) the quantity of the Product to be delivered to the Purchaser; (iii) the current applicable Purchase Price for such Products, (iv) the delivery date or shipping schedule; (v) the location to which the Product is to be shipped; and (vi) transportation instructions. Each Order shall provide an Order number for billing purposes, and may include other instructions and terms as may be appropriate under the circumstances. The lead times for each Product ("Product Specific Lead Times") shall be determined by mutual agreement of the parties upon delivery of the Specifications and agreement by the Supplier to supply the applicable Product.

3.6. Emergency Deliveries. Notwithstanding Section 3.5, in the event that Purchaser desires to place Orders for Products requiring delivery within a shorter period than the Product Specific Lead Time(s) ("Emergency Purchase Orders"), Purchaser shall notify Supplier and Supplier shall provide the Purchaser with a commercially reasonable written estimate of any additional costs (the "Emergency Quote") that would be incurred to manufacture Products to meet the delivery schedule in an Emergency Purchase Order. Supplier will be obligated to supply such Products in the manner specified in an Emergency Purchase Order only if the Purchaser agrees in writing to pay the additional costs set forth in the Emergency Quote. Upon Purchaser's written acceptance of the Emergency Quote, the Supplier agrees to meet such delivery schedules specified in such Emergency Purchase Orders.

3.7. Excess and Obsolete Inventory. If Purchaser cancels or materially changes any Order, Supplier shall make good faith efforts to mitigate any costs which may be incurred with such Order changes. Notwithstanding the foregoing, should any inventory (including finished goods, works-in-process, components, or raw materials) be rendered excess or obsolete (as agreed upon by both Purchaser and Supplier) due to (i) the cancellation by Purchaser of any Orders, or (ii) changes or modifications to Orders, and that cannot reasonably and without extra cost to the Supplier be utilized on other Supplier products or returned to its suppliers, or such damages otherwise mitigated, the impact of such changes will be the financial responsibility of the Purchaser, at the Supplier's documented actual costs (including, but not limited to, restocking charges paid by the Supplier to its suppliers, labor, and component costs). Notwithstanding the foregoing, Supplier will accept all financial responsibility for inventory purchased in excess of the then-current Forecast

4. Quality.

4.1. Manufacturing Processes and Approvals. Supplier will manufacture Products that fully conform with: (i) Product Specifications supplied by Purchaser, (ii) applicable regulations relating to 21 CFR Part 820 Quality System Regulations, Good Manufacturing Practices, including device and lot history records, (iii) quality system requirements of ISO 13485 and MDD 93/42/EEC, and (iv) in accordance with a risk management system conforming to the requirements of ISO 14971.

4.2. Changes by Supplier: Manufacturing. Supplier shall make no change to the Specifications, Process, Product tooling design, processing conditions, materials or manufacturing location without Purchaser's prior written approval. Supplier shall provide a written request for any such change. Such request must include a description of the specific proposed change, the reason for the proposed change, the perceived benefit that will be derived from the proposed change, the perceived potential loss that may arise from failure to make the proposed change, and the anticipated lead time that will be necessary to make the proposed change. For accepted changes, the Supplier and Purchaser will work together to develop an implementation plan.

4.3. Changes by Supplier: Deviations. Supplier shall provide a written request for any deviation from a document, specification, drawing, etc. Such request must explain the specific proposed deviation, the reason for the proposed deviation, and the period (time, lots, etc.) the proposed deviation is to be in effect. Supplier shall not proceed with a deviation without Purchaser's prior written approval.

4.4. Disposition of Non-Conforming Material. The Supplier shall identify, segregate and investigate all nonconforming material. The Supplier may make scrap dispositions without Purchaser's prior written approval. Suppler shall not make concession ("use as is") or rework dispositions without Purchaser's prior written approval. Supplier shall provide a written request for any concession ("use as is") or rework disposition. Such request must include the inspection or test conducted, the actual results, and if applicable, the proposed disposition or repair. In the event a disposition is approved, Supplier shall update the production-monitoring portion of the ISO 14971 Risk Management File to include information on the nonconformity. If the Supplier performs rework, a written history of all rework and/or corrective actions shall accompany the Product shipped to Purchaser.

4.5. Corrective Action. Supplier shall initiate corrective action for all detected nonconforming material regardless of disposition. Corrective action shall include (1) Investigation (including impact to product already released) and determination of root cause, (2) Proposed corrective action to prevent recurrence, (3) Implementation of corrective actions, and (4) Verification of the effectiveness of the corrective action. The Supplier shall report the results of the corrective action to the Purchaser within fifteen (15) working days of initiation. The Supplier shall keep records of these activities and make them available to the Purchaser upon request.

4.6. Device History Record. The Supplier and Purchaser will maintain the following portions of the Device History Record required by 21 CFR §820.181. Supplier shall keep records of these activities and make them available to the Purchaser within one business day of request.

a. Device specifications (Purchaser)

b. Production process specifications (Supplier)

c. Quality assurance procedures and specifications (Supplier)

d. Labeling specifications (Purchaser)

e. Packaging specifications (Supplier)

f. Maintenance procedures and methods records (Supplier)

4.7. Labeling Operations. Supplier shall control all labeling operations to prevent labeling errors. Supplier shall record all labeling activities on the Device/Lot History Record.

4.8. Packaging Operations. Supplier shall pack and package Product using best practices to protect Product from deterioration or damage during processing, storage, handling, and shipment. Supplier shall record all packaging activities on the Device/Lot History Record.

4.9. Environmental Controls. If environmental conditions could reasonably be expected to have an adverse effect on product quality, the Supplier shall establish and maintain procedures, including maintenance, adjustment, and inspection to adequately control these environmental conditions. The Supplier shall keep records of these activities and make them available to the Purchaser upon request.

4.10. Personnel. If contact between personnel and the product could reasonably be expected to have an adverse effect on product quality, the Supplier shall establish and maintain requirements for the health, cleanliness, personal practices, and clothing of personnel to adequately control this contact. The Supplier shall keep records of these activities and make them available to the Purchaser upon request.

4.11. Equipment. The Supplier shall ensure that all equipment used in the manufacturing process for product is appropriately designed, constructed, placed, and installed. The Supplier shall establish and maintain schedules for the calibration, adjustment, cleaning, and other maintenance of equipment to ensure that manufacturing specifications are met. The Supplier shall keep records of these activities and make them available to the Purchaser upon request.

4.12. Inspection, Measuring, and Test Equipment. The Supplier shall ensure that all inspection, measuring, and test equipment (IM&TE) used in the manufacturing process for product is suitable for its intended purposes and is capable of producing valid results. Suitability includes limits for accuracy and precision. The Supplier shall establish and maintain schedules for the calibration, adjustment, cleaning, and other maintenance of equipment to ensure that manufacturing specifications are met. Calibration standards used for IM&TE shall be traceable to national or international standards. The Supplier shall keep records of these activities and make them available to the Purchaser upon request.

4.13. Process Validation. If the output of a Supplier's process is not fully verified by subsequent inspection or test, the Supplier shall validate the process with a high degree of assurance, [*].

The validation process shall create a validation protocol (describing the planned activities) and a validation report (documenting the outcome of the planned activities). All validated process changes shall be similarly validated prior to use. The Supplier shall keep records of these activities and make them available to the Purchaser upon request. When the Supplier ships products produced using a validated process, the Supplier shall include process documentation showing the date the process was operated, the name of the operator, the identity of major equipment used, the identity and calibration date of the IM&TE used in the process, and the setting of each input process parameter.

4.14. Facility Inspections by Purchaser. Purchaser shall have the right, upon reasonable advance written notice and during regular business hours, to inspect the facilities being used by the Supplier for production and storage of the Products. If any such inspection reveals that the facilities do not satisfy Purchaser's requirements, then Purchaser shall provide written notification, which notice shall contain in reasonable detail the identified deficiencies and, if practicable, remedial efforts the Supplier should undertake. Supplier shall remedy all

identified deficiencies within [*] days following Purchaser's written notification. In the event the deficiencies are not remedied within such [*] day period, Supplier shall be in material breach of this Agreement and Purchaser shall have the right to immediately terminate this Agreement.

4.15. Facility Inspections by Regulatory Authorities. Supplier shall notify Purchaser within 24 hours of any communication, correspondence, inquiry, inspection, audit or investigation by any regulatory authority or notified body in relation to the services provided under this Agreement or Purchaser's Products. Supplier shall consult and cooperate with Purchaser in responding to the regulatory authority, which shall include providing Purchaser access to all related documents and other information received from any regulatory authority or notified body. If requested, the Supplier will allow regulatory authorities and/or the Purchaser to inspect Product, storage locations, inventory and records. In the event a regulatory authority requests an inspection, Supplier will immediately contact Purchaser and inform the Purchaser of the inspection. In any event, Supplier shall neither make any commitments nor provide any undertakings, which, in either case, relate directly to the Products, to any regulatory authority or notified body without the prior written approval of Purchaser. Supplier's failure to comply with this Article "Inspection by Regulatory Authorities" shall be a material breach of this Agreement and Purchaser shall have the right to immediately terminate this Agreement.

4.16. Quality System Audits. Purchaser shall have the right, upon reasonable advance written notice and during regular business hours, to perform audits of Supplier's systems, documentation, and other requirements related to this Agreement. Audits shall be conducted at mutually agreed dates and times.

4.17. Records. Supplier will maintain records with respect to the manufacture of the Products for [*] after the last Product has been manufactured, at which time such records will be returned to Purchaser for maintenance or destruction.

4.18. Product Complaints. With respect to Product complaints, Purchaser shall be considered the "manufacturer" for regulatory purposes and is responsible for filing all required Medical Device Reports. If Purchaser reasonably believes that a complaint relates to a breach by the Supplier of the warranty contained in Section 5.1, Purchaser will forward the complaint to the Supplier and Supplier shall be responsible to remedy the noncompliance as provided in Section 5.2. If the Supplier receives a complaint related to the product, or any similar product, the Supplier provides to the Purchaser, the Supplier shall promptly notify the Purchaser. Purchaser will enter the complaint into the Purchaser's Complaint Management System (21 CFR §820.198) and review and evaluate the complaint to determine whether an investigation is necessary. The Supplier shall provide assistance in a complaint investigation as requested by the Purchaser.

4.19. Corrections and Removals. If the Supplier files a Corrections or Removals for the product, or any similar product that the Supplier provides to the Purchaser, the Supplier shall promptly notify the Purchaser. The Purchaser is responsible for managing corrections or removals of SI-BONE product.

4.20. Sterilization Services. Sterilization will be provided and managed by Supplier. Supplier and Purchaser will jointly review the sterilization validation protocol and report, which will include the results of sterilization validation and revalidation. Supplier will provide all sterilization documentation to Purchase upon request.

4.21. Manufacturing Process Documentation. The supplier shall provide the following documentation with each product lot shipped to the Purchaser:

a. Sterilization Certificate

b. Package Labeling Documentation

c. Job Order Pick List

d. Line Clearance Forms

e. Supplier Certificate of Conformance

f. Material Certificates

g. Supplier Inspection Sheets

h. Copy of any related Non-Conforming Material Reports

4.22. Storage and Shipment.

4.22.1. Storage. The Supplier shall establish and maintain procedures to control storage areas and stock rooms to prevent mix-ups, damage, deterioration, contamination, or other adverse effects. The Supplier shall ensure that all products are stored to facilitate proper stock rotation and that product is retrieved from stock using First In, First Out (FIFO) methodology.

4.22.2. Shipment. The Supplier shall ship products to the Purchaser using shipping methods that will prevent the damage or deterioration of the product.

5. Product Warranty and Limited Remedies.

5.1. Warranty. Supplier represents and warrants that the Products furnished under this Agreement shall be free from all defects in workmanship and materials and shall conform to the Specifications for a period of [*] after delivery to Purchaser.

5.2. Remedies. If Supplier fails to meet the warranty stated in Section 5.1 with respect to any Product, the Supplier shall, at the Purchaser's option, either (i) repair or replace such Product at the Supplier's own expense, and ship such repaired or replacement Product to either the Purchaser or the applicable customer at the Supplier's own expense, or (ii) credit to the Purchaser the Purchase Price for the non-conforming Product. If reasonably possible, all defective Products covered by the foregoing warranty shall be shipped to the Supplier at Supplier's expense for such repair or replacement.

5.3. Exclusions from Warranty. The warranty set forth in Section 5.1 above does not include Products that have defects or failures resulting from Purchaser's design of Products as set forth in the Specifications, including, but not limited to, design functionality failures, Specification inadequacies, failures relating to the functioning of Products in the manner for the intended purpose or failures resulting from unauthorized modification of the Products. To the extent that all Product designs have been provided by Purchaser to Supplier, Purchaser bears all design responsibility for the Product.

5.4. Disputes. If the Supplier disagrees with a claim that a Product does not conform to the warranty provided in Section 5.1, then the parties agree to submit the disputed Product to a mutually agreed-upon independent party to test the Product to determine whether it conforms. The cost of such testing shall be borne by the party against whom the testing party finds.

5.5. Limitation of Liability. EXCEPT FOR THE PARTIES' INDEMNIFICATION OBLIGATIONS UNDER SECTION 6 AND OBLIGATIONS OF CONFIDENTIALITY UNDER SECTION 9, NEITHER PARTY SHALL BE LIABLE TO THE OTHER FOR ANY PUNITIVE, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO, PERSONAL INJURY AND PROPERTY DAMAGE, EQUIPMENT DAMAGE, LOSS OF PROFITS OR REVENUES OR BUSINESS, COST OF CAPITAL, COST OF PURCHASE, COST OF RECALL, OR COST OF THIRD PARTY REPLACEMENT GOODS. IN NO EVENT SHALL PURCHASER'S TOTAL AGGREGATE LIABILITY UNDER THIS AGREEMENT, WHETHER BASED UPON CONTRACT, TORT, OR OTHERWISE EXCEED [*].

6. Indemnification.

6.1. By Supplier. Supplier agrees to indemnify and hold Purchaser, its affiliates, officers, directors, agents and employees ("Purchaser Indemnitees") harmless from and against all actions, liabilities, losses, damages, claims and demands whatsoever, including, but not limited to, attorney fees and other expenses ("Claims") that are brought or threatened against the Purchaser Indemnitees and related to Supplier's or Supplier Indemnitee's: (a) breach of this Agreement; (b) violation of applicable laws and regulations; (c) breach of representations and warranties; (d) any claim of Intellectual Property infringement brought by third parties arising from Supplier's manufacturing processes or Supplier's services provided hereunder, provided such infringement is not a direct result of specifications or instructions provided by Purchaser; or (e) negligence, recklessness or willful misconduct. The duty to indemnify will not apply to the extent that any Claim arises from the negligence, recklessness, or willful misconduct of a Purchaser Indemnitee.

6.2. By Purchaser. Purchaser agrees to indemnify and hold Supplier, its affiliates, officers, directors, agents and employees ("Supplier Indemnitees") harmless from and against all Claims that are brought or threatened against the Supplier Indemnitees and related to: (a) Purchaser's breach of this Agreement; (b) Purchaser's violation of applicable laws and regulations; (c) defects or alleged defects in the design of the Products, provided such design defects are a result of specifications or instructions provided by Purchaser; (d) infringement upon the Intellectual Property rights of third parties, provided such infringement is a direct result of specifications or instructions provided by Purchaser; or (e) Purchaser's negligence, recklessness or willful misconduct. The duty to indemnify will not apply to the extent that any Claim arises from the negligence, recklessness, or willful misconduct of a Supplier Indemnitee.

6.3. General. The party claiming indemnity (the "Indemnified Party") shall provide the party from whom indemnity is being sought (the "Indemnifying Party") with reasonable assistance, at the Indemnifying Party's expense, in connection with the defense of the claim for which indemnity is being sought. The Indemnifying Party shall have the right to assume sole control over the defense of such claim and conduct the defense of the claim with counsel of its choice. The Indemnifying Party shall not settle any claim without the prior written consent of the Indemnified Party, not to be unreasonably withheld, unless the settlement involves only the payment of money.

6.4. Insurance. Each party agrees to procure and maintain in full force and effect during the term of this Agreement collectible insurance policies in connection with the manufacture, supply and sale of Products pursuant to this Agreement and provide: (i) for commercial general liability coverage in the amount of [*] per occurrence and [*] in the aggregate, excluding Products and Completed Operations coverage and written on either an occurrence or a claims made basis; and (ii) Products and Completed Operations coverage in the amount of [*] per occurrence and [*] in the aggregate and written on a claims-made basis. Each party shall endeavor to provide the other party with thirty (30) days written notice of cancellation or ten (10) days' notice for non-payment of premium or termination of any such policy. Upon either party's request, the other party shall provide to the requesting party a certificate of insurance coverage.

7. License, Ownership; Tooling.

7.1. Limited License Grant. Purchaser grants Supplier a non-exclusive, nontransferable, worldwide license, without the right to sublicense, to use all designs, materials, information,

know-how and documentation, including the Specifications, provided by Purchaser to Supplier, solely in connection with manufacturing the Products hereunder for supply of such Products to Purchaser or parties designated by Purchaser. This license shall not include the right to modify, make derivative works of or improvements to the Products and shall terminated upon the termination or expiration of this Agreement.

7.2. Ownership of Intellectual Property. All Intellectual Property of Purchaser existing on or prior to the execution of this Agreement shall be and remain the property of Purchaser, and Supplier shall not acquire any rights therein, except as expressly provided in Section 7.1 of this Agreement or in the License Agreement. Purchaser shall own, and Supplier hereby assigns to Purchaser, all worldwide right, title and interest in and to the Products, all Intellectual Property conceived or reduced to practice by Supplier, its employees or agents in the course of performing Supplier's duties hereunder, or as a result of access to Purchaser's Intellectual Property, and any modification, derivative work of or improvement to the Products and/or Purchaser's Intellectual Property. All rights not expressly granted herein are reserved. Supplier shall execute all papers, including patent applications, invention assignments and copyright assignments, and otherwise shall assist Purchaser as reasonably required to perfect in the Purchaser the rights, title and other interests held by Purchaser under this Agreement. Purchaser shall pay for reasonable costs related to such assistance. If Purchaser is unable for any reason, after reasonable effort, to secure Supplier's signature on any document needed in connection with the actions specified above, Supplier hereby irrevocably designates and appoints Purchaser and its duly authorized officers and agents as its agent and attorney in fact, which appointment is coupled with an interest, to act for and in its behalf to execute, verify and file any such documents and to do all other lawfully permitted acts to further the purposes of the preceding paragraph with the same legal force and effect as if executed by Supplier. Notwithstanding anything contained in this Agreement to the contrary,

7.3. Tooling and Equipment. All tooling and equipment used by the Supplier to manufacture the Products shall be the property of the Supplier, unless any such tooling and equipment is specifically provided by the Purchaser or purchased by the Purchaser from the Supplier over and above the Purchase Price for the Products. The agreement of the parties concerning any tooling and equipment so provided or purchased by the Purchaser shall be set forth in a separate document that is agreeable to both parties.

8. Confidentiality; Publicity.

8.1. Confidentiality. The Purchaser and the Supplier will have access to each other's Confidential Information (as defined herein). "Confidential Information" means any trade secret, other information viewed by the party disclosing it (the "Disclosing Party") as confidential and/or proprietary, and any and all information or proprietary materials (in every form and media) not generally known in the relevant trade or industry made available by either party to the party receiving such information (in such case, the "Receiving Party") in connection with the efforts contemplated hereunder and which the Disclosing Party designates as confidential or may reasonably be understood as confidential, including, but not limited to (i) all Intellectual Property of either Party; (ii) existing or contemplated products, services, designs, inventions, technology, processes, technical data, engineering, techniques, methodologies and concepts and any information related thereto; and (iii) information relating to business plans, sales, consultants, employees, or marketing methods and customer lists or requirements. The Receiving Party will maintain the information in confidence using the same standard of care it uses to maintain its own Confidential Information in confidence, but in any case, no less than reasonable commercial diligence, and will not use such information for itself or others except as provided in this Agreement. Such obligation of confidentiality and non-use shall not apply to information which (a) is known to the Receiving Party prior to the disclosure as demonstrated by documentary evidence, (b) is publicly known as of the date of the

disclosure, (c) becomes publicly known after the date of disclosure through no fault of the Receiving Party, (d) is received by the Receiving Party from a third party who has, to the Receiving Party's knowledge, no obligation of confidentiality to the Disclosing Party, or (v) is developed independently by the Receiving Party without reference to the Disclosing Party's Confidential Information as demonstrated by documentary evidence. Such obligation of confidentiality and non-use shall survive any expiration or termination of this Agreement. The restrictions on disclosure contained in this Section 9.1 shall not apply to any information which is required to be disclosed by a valid court rule or governmental law or regulation, provided that the Receiving Party gives the Disclosing Party prompt notice of any such requirement and cooperates with the Disclosing Party, at the Disclosing Party's expense, in attempting to limit such disclosure and obtain confidential treatment thereof.

8.2. Publicity. Neither party will originate any publicity, news release, or other public announcement, written or oral, whether to the public, press or otherwise, relating to this Agreement or any amendment hereto or to performance hereunder or the existence of an arrangement between the parties, without the prior written approval of the other party, such approval not to be unreasonably withheld.

8.3. Use of Names in Promotions. Neither party shall use the name of the other for advertising or promotional claims without the prior written consent of the other party.

8.4. Damages Inadequate. The parties acknowledge that monetary damages may be an inadequate remedy for any breach by a party of its obligations under Section 9.1 and that the non-breaching party shall be entitled to seek injunctive relief and specific performance to enforce the breaching party's obligations, in addition to any other remedies the non-breaching party may be entitled to at law.

9. Term and Termination.

10.1. Term. Unless sooner terminated as provided in Section 10.2 below or in Section 12.6, this Agreement shall have a term commencing on the Effective Date and expiring the date three (3) years thereafter.

10.2. Termination. This Agreement may be terminated:

(i) upon written notice by either party to the other party, if the other party is in Default (as defined in Section 10.3 below);

(ii) By written notice from the Purchaser to the Supplier in accordance with Section 4; or

(iii) By either party upon [*] written notice to the other party.

10.3. Default. A party shall be in "Default" (i) if such party becomes the subject of a Bankruptcy Event; (ii) with respect to Purchaser, if Purchaser fails to make full payment of the Purchase Price when due and such failure continues for [*] after notification of non-payment by Supplier; or (iii) if such party breaches any other material provision of this Agreement and fails to remedy such default within [*] after receipt of written notice thereof, which notice shall state, with particularity, the grounds for such claimed default.

10.4. Effect of Termination. Upon any expiration or termination of this Agreement, each party shall either return to the other or destroy, upon the other party's request, all Confidential Information, Intellectual Property and any other proprietary materials of such requesting party. The provisions of Sections 4.6, 4.11, 4.17, 4.18, 5, 6, 7, 8, 9, 10.4, 11, and 12 shall survive any termination or expiration of this Agreement.

10. Risk Management.

11.1. Contingency Plan. Supplier shall create and maintain a contingency plan to prevent an interruption of Product supply in the event that normal business is disrupted ("Contingency Plan"), which shall be approved in advance in writing by Purchaser. Changes to the Contingency Plan may not be made without Purchaser's prior written approval. Supplier will review the Contingency Plan on a semi-annual basis to ensure the necessary components remain in place. The Contingency Plan shall contain adequate provisions for each of the following:

a. Off-site storage for tools and tool drawings;

b. Raw material acquisition;

c. Back-up site(s) for manufacturing capability; and

d. Assurance that, given an interruption in the normal business process, Products could be produced within [*] of such interruption.

11. Miscellaneous.

11.1. Independent Contractor Status. The relationship between the Supplier and the Purchaser is that of independent contractors, and nothing contained herein shall be deemed to create a relationship of employer and employee, principal and agent, partners, or otherwise. Neither party shall have any authority to obligate the other in any respect nor hold itself out as having any such authority. All personnel of the Supplier shall be solely employees of the Supplier and shall not represent themselves as employees of the Purchaser, and all personnel of the Purchaser shall be solely employees of the Purchaser and shall not represent themselves as employees of the Supplier.

11.2. Assignment. Neither party may assign, delegate or subcontract its obligations without the other party's prior express written consent. Notwithstanding the foregoing, either party shall be permitted to assign all or part of this Agreement to a purchaser of all of, or the applicable portion of, such Party's business (whether through asset sale, merger, consolidation, reorganization or other form of transaction) with written notice to the other party, except that Supplier may not assign this Agreement to any party that competes with Purchaser.

11.3. Entire Agreement; Amendments. This Agreement is the full, complete, and exclusive agreement between the parties and supersedes and cancels any and all previous or contemporaneous agreements of whatever nature, whether written or oral, between them with respect to the matters covered herein. This Agreement may only be modified or amended in a writing signed by both parties.

11.4. Severability. In the event that any provision of this Agreement would be held in any jurisdiction to be invalid, prohibited or unenforceable for any reason, such provision, as to such jurisdiction, shall be ineffective, without invalidating the remaining provisions of this Agreement or affecting the validity or enforceability of such provision in any other jurisdiction. Notwithstanding the foregoing, if such provision could be more narrowly drawn so as not to be invalid, prohibited or unenforceable in such jurisdiction, it shall, as to such jurisdiction, be so narrowly drawn, without invalidating the remaining provisions of this Agreement or affecting the validity or enforceability of such provision in any other jurisdiction.

11.5. Remedies. Unless otherwise expressly provided, all remedies hereunder are cumulative, are in addition to any other remedies provided for by law and may, to the extent permitted by law, be exercised concurrently or separately, and the exercise of any one remedy shall not be deemed to be an election of such remedy or to preclude the exercise of any other remedy.

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

11.6. Force Majeure. The obligations of the Supplier and the Purchaser hereunder (except for the Purchaser's obligations to make payment in full for Products) shall be subject to any delays or non-performance caused in whole or part by any contingency or event beyond either party's reasonable control, including, without limitation, any act of God; acts of any government or any agency or subdivision thereof; fire; strikes; war; machinery breakage; failure of a communications or internet provider; transportation delays; shortage of or inability to secure labor, fuel, energy, materials or supplies at reasonable prices or from regular sources; riots or acts of a public enemy; terrorist acts; and any existing or future laws or regulations with which Supplier, in its judgment and discretion, deems it advisable to comply as its legal duty. The party which is not performing its obligations under this Agreement as a result of an event of force majeure shall use diligent efforts to resume compliance with this Agreement as soon as possible. Should the event of force majeure continue unabated for a period of sixty (60) days or more, the party who's performance has not been delayed or prevented may terminate this Agreement upon notice to the other party.

11.7. Notices. Any notice, request, consent or communication (collectively, a "Notice") under this Agreement shall be effective if it is in writing and (i) personally delivered, (ii) sent by certified or registered mail, postage prepaid, return receipt requested, (iii) sent by an internationally recognized overnight delivery service, with delivery confirmed, or (iv) telexed or telecopied, with receipt confirmed, addressed as set forth in this Section or to such address as shall be furnished by either party hereto to the other party hereto. A Notice shall be deemed to have been given as of (a) the date when personally delivered, (b) when received if delivered by the United States Postal Service, certified or registered mail, properly addressed, return receipt requested, postage prepaid, or by overnight delivery service, or (c) immediately, upon confirmation of receipt of the telex or telecopy, as the case may be. All Notices shall specifically state: the provision (or provisions) of this Agreement with respect to which such Notice is given and shall be addressed as follows:

If to the Supplier:	If to the Purchaser:
Orchid MPS Holdings, LLC 1489 Cedar St. Holt, MI 48842 ATTN: VP Sales	SI-BONE, Inc. 3055 Olin Ave. Suite 2200 San Jose, CA 95128 ATTN: CFO

11.8. Permits and Compliance. Supplier agrees to procure all necessary permits or licenses and abide by all applicable laws, regulations and ordinances of the United States and of the state, territory and political subdivision in which the work under this Agreement is performed. Supplier hereby represents and warrants that it and its personnel: (i) are not currently excluded, debarred, or otherwise ineligible to participate in federal health care programs as defined in 42 U.S.C. § 1320a-7b(f) (the "Federal Health Care Programs"); (ii) are not convicted of a criminal offense related to providing health care items or services but have not yet been excluded, debarred, or otherwise declared ineligible to participate in the Federal Health Care Programs, and (iii) are not under investigation or otherwise aware of any circumstances that may result in being excluded, debarred, or otherwise declared to participate in Federal Health Care Programs

11.9. Governing Law. This Agreement will be governed by and constructed in accordance with the laws of California without regard to the conflicts of the law principles thereof. Any dispute between the Parties in relation to or in connection with this Agreement (including those relevant to the validity, construction, execution and termination of the same) shall be submitted to the exclusive jurisdiction of courts located in San Jose, Santa Clara County, California.

11.10. Waivers. The failure of either party to assert a right hereunder or to insist upon compliance with any term or condition of this Agreement shall not constitute a waiver of that right or excuse a similar subsequent failure to perform any such term or condition by the other party.

11.11. Counterparts. This Agreement may be executed in any number of counterparts, and execution by each of the parties of any one of such counterparts will constitute due execution of this Agreement. Each such counterpart hereof shall be deemed to be an original instrument, and all such counterparts together shall constitute but one agreement.

11.12. Headings. The article and section headings contained in this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement.

[REMAINDER OF THE PAGE INTENTIONALLY LEFT BLANK]

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the date set forth beneath such person's name.

SI-BONE, INC.	**ORCHID MPS HOLDINGS, LLC**
/s/ Jeffrey W. Dunn	/s/ Matthew K. Burba
(Signature)	(Signature)
Jeffrey W. Dunn	Matthew K. Burba
(Print Name)	(Print Name)
President, CEO	EVP, Operations
(Title)	(Title)
Date April 20, 2016	Date 4/18/2016

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

Addendum No. 1 to
Quality and Manufacturing Agreement by and between
Orchid MPS Holdings, LLC and SI-BONE, Inc.

This **Addendum No. 1 to Quality and Manufacturing Agreement** ("***Addendum No. 1***") evidences agreements between Orchid MPS Holdings, LLC together with its subsidiaries and affiliates on the one hand ("***Supplier***") and SI-BONE, Inc. and its subsidiaries and affiliates on the other hand ("***Purchaser***") and modifies and supplements that certain Quality and Manufacturing Agreement by and between the parties with an effective date of April 18, 2016 (the "***Original Agreement***", and together with this Addendum No. 1, the "***Agreement***"). This Addendum No. 1 is intended to, among other things, allow Supplier to hold a specified level of inventory to better support Purchaser's business. Capitalized terms used and not defined in this Addendum No. 1 shall have the meaning given them in the Original Agreement.

I. Interpretation. Should any conflict exist between this Addendum No. 1 and the Original Agreement, the terms of this Addendum No. 1 will control.

II. Supplier agrees to:

1) Hold the equivalent of [*] of machined implants and [*] of finished goods, in each case based on the then current Forecast. For purposes hereof, "machined implants" shall mean implants ready for TPS-coating and "finished goods" shall mean implants coated, packaged, sterilized and ready for shipment. Supplier will use [*] of the then current Forecast to make inventory determinations where [*] of finished goods inventory is required hereby. The inventory and lead time requirements set forth in this Addendum No. 1 shall apply only to items set forth on Schedule A.

2) Maintain a lead time not to exceed [*] for finished goods.

3) Hold pricing per Schedule A to the Amendment for at least [*] from the date of this Addendum No. 1. Thereafter, price adjustments shall be subject to the mechanism set forth in Section 3.1 of the Original Agreement.

4) Keep purchaser informed of any significant changes in its business which could reasonably be foreseen to impact Supplier's inventory, lead time, volume limitations or any other aspect of its performance under the Original Agreement or this Addendum No. 1.

5) Not to assess any lot charges for one document change each [*]; thereafter, Supplier shall charge Purchaser only at its reasonable and customary hourly rates for engineering and other administrative time necessary to effectuate documentation changes.

6) Participate in [*] Kanban review meetings to discuss:

    a. Adding parts to the Original Agreement, provided there shall be no obligation on the part of Supplier to accept such additional parts;

    b. Removing parts from the Original Agreement; and

    c. Changing the levels held in inventory for various part numbers.

III. Purchaser agrees to:

1) Provide a rolling [*] Forecast by part number and month; Purchaser shall make good faith efforts to provide such Forecast with [*] detail.

2) Provide a blanket purchase order for the [*] Forecast no less than [*] prior to the first required delivery date.

3) Release against such blanket purchase order ("Orders" as described in the Original Agreement) shall be provided at least [*]. Such releases shall be in multiples of the bin size set forth on Schedule A to this Addendum No. 1.

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

4) Provide releases against the then current blanket order for any parts that remain in Supplier's Detroit inventory of finished goods for more than [*]; provided, however, that Purchaser shall have no obligation to purchase in excess of [*] worth of inventory based on the Forecast at the time of its original procurement by Supplier.

5) Purchase any inventory throughout Supplier's supply chain obsoleted by a revision change or obsoleting of a part, including packaging materials, at material cost (including Supplier's standard labor rates) unless assembly processing has been completed.

6) Participate in [*] Kanban review meetings to discuss:

   a. Adding parts to the Original Agreement, provided Purchaser shall have no obligation to add parts to the Original Agreement;

   b. Removing parts from the Original Agreement; and

   c. Changing the levels held in inventory for various part numbers.

IV. Miscellaneous.

1) Ratification. The parties take this opportunity to ratify the Original Agreement and confirm all of their respective obligations set forth therein, including the representations and warranties made to one another.

2) Severability. If any provision of the Original Agreement will be declared invalid, illegal or unenforceable, such provision will be severed and all remaining provisions will continue in full force and effect.

3) Entire Agreement. The Original Agreement, including this Addendum No. 1, is the full, complete, and exclusive agreement between the parties and supersedes and cancels any and all previous or contemporaneous agreements of whatever nature, whether written or oral, between Supplier and Purchaser and their respective subsidiaries and affiliates with respect to its subject matter. The Agreement may only be modified or amended in a writing signed by both parties. Subject headings are for convenience of reference only and will in no way affect interpretation of the Agreement.

4) Counterparts. This Addendum No. 1 may be executed in separate counterparts, and by facsimile, each of which will be deemed an original, and when executed separately or together, will constitute a single original instrument, effective in the same manner as if the parties had executed one and the same instrument.

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[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

IN WITNESS WHEREOF, the parties have executed this Addendum No. 1 as of the date set forth beneath such person's name.

PURCHASER:	**SUPPLIER:**
SI-BONE, Inc.	**Orchid MPS Holdings, LLC**
By: /s/ Laura Francis	By: /s/ Patrick Davidson
Name: Laura Francis	Name: Patrick Davidson
Title: CFO	Title: General Manager
Dated: 3/1/2017	Dated: 3/1/2017

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

Schedule A to Addendum No. 1
to
Quality and Manufacturing Agreement by and between Orchid MPS Holdings, LLC and SI-BONE, Inc.

Part Number	Price	Bin Size	Weeks Inventory (finished goods)	Weeks Inventory (machined)
[*]	[*]	[*]	[*]	[*]

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

MANUFACTURING, QUALITY AND SUPPLY AGREEMENT

THIS MANUFACTURING, QUALITY AND SUPPLY AGREEMENT ("***Agreement***") is entered into as of **January 31, 2017** (the "***Effective Date***"), between **SI-BONE, INC.**, a Delaware corporation having an address of 3055 Olin Ave., Ste. 2200, San Jose, CA 95128 (including its Affiliates, "***SI-BONE***") and **rms COMPANY** a Minnesota corporation having an address of 8600 Evergreen Blvd., Coon Rapids, MN 55433 ("***Supplier***").

RECITALS

WHEREAS, SI-BONE desires to engage the services of Supplier to perform the Manufacture of the Products (as those terms are defined below) for use and sale by SI-BONE, on the terms and conditions set forth below, and

WHEREAS, Supplier desires to perform Services for SI-BONE on the terms and conditions set forth below.

AGREEMENT

The parties, intending to be legally bound, agree as follows:

1. AGREEMENT TO SUPPLY; FORECASTS.

1.1 **Agreement to Supply**. Except as provided in this Agreement, during the Term Supplier shall supply on a non-exclusive basis and pursuant to this Agreement Product to SI-BONE to be sold, distributed or used otherwise as provided by SI-BONE. The parties acknowledge and agree that the accessories used in connection with the Product may be purchased by SI-BONE from Supplier or a third-party vendor or manufactured directly by, or otherwise obtained through, SI-BONE.

1.2 **Forecasts**. Within **ten days** after the Effective Date, SI-BONE shall deliver to Supplier a forecast of its requirements for the Product for each of the calendar quarters ending June 30, 20XX, September 30, 20XX, December 31, 20XX, and March 31, 20XX (with the period ending March 31, 2017 including the period starting with the Effective Date) (the "***Forecast***"). No later than **ten days** following the end of each [*] during the Term, SI-BONE shall update the Forecast in writing by providing to Supplier an updated Forecast for the following [*] (or such fewer number of [*] remaining in the Term). Except as provided in this Section 1.2, Forecasts shall be nonbinding and used and relied upon by Supplier only for Supplier's internal capacity planning purposes.

1.3 **Purchase Orders**. All purchases shall be pursuant to purchase orders submitted by SI-BONE to Supplier (an "***Order***"), which shall specify a delivery date no less than [*] after submission of the Order. SI-BONE shall submit Orders for the number of Products. If Supplier cannot satisfy such order, then Supplier shall provide written notice to SI-BONE no later than [*] after receipt of the Order specifying its alternative delivery date which may not be more than [*] after submission of the Order, unless otherwise agreed by the parties, provided that the Order quantities required are reasonably consistent with the current Forecast. An Order shall specify the Products ordered (including part numbers and revision levels if applicable), quantities of each Product ordered, price, requested delivery date and requested Product recipient, all of which shall be subject to Article 5. Orders may be changed only by the mutual written agreement of the parties.

1.4 **Vendors and Subcontractors**. Supplier shall not (i) change the vendors from whom Supplier sources components of the Products as of the Effective Date or (ii) subcontract its obligations to manufacture Products to subcontractors in each case without the prior written consent of SI-BONE;

provided, that SI-BONE hereby acknowledges its consent to Supplier's purchase of Product components from vendors identified in **Exhibit B** ("***Approved Vendors***") and use of subcontractors identified in **Exhibit C** ("***Approved Subcontractors***"). SI-BONE may order through Supplier components sourced from Supplier's approved vendors (which vendors may include affiliates of SI-BONE) and Supplier agrees to provide those components to SI-BONE at Supplier's cost [*]. Subject to the requirements of Section 4.7 of this Agreement, SI-BONE may request or otherwise require Supplier to approve and utilize alternative sources including the Approved Vendors and Approved Subcontractors.

2. PRICING AND PAYMENT TERMS.

2.1 During the Term, Supplier's sales price to SI-BONE for each Product unit shall be based on the forecasted estimated annual unit ("***EAU***") volumes of Product to be purchased by SI-BONE during the Term in accordance with the pricing described in **Exhibit A** (the "***Pricing Addendum***"). From time to time, the parties may mutually agree to add additional Products to this Agreement.

2.2 The pricing set forth in **Exhibit A** shall be firm for the Initial Term, as defined on the Pricing Addendum, unless the volumes vary from the forecasted EAU volume by more than [*] in either direction during the initial twelve months or during subsequent twelve month periods during the Term. In this case the Supplier or SI-BONE may request a price review based on the volume changes and the parties shall negotiate in good faith any price changes, with reference to changes in input costs and variance from EAU forecast, prior to implementation provided that there will not be more than [*]. If the parties are unable to agree on the change in pricing through a process of good faith negotiation, then either of the parties may terminate this Agreement provided that, if the Supplier terminates the Agreement, SI-BONE will have the option of making Last Purchase per Section 9.5. **Exhibit A** will be amended to reflect any mutually agreed changes to the pricing and/or EUA volumes. Supplier may also re-price the items listed in **Exhibit A** in accordance with Section 6 if there are any changes made by SI-BONE to the Specifications or materials which affect the unit costs.

2.3 Supplier will invoice SI-BONE for all quantities of Products delivered in accordance with this Agreement. Payment terms shall include a [*] discount to the Agreement price if paid within [*], and otherwise net cash [*], paid in US dollars from the date of SI-BONE's receipt of Supplier's invoice.

3. CAPACITY.

Supplier shall maintain capacity adequate to fulfill the Product requirements of SI-BONE as specified in the most recent [*] rolling Forecast. Supplier hereby agrees to give timely notice to SI-BONE of any event that would reasonably be expected to adversely affect Supplier's capacity. Without limiting Article 1, Supplier shall use commercially reasonable efforts to assure that adequate capacity is available to fulfill future Product requirements of SI-BONE (as determined by SI-BONE's then-current Forecast, historical purchasing patterns and written communications to Supplier regarding anticipated requirements). Supplier shall obtain and maintain all equipment and resources required to fulfill its obligations under this Agreement at Supplier's sole cost, unless such equipment or resources were purchased by Supplier exclusively to supply SI-BONE.

4. SPECIFICATIONS; QUALITY CONTROL MATTERS.

4.1 **Compliance with Laws**. The parties shall comply with all applicable federal, state and local statutes, regulations, rules, ordinances and policies that pertain to the activities for which Supplier and SI-BONE are responsible under this Agreement, including those enforced by the FDA. With respect to the Products, SI-BONE shall be the "finished device manufacturer" (as such term is used by the FDA).

4.2 **Specifications**. SI-BONE shall define the specifications for the product to be manufactured by Supplier, by way of drawings, reference to commercial specifications and standards (the "***Specifications***"), which shall be set forth on the applicable Pricing Addendum or Order and updated from time to time in accordance herewith. References to the initial Specifications for Product to be purchased hereunder are set forth on **Exhibit E** hereto and shall have been delivered to Supplier by or promptly following the Effective Date of this Agreement. The Specifications may be paper documents, electronic documents or other appropriate media. Supplier shall deliver the Product in full conformance to the Specifications. The parties may change the Specifications from time to time by mutual written agreement. A Product that does not conform with the Specifications and applicable laws at the time it is delivered to SI-BONE is referred to in this Agreement as a "***Nonconforming Product***," and such Product shall be regarded as having a "***Nonconformity***." SI-BONE may amend or modify the Specifications from time to time in accordance with Section 6 and shall give prompt written notice of such change(s) to the Supplier provided that Supplier will have the right to reasonably adjust the Product price to the extent that the changes made by SI-BONE affect the material, manufacturing or quality costs.

4.3 **Implementation of Quality Control and Risk Management Program**. At all times during the Term, Supplier shall comply with SI-BONE's vendor qualification requirements ("***Qualification Requirements***"), a copy of which has been provided to Supplier. In addition, Supplier shall maintain and comply with a quality control program that conforms with all applicable laws and is consistent with current good manufacturing practices applicable to Products ("***GMPs***") and as effective during the remainder of the Term and as required by any governmental or quasi-governmental agency having regulatory authority over the Products, including, without limitation, 21 CFR Part 820, the current released versions of ISO 13485 and 14971 (collectively, the "***Quality Management System***"). In addition, Supplier shall maintain a risk management system which is integrated into its Quality Management System (the "***RMS***"). Supplier shall notify SI-BONE of revisions to its manufacturing procedures to the extent necessary to remain in compliance with the Qualification Requirements, GMPs or RMS, as applicable, in accordance with this Section 4.3; provided, however, that Supplier may not make any changes to its manufacturing procedures that are inconsistent with the Specifications without the prior written consent of SI-BONE. Upon SI-BONE's request, Supplier will provide a copy of such quality agreement(s).

4.4 **Notification of Nonconformity**. Supplier agrees to promptly notify SI-BONE in writing after Supplier obtains knowledge of its delivery to SI-BONE of any Nonconforming Product. In addition to the foregoing, Supplier shall notify SI-BONE within (a) [*] of learning of any situation which may require a recall of Products and (b) [*] of obtaining knowledge of any failure of any batch of Products to meet the standards set forth in this Section 4.4.

4.5 **Acceptance; Remedy for Nonconforming Products**. All Products are subject to SI-BONE's inspection prior to acceptance. SI-BONE shall have [*] from delivery to reject Nonconforming Products. Upon detection of any Nonconformity, SI-BONE shall give written notice (which may be given by e-mail) to Supplier specifying the nature and type of alleged Nonconformity and Supplier will evaluate the alleged Nonconformity including samples of the Nonconforming Product if requested by the Supplier. Upon agreement between the parties that the Product is Nonconforming to the Specification, Supplier shall replace such Product free of charge, and Supplier shall cover expenses including freight, if any, in connection with (a) shipment of replacement Product to the same location and (b) shipment of the Nonconforming Product back to Supplier (if so requested by Supplier). In the absence of such agreement between the parties or if the Supplier is unable to

replace properly rejected Nonconforming Products within [*], SI-BONE may request a credit, or if payment has been made reimbursement for, the Nonconforming Product and may, at its discretion, discontinue the purchase of the Product from Supplier and terminate this Agreement.

4.6 **Latent Nonconformities**. Within the Warranty Period defined in 4.11, latent Nonconformities and Nonconformities not discovered by SI-BONE pursuant to Section 4.4 through the use of reasonable inspection methods and procedures will be reported to the Supplier by SI-BONE within [*] following detection of any Nonconformity specifying the nature and type of alleged Nonconformity. Supplier will evaluate the alleged Nonconformity including samples of the Nonconforming Product if requested by the Supplier. Upon agreement between the parties that the Product is Nonconforming to the Specification, Supplier will replace such Product free of charge, and Supplier shall cover expenses including freight, if any, in connection with (a) shipment of replacement Product to the same location and (b) shipment of the Nonconforming Product back to Supplier (if so requested by Supplier). In the absence of such agreement between the parties or if the Supplier is unable to replace properly rejected Nonconforming Products within [*], Supplier shall issue a credit if payment has already been made for the Nonconforming Product, and SI-BONE may, at its discretion, discontinue the purchase of the Product from Supplier and terminate this Agreement.

4.7 **Qualification of Approved Vendors and Approved Subcontractors**. When requested to do so by SI-BONE, or otherwise required to do so by this Agreement, Supplier shall utilize its Purchasing Control/Vendor Qualification processes and procedures in effect at the time, to qualify third party suppliers and/or third party manufacturers to manufacture and provide components, parts or sub-assemblies for the Product, or to manufacture and supply the Product to SI-BONE. Supplier may, but is not necessarily required to, qualify the Approved Vendors and Approved Subcontractors.

4.8 **Audits**. SI-BONE shall have the right, but not the obligation, at its expense, to audit, or have audited, Supplier's facilities, and plants that are used to manufacture and store the Products. Such audits will be conducted during Supplier's normal business hours by SI-BONE or its designee. Supplier shall issue a plan to determine the correction, cause, and corrective action for any negative finding of any audit report issued by SI-BONE within [*] of such audit report's issue date. Supplier shall facilitate SI-BONE, or its authorized representative, to perform audits of any third-party supplier's facilities, systems, documentation, and other requirements related to this Agreement at mutually agreed dates and times. Supplier, SI-BONE, any outside auditor, and such third-party supplier shall agree on reasonable methods to protect intellectual property, such as non-disclosure agreement or the like.

4.9 **Inspections**. Supplier shall promptly notify SI-BONE of any inspections, audits, formal visits, etc. of any regulator, notified body, or certification body acting in a formal capacity that are related directly to the Product. In the US this includes the Food and Drug Administration. Supplier shall promptly notify SI-BONE of any inspection or audit findings that impact the safety, effectiveness, conformity, or availability of Product Supplier provides to SI-BONE. Supplier agrees that SI-BONE's notified body may conduct unannounced audits of Supplier in accordance with Annex III of the 24 September 2013 Commission Recommendations, on the audits and assessments performed by notified bodies in the field of medical devices (2013/473/EU), provided that SI-BONE will be responsible for any out-of-pocket costs incurred by Supplier and associated with third party audits performed on SI-BONE's behalf.

4.10 **Insurance**. During the term and for [*] after termination for any reason, the Supplier shall maintain commercial general and product liability insurance adequate to cover any liability (including any alleged manufacturing defect or breach of warranty in Section 4.11) arising in connection with any Product manufactured by or on behalf of Supplier and supplied to SI-BONE

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

under this Agreement in coverage amounts consistent with normal business practices of prudent companies similarly situated. The insurance coverage shall in no event be less than [*] per loss and [*] in the aggregate. Supplier shall provide SI-BONE with written evidence of such insurance upon request. Supplier shall provide SI-BONE with written notice at least [*] prior to the cancellation, nonrenewal or material change in such insurance which materially adversely affects the scope or amount of such insurance coverage.

4.11 **Warranty**. Supplier represents and warrants that all Products will conform to the Specifications and will be free from defects in manufacture, workmanship and materials for a period of [*] ("***Warranty Period***") from the date of delivery. Except as otherwise specifically provided in this Section 4 and Section 11, whatever the basis for the claim, Suppliers obligations under this warranty are limited solely to the repair or replacement of Non-conforming Products. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES REGARDING MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, RELATING TO THE USE OR PERFORMANCE OF THE PARTS. No other express or implied warranty or guaranty shall bind Supplier. Supplier shall not be liable for its failure to conform with any requirements not adequately identified by SI-BONE in the specifications, or for personal injury or property damage, loss of revenue or profit, failure to realize savings or other benefits, expenditures for substitute goods or services, storage charges or other special, incidental or consequential damages caused by the use, misuse or inability to use the goods, regardless of the legal theory on which the claim is based and even if Supplier has been advised of the possibility of such damages. Without limiting the foregoing, SI-BONE assumes all risk and liability for loss, damage or injury to persons and property of SI-BONE or others arising out of use, misuse, or inability to use any goods sold by Supplier not caused directly by the willful acts or omissions of Supplier. This warranty shall not extend to anyone other than the SI-BONE and states SI-BONE's exclusive remedy. The foregoing sentence shall not be interpreted to limit Supplier's indemnification obligations set forth in Section 11 below. All claims under this warranty must be made within the Warranty Period.

4.12 **Process Improvements**. As required by 21 CFR Part 820 Sec. 820.50, Supplier shall not make significant changes to the Specifications, manufacturing process, tooling design, processing conditions, materials or manufacturing location of the Products without SI-BONE's prior written consent. Notwithstanding the foregoing, SI-BONE will consider in good faith reasonable written requests by Supplier to change the materials or manufacturing process of the Products, provided SI-BONE shall make final determination on such change(s) in its sole discretion.

4.13 **Complaint Handling and Adverse Event Reporting**. Each party shall cooperate fully with the other party in dealing with customer complaints concerning the Product(s) and shall take such action to promptly resolve such complaints as may be reasonably requested by the other party. SI-BONE is responsible for complying with all FDA and applicable foreign regulatory requirements pertaining to the receipt, review, evaluation, and where applicable, investigation of all complaints received pertaining to the Products, and for the reporting of adverse device events, including FDA's Medical Device Reporting requirements, codified at 21 C.F.R Part 803. Supplier shall reasonably cooperate with SI-BONE to enable SI-BONE to fulfill such requirements. Supplier shall promptly, but in no event more than [*] after receipt of such information, provide complaint information regarding the Products to SI-BONE.

5. PACKAGING; LABELING; DELIVERY.

5.1 **Packaging and Labeling**. Supplier shall be responsible for labeling and packaging Product for shipment to SI-BONE or to its designee(s), in accordance with applicable laws, SI-BONE requirements and instructions and the additional specifications included in the Specifications, which labeling shall include "Manufactured for SI-BONE." SI-BONE may request changes to the packaging and labeling requirements and Specifications upon reasonable prior written notice to

Supplier. To the extent that Supplier provides input on the Product labeling or Specifications, it is understood by the parties that such activity is not intended to make Supplier a "Specifications developer" or a "finished device manufacturer" as such terms are used by FDA. Supplier is responsible for release of product labeling, provided, however, that in the case of initial release of any new label or labeling change, Supplier shall obtain SI-BONE's consent to such release. SI-BONE is responsible for compliance with applicable FDA product labeling requirements.

5.2 **Delivery**. Supplier shall deliver Products by, and no more than [*] prior to, SI-BONE's requested dates of delivery indicated in the Order or as agreed between the Supplier and SI-BONE as indicated on the Supplier Order acknowledgement. Requested delivery dates may be changed only by mutual written agreement of the parties, which agreement shall not be unreasonably withheld or delayed. In the event that Supplier has reason to believe that it will be unable to meet the agreed upon delivery dates, Supplier will notify SI-BONE promptly and state the reasons for the anticipated delay. All shipments of Products pursuant to this Agreement shall be shipped by Supplier FOB Supplier's facility. Delivery shall be deemed to have occurred, and therefore risk of loss transferred from Supplier to SI-BONE, when Products are delivered to the freight forwarder.

5.3 **Packing**. Products shall be packed at Supplier's sole cost and expense in accordance with SI-BONE's reasonable written instructions and reasonable commercial practices. Each shipment of Product shall be clearly marked as per SI-BONE's instructions.

6. PRODUCT IMPROVEMENTS.

6.1 **General**. In the event that SI-BONE notifies Supplier that it desires to have Supplier incorporate changes or improvements to a Product to (a) address a Product defect, integrity, safety or quality concern or compliance matter (each a "***Required Improvement***") or (b) incorporate a feature enhancement or other improvement that is a not a Required Improvement (each an "***Optional Improvement***," and together with the Required Improvements, an "***Improvement***"), the parties shall promptly discuss in good faith the feasibility of implementing such Improvement.

6.2 **Implementation of Required Improvements**. Immediately following receipt of such a request from SI-BONE regarding a Required Improvement, Supplier shall use best efforts to implement the Required Improvement as soon as possible at SI-BONE's sole cost and shall provide reports regarding Supplier's implementation progress to SI-BONE upon SI-BONE's request. All such improvements shall be evaluated and implemented in accordance SI-BONE's applicable design control processes and procedures that are in effect at the time that the improvements are made. SI-BONE shall update the Design History File and Device Master Record, as applicable, and provide copies of such documentation to SI-BONE upon implementation of the Required Improvement. To the extent that Supplier provides input on Required Improvements and changes to the Specifications, it is understood by the parties that such activity does not intend to make Supplier a "Specifications Developer" or a "finished device manufacturer" as such terms are used by FDA. Supplier will have the right to reasonably adjust the Product price to the extent that the changes requested by SI-BONE affect the material, manufacturing or quality costs. In the event that any Required Improvements result in a change in costs to Supplier, the parties shall negotiate in good faith a pricing change commensurate with the change in costs. If the parties are unable to agree on the change in pricing, then either of the parties may terminate this Agreement provided that, if the Supplier terminates the Agreement, SI-BONE will have the option of making Last Purchase per Section 9.5.

6.3 **Implementation of Optional Improvements**. In evaluating and implementing Optional Improvements, Supplier shall use commercially reasonable efforts to minimize SI-BONE's cost of implementing the Optional Improvements. Supplier shall provide SI-BONE with a detailed analysis (together with supporting documentation) of the estimated costs (if any) and effect on the supply

price for the applicable Product (if any) of implementing such Optional Improvement. Supplier shall implement such Optional Improvement only with SI-BONE's prior written consent. If Supplier notifies SI-BONE that implementation of an Optional Improvement will require any modification to the pricing set forth on the Pricing Addendum or in the applicable Order and SI-BONE agrees, the parties will negotiate in good faith an appropriate modification to the pricing in an amendment to this Agreement. If the parties are unable to agree on the change in pricing, then Supplier may delay implementation of the Optional Improvement until a reasonable price change is agreed; provided, however, that if the parties are unable to agree on such reasonable change in pricing, SI-BONE will have the option of terminating this Agreement provided that this termination will not relieve SI-BONE of its obligations with respect to any open Orders or outstanding payments. All such improvements shall be evaluated and implemented in accordance with SI-BONE's applicable design control processes and procedures that are in effect at the time that the improvements are made. Supplier shall update the Design History File and Device Master Record, as applicable, and provide copies of such documentation to SI-BONE upon implementation of the Optional Improvement. To the extent that Supplier provides input on Optional Improvements and changes to the Specifications, it is understood by the parties that such activity does not intend to make Supplier a "Specifications Developer" or a "finished device manufacturer" as such terms are used by FDA.

6.4 **Regulatory Determination**. SI-BONE shall be responsible for making the final decision as to whether a proposed design or manufacturing change may be implemented for the Product(s). Supplier is not permitted to make any modification that affects the Product(s) without notifying SI-BONE. SI-BONE shall be responsible for making the final determination as to whether such changes require regulatory approval or clearance prior to implementation and shall be responsible for filing and obtaining any required approvals and/or clearances, as necessary.

6.5 **Registration and Listing**. Supplier shall comply with applicable establishment registration requirements of the US FDA applicable to the Products and the manufacture of the Products.

7. INTELLECTUAL PROPERTY.

7.1 **Limited License**. SI-BONE hereby grants Supplier a non-exclusive, nontransferable, worldwide license, without the right to sublicense, to use all designs, materials, information, know-how and documentation, including the Specifications, provided by SI-BONE to Supplier, solely in connection with manufacturing the Products hereunder for supply of such Products to SI-BONE or parties designated by SI-BONE. This license shall not include the right to modify, make derivative works of or improvements to the Products and shall terminate upon the termination or expiration of this Agreement. For purposes of this Agreement, "***Intellectual Property***" means any inventions, improvements, developments, or innovations (including all rights to patents, copyrights, trademarks, and trade secrets and know-how inherent therein and appurtenant thereto) and other creative works (whether or not patentable or copyrightable, conceived or made or reduced to practice), know-how, technical information, pending patent applications, registrations, divisions and continuations thereof, registered and unregistered copyrights, and all associated goodwill, designs, drawings, specifications, vendor lists, manufacturing methods and processes, and all other information pertinent to this Agreement, which is proprietary to SI-BONE. SI-BONE's Intellectual Property as of the date hereof includes, but is not limited to the list set forth on **Exhibit D**.

7.2 **Ownership of Intellectual Property**. All Intellectual Property of SI-BONE existing on or prior to the execution of this Agreement shall be and remain the property of SI-BONE, and Supplier shall not acquire any rights therein, except as expressly provided in Section 7.1 of this Agreement.

7.3 **Inventions**. All Intellectual Property conceived or reduced to practice by Supplier, its employees or agents in the course of performing Supplier's duties hereunder and related to the Products, or as a result of access to SI-BONE's Intellectual Property, shall be owned solely by SI-BONE and Supplier

agrees to irrevocably assign all of its interests in such Intellectual Property to SI-BONE. Supplier shall execute all papers, including patent applications, invention assignments and copyright assignments, and otherwise shall assist SI-BONE as reasonably required to perfect in SI-BONE the rights, title and other interests held by SI-BONE under this Agreement. SI-BONE shall pay for reasonable costs related to such assistance. If SI-BONE is unable for any reason, after reasonable effort, to secure Supplier's signature on any document needed in connection with the actions specified above, Supplier hereby irrevocably designates and appoints SI-BONE and its duly authorized officers and agents as its agent and attorney in fact, which appointment is coupled with an interest, to act for and in its behalf to execute, verify and file any such documents and to do all other lawfully permitted acts to further the purposes of the preceding paragraph with the same legal force and effect as if executed by Supplier.

7.4 **Trade Names**. Each of SI-BONE and Supplier hereby acknowledges and agrees that it does not have, and shall not acquire, any interest in the other party's trademarks except as expressly provided herein. Any violation of this Section 7 shall constitute a material breach of this Agreement.

8. NON-INTERFERENCE.

During the Term of this Agreement and for a period of [*] thereafter (the "***Restricted Period***"), neither party shall, directly or indirectly, solicit for hiring, hire or accept any services or work from the other party's employees or consultants. This restriction shall not apply to employees responding to commercially reasonable employment advertisements in common national or regional recruiting media. The parties further agree that during the Restricted Period, the parties shall not in any way discourage any of the other party's clients, customers or distributors or prospective clients, customers or distributors from purchasing products, or solicit or influence or attempt to solicit or influence any client, customer, distributor or other person, either directly or indirectly, to direct any purchase of products to any other entity in competition with the business of the other party.

9. TERM; TERMINATION.

9.1 **Term; Renewal**. Unless earlier terminated in accordance with this Section 9, the term of this Agreement shall commence on the Effective Date and continue for an initial term of **three years** (the "***Initial Term***"). This Agreement shall automatically renew for successive **one year** periods (each, a "***Renewal Term***" and collectively, together with Initial Term, the "***Term***") unless terminated by either party with [*] written notice prior to the beginning of such Renewal Term.

9.2 **Material Breach**. Either party may terminate this Agreement in the event the other party commits a material breach of this Agreement and has not cured such breach within [*] of written notice thereof from the non-breaching party.

9.3 **Termination by SI-BONE**. SI-BONE may terminate this Agreement upon written notice to Supplier:

a. if Supplier fails to deliver a shipment of conforming Products in the quantities and within [*] of the mutually agreed delivery date for a SI-BONE Order submitted in accordance with this Agreement and such failure results in a delay or Product backorder of an aggregate total (together with any other delays during the same Supply Period) of more than [*] (a "***Supply Failure***");

b. if Supplier changes the site of manufacture of any Products to a site that has not been previously approved by SI-BONE in writing;

c. in the event of a Change in Control of Supplier or Supplier sells all or substantially all of its assets relating to the manufacturing of the Products; or

d. if Supplier breaches Section 8 hereof (Non-Interference Covenant).

9.4 **Insolvency**. Either party may terminate this Agreement if the other party files, or has filed against it, a petition for voluntary or involuntary bankruptcy or pursuant to any other insolvency law, or the other party makes or seeks to make a general assignment for the benefit of its creditors or applies for or consents to the appointment of a trustee, receiver or custodian for it or a substantial part of its property, and, in the case of an involuntary bankruptcy, such situation is not cured within [*] from its occurrence, such termination to take effect upon delivery of notice of termination to the other party.

9.5 **Last Purchase**. If this agreement is terminated by SI-BONE in accordance with 9.3, SI-BONE will have the option of placing a last purchase with the Supplier equal to the amount of the demand for up to a [*] period based on the then current forecast and unit prices, to be delivered by the Supplier within a mutually agreed upon time frame or a maximum of [*].

9.6 **Effect of Termination**. Immediately upon expiration or termination of this Agreement, Supplier will discontinue manufacturing the Products and the license under Section 7.1 shall terminate; provided, that expiration or termination of this Agreement shall not relieve the parties of any obligation accruing prior of such expiration or termination. Upon termination or expiration of this Agreement, SI-BONE shall take delivery of and pay for all Products under any Order outstanding as of the date of termination only in the event of a termination by SI-BONE under Section 9.1 unless SI-BONE terminated the Agreement for cause, and Supplier will (i) fulfill all Orders submitted to Supplier prior to the effective date of termination and (ii) promptly return all SI-BONE documentation and property in Supplier's possession.

9.7 **Survival**. All of the representations, warranties, and indemnifications made in this Agreement, and all terms and provisions hereof intended to be observed and performed by the parties after the termination hereof, including Sections 4.1, 4.3, 4.4, 4.5, 4.6, 4.8, 4.9, 4.10, 4.11, 4.13, 7.2, 7.3, 7.4, 8, 9, 10, 11 and 12 shall survive such termination and continue thereafter in full force and effect, subject to applicable statutes of limitations.

10. CONFIDENTIALITY; PUBLICITY.

10.1 **Confidential and Proprietary Information**. SI-BONE and the Supplier will have access to each other's Confidential and Proprietary Information. "***Confidential and Proprietary Information***" means any trade secret as defined by the Uniform Trade Secrets Act ("***Trade Secret***"), other information viewed by the party disclosing it (the "***Disclosing Party***") as confidential and/or proprietary, and any and all information or proprietary materials (in every form and media) not generally known in the relevant trade or industry made available by either party to the party receiving such information (in such case, the "***Receiving Party***") in connection with the efforts contemplated hereunder and which the Disclosing Party designates as confidential or may reasonably be understood as confidential, including, but not limited to (i) all Intellectual Property of either party; (ii) existing or contemplated products, services, designs, inventions, technology, processes, technical data, engineering, techniques, methodologies and concepts and any information related thereto; and (iii) information relating to business plans, sales, consultants, employees, or marketing methods and customer lists or requirements. The Receiving Party will maintain the information in confidence using the same standard of care it uses to maintain its own Confidential and Proprietary Information in confidence, but in any case, no less than reasonable commercial diligence, and will not use such information for itself or others except as provided in this Agreement. Such obligation of confidentiality and non-use shall not apply to information which (a) is known to the Receiving Party prior to the disclosure as demonstrated by documentary evidence, (b) is publicly known as of the date of the disclosure, (c) becomes publicly known after the date of disclosure through no fault of the Receiving Party, (d) is received by the Receiving Party from a

third party who has, to the Receiving Party's knowledge, no obligation of confidentiality to the Disclosing Party, or (v) is developed independently by the Receiving Party without reference to the Disclosing Party's Confidential and Proprietary Information as demonstrated by documentary evidence. Such obligation of confidentiality and non-use shall survive any expiration or termination of this Agreement for a period of [*]; *provided*, *however*, that such restrictions shall survive indefinitely, or until public disclosure of the secret occurs through no fault or breach of the other party, for any information which is Trade Secret information of a party. The restrictions on disclosure contained in this Section 10.1 shall not apply to any information which is required to be disclosed by a valid court order or governmental law or regulation, provided that the Receiving Party gives the Disclosing Party prompt notice of any such requirement and cooperates with the Disclosing Party, at the Disclosing Party's expense, in attempting to limit such disclosure and obtain confidential treatment thereof.

10.2 **Misuse of Confidential and Proprietary Information**. Each party understands and agrees that this provision prohibits it from rendering services to another party to the extent that such party would use, disclose, or rely upon the other party's trade secrets in the course of rendering such services or use disclose or rely upon Confidential and Proprietary Information in any way other than for the other party's benefit and in the furtherance of the objectives of this Agreement.

10.3 **Publicity**. Except as otherwise provided in this Agreement or required by Law, neither party shall use the other's name or refer to it directly or indirectly in an advertisement, news release or release to any professional or trade publication without written approval from such party, which approval may not be unreasonably withheld or delayed. Neither party shall use the name of the other for advertising or promotional claims without the prior written consent of the other party.

10.4 **Damages Inadequate**. The parties acknowledge that monetary damages may be an inadequate remedy for any breach by a party of its obligations under this Section 10 and that the non-breaching party shall be entitled to seek injunctive relief and specific performance to enforce the breaching party's obligations, in addition to any other remedies the non-breaching party may be entitled to at law.

11. REMEDIES; INDEMNIFICATION.

11.1 **Remedies for Nonconforming Products**. In addition to any other remedies available to SI-BONE at law, in equity or hereunder, in the event Supplier delivers Nonconforming Products to SI-BONE, SI-BONE may select, and Supplier shall provide, one of the following remedies: (a) the refund of the purchase price of the Nonconforming Products, (b) replacement with Products that conform to the Specifications, or (c) the cost of reconditioning or reworking any Nonconforming Products to conform in all material respects with the Specifications.

11.2 **Indemnification by Supplier**. Supplier agrees to indemnify, defend and hold SI-BONE, its affiliates, officers, directors, agents and employees ("***SI-BONE Indemnitees***") harmless from and against all actions, liabilities, damages, claims and demands whatsoever, including, but not limited to, reasonable attorney fees and other expenses ("***Claims***") that are brought or threatened against the SI-BONE Indemnitees and related to Supplier's or Supplier Indemnitee's: (a) breach of this Agreement; (b) violation of applicable laws and regulations; (c) breach of representations and warranties; (d) any claim of Intellectual Property infringement brought by third parties as a direct result of Supplier's manufacturing processes or Supplier's services provided hereunder, provided such infringement is not a direct result of the Specifications provided by SI-BONE; or (e) gross negligence, recklessness or willful misconduct. The duty to indemnify will not apply to the extent that any Loss arises from the gross negligence, recklessness, or willful misconduct of a SI-BONE Indemnitee or SI-BONE's breach of this Agreement.

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

11.3 **Indemnification by SI-BONE**. SI-BONE agrees to indemnify, defend and hold Supplier, its affiliates, officers, directors, agents and employees ("***Supplier Indemnitees***") harmless from and against all Claims that are brought or threatened against the Supplier Indemnitees and related to: (a) SI-BONE's breach of this Agreement; (b) SI-BONE's violation of applicable laws and regulations; (c) defects or alleged defects in the design of the Products, provided such design defects are a result of specifications or instructions provided by SI-BONE and not Supplier's manufacturing process; (d) infringement upon the Intellectual Property rights of third parties, provided such infringement is a direct result of the Specifications or instructions provided by SI-BONE; or (e) SI-BONE's gross negligence, recklessness or willful misconduct. The duty to indemnify will not apply to the extent that any Claim arises from the gross negligence, recklessness, or willful misconduct of a Supplier Indemnitee or Supplier's breach of this Agreement.

11.4 **Indemnification Procedure**. The party claiming indemnity (the "***Indemnified Party***") shall provide the party from whom indemnity is being sought (the "***Indemnifying Party***") with reasonable assistance, at the Indemnifying Party's expense, in connection with the defense of the claim for which indemnity is being sought. The Indemnifying Party shall have the right to assume sole control over the defense of such claim and conduct the defense of the claim with counsel of its choice. The Indemnifying Party shall not settle any claim without the prior written consent of the Indemnified Party, not to be unreasonably withheld, unless the settlement involves only the payment of money.

11.5 **Limitations of Damages**. Notwithstanding anything to the contrary contained in this Agreement, neither party shall be liable to the other party or its Affiliates (except with respect to either party's breach of its obligations of Article 10, or indemnification obligations of Section 11.2 or 11.3 with respect to third party claims) for any indirect, special, incidental (including, without limitation, lost profits) or punitive damages of the other party or its Affiliates from any breach or default of a party's obligations hereunder or the breach of any representation or warranty made hereunder. Except with respect to either party's breach of its obligations of Article 10, or indemnification obligations of Section 11.2 or 11.3 with respect to third party claims, the collective liability of either party to the other under this Agreement shall be limited on an aggregate basis (not per claim or occurrence) to [*], except that with respect to damages or liabilities [*]. Upon payment(s) by the they indemnifying party to the indemnified party Supplier and/or Supplier Indemnitees to the SI-BONE and/or SI-BONE Indemnitees, or payment(s) by SI-BONE and/or the SI-BONE Indemnitees to Supplier and/or the Supplier Indemnitees, the party having made such payments shall be relieved and discharged from any further liability to the other party and/or its Indemnitees under this Agreement, or otherwise for contribution or to defend, indemnify, and/or hold harmless the other party and/or its Indemnitees .

12. **MISCELLANEOUS**.

12.1 **Assignment; Binding Effect**. This Agreement shall not be assignable or otherwise transferable by Supplier without the prior written consent of SI-BONE and shall be binding upon and inure to the benefit of the parties and their respective successors and permitted assigns. This Agreement shall not be assignable or otherwise transferable by SI-BONE without the prior written consent of Supplier, provided that SI-BONE may assign this Agreement to any Affiliate of SI-BONE without Supplier's consent or in connection with a merger, acquisition or sale of the stock of, or all or substantially all of the assets of, SI-BONE. Notwithstanding anything in this Agreement, the parties acknowledge and agree that SI-BONE may perform its obligations under this Agreement through an Affiliate of SI-BONE.

12.2 **Notices**. All notices, requests, claims, demands and other communications hereunder shall be in writing and shall be deemed to have been duly given (a) when received if delivered personally, including by recognized overnight delivery service, (b) when transmitted by facsimile or electronic

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

mail (email), with confirmation of successful transmission, provided that such delivery is followed by physical delivery, (c) upon receipt, if sent by registered or certified mail (postage prepaid, return receipt requested) and (d) the next business day after it is sent, if sent for next-day delivery to a domestic address by overnight mail or courier, to the parties at the following addresses:

If to SI-BONE, to:	SI-BONE, Inc. 3055 Olin Ave. Suite 2200 San Jose, CA 95128 ATTN: CFO legal@si-bone.com
If to Supplier, to:	rms Company 8600 Evergreen Blvd. Coon Rapids, MN 55433 ATTN: Director of Sales

provided, *however*, that if any party shall have designated a different address by notice to the others, then to the last address so designated.

12.3 **Severability**. If any term, provision, covenant or restriction of this Agreement is held by a court of competent jurisdiction or other authority to be invalid, void, unenforceable or against its regulatory policy such determination shall not affect the enforceability of any others or of the remainder of this Agreement; and in connection with such term, provision, covenant or restriction of this Agreement which is held invalid, void, unenforceable or against regulatory policy, the parties shall negotiate in good faith with a view to the substitution therefor of a suitable and equitable solution in order to carry out, so far as may be valid and enforceable, the intent and purpose of such invalid term, provision, covenant or restriction and, absent any agreement by the parties, such court of competent jurisdiction or other authority shall substitute therefore such term, provision, covenant or restriction as is legal, valid and enforceable but otherwise similar to the invalid term, provision, covenant or restriction.

12.4 **Entire Agreement**. This Agreement may not be amended, supplemented or otherwise modified except by an instrument in writing signed by SI-BONE and Supplier. This Agreement contains the entire agreement of the parties hereto with respect to its subject matter, superseding all negotiations, prior discussions and preliminary agreements made prior to the date hereof.

12.5 **No Third-Party Beneficiaries**. This Agreement is solely for the benefit of the parties hereto and their respective Affiliates and no provision of this Agreement shall be deemed to confer upon any third parties (other than permitted assigns) any remedy, claim, liability, reimbursement, claim of action or other right in excess of those existing without reference to this Agreement.

12.6 **Waiver**. The failure of any party to enforce any condition or part of this Agreement at any time shall not be construed as a waiver of that condition or part, nor shall it forfeit any rights to future enforcement thereof.

12.7 **Governing Law; Jurisdiction**. This Agreement (including any claim or controversy arising out of or relating to this Agreement) shall be governed by the law of the State of Delaware without regard to conflict of law principles that would result in the application of any Law other than the Laws of the State of Delaware. Any proceeding to interpret or enforce this Agreement will be brought exclusively in the state and federal courts situated in the state of Delaware.

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

12.8 **Injunctive Relief**. The parties acknowledge that damages would be an inadequate remedy for any material breach of Sections 7, 8, or 10. Accordingly, notwithstanding anything to the contrary in this Agreement, either party will have the right to obtain injunctive relief in any court of competent jurisdiction to enforce Sections 7, 8, or 10 in the event of a party's failure to perform its obligations thereunder, as well as the right to pursue any and all other rights and remedies available at law or in equity for such a breach. The breaching party hereby expressly waives the defense that a remedy in damages will be adequate and any requirement in an action for specific performance or injunction for the posting of a bond by the party seeking injunctive relief.

12.9 **Counterparts**. This Agreement may be executed manually or by facsimile by the parties, in any number of counterparts, each of which shall be considered one and the same agreement and shall become effective when a counterpart hereof shall have been signed by each of the parties and delivered to each of the other parties.

12.10 **Construction**. The language in all parts of this Agreement shall be construed, in all cases, according to its fair meaning. The parties acknowledge that each party and its counsel have reviewed and revised this Agreement and that any rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of this Agreement.

12.11 **Other Terms and Conditions**. Other terms and conditions not inconsistent with terms and conditions in this Agreement covering Products to be supplied under this Agreement will be provided in Orders by SI-BONE and in order acknowledgments and invoices issued by Supplier. In the event of any conflict of terms in these documents, SI-BONE and Supplier agree to negotiate in good faith to resolve such differences, unless such terms conflict with the terms of this Agreement, in which case the terms of this Agreement shall control.

12.12 **Further Assurances**. SI-BONE and Supplier covenant and agree that subsequent to the execution and delivery of this Agreement and without any additional consideration, each of SI-BONE and Supplier shall execute and deliver any further legal instruments and perform such acts which are or may become necessary to effectuate the purposes of this Agreement.

12.13 **Relationship**. Supplier is an independent contractor engaged by SI-BONE for the provision of the Products. Nothing in this Agreement shall constitute either party as an employee, agent or general representative of the other, nor shall either SI-BONE or Supplier have the right or authority to assume, create or incur any liability or any obligation of any kind, express or implied, against, or in the name of or on behalf of, the other.

[REMAINDER OF THE PAGE INTENTIONALLY LEFT BLANK]

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

IN WITNESS WHEREOF, the parties hereto have caused this Manufacturing, Quality and Supply Agreement to be executed by their respective duly authorized officers as of the date set forth below their names.

By:	/s/ Laura Francis	By:	/s/ Richard Riddle
Name:	Laura Francis	Name:	Richard Riddle
Title:	Chief Financial Officer	Title:	Director of Sales
Date:	2/1 /2017	Date:	2/1/2017

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

EXHIBIT A

PRICING ADDENDUM

[*]

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

EXHIBIT B

APPROVED VENDORS

[*]

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

EXHIBIT C

APPROVED SUBCONTRACTORS

[*]

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

EXHIBIT D

INTELLECTUAL PROPERTY

[*]

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

EXHIBIT E

PRODUCT SPECIFICATIONS

Item	Part Number	Document Title	Document Type
[*]	[*]	[*]	[*]

Note: Future revision updates to be applied through mutual signed agreement of both parties through the change control process.

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

Exhibit 10.9

SI-BONE, INC.
SUITE 1F
20045 STEVENS CREEK BLVD
CUPERTINO, CA 95014

December 15, 2009

Jeffrey W. Dunn
[Address intentionally omitted.]

Dear Jeff,

SI-BONE, Inc. (the "Company") is pleased to offer you employment on the following terms. In consideration for receiving this offer of employment, you acknowledge and agree that, effective as of January 1, 2010, the consulting agreement between you and the Company is terminated and of no further force and effect.

1. **Position**. Your initial title will be President and CEO, and you will initially report to the Company's Board of Directors. While you render services to the Company, you will not engage in any other employment, consulting or other business activity (whether full-time or part-time) that would create a conflict of interest with the Company. By signing this letter agreement, you confirm to the Company that you have no contractual commitments or other legal obligations that would prohibit you from performing your duties for the Company.

2. **Cash Compensation**. The Company will pay you a starting salary at the rate of $360,000 per year, payable in accordance with the Company's standard payroll schedule. This salary will be subject to adjustment pursuant to the Company's employee compensation policies in effect from time to time.

3. **Employee Benefits**. As a regular employee of the Company, you will be eligible to participate in a number of Company-sponsored benefits. In addition, you will be entitled to paid vacation in accordance with the Company's vacation policy, as in effect from time to time.

4. **Equity**. On June 20, 2009 and October 7, 2009, the Company's Board of Directors granted you options to purchase 1,668,963 shares of the Company's Series 1 Common Stock and 953,693 shares of the Company's Series 1 Common Stock, respectively (the "Options"). The Options are subject to the terms and conditions applicable to options granted under the Company's 2008 Stock Plan (the "Plan"), as described in the Plan and the applicable Stock Option Agreements.

5. **Severance Benefits**.

A. General. If you are subject to an Involuntary Termination, then you will be entitled to the benefits described in this Section 5. However, this Section 5 will not apply unless you (i) have returned all Company property in your possession, (ii) have resigned as a member of the Boards of Directors of the Company and all of its subsidiaries, to the extent applicable, and (iii) have executed a general release of all claims that you may have against the Company or persons affiliated with the Company. The release must be in the form prescribed by the Company, without alterations. You must execute and return the release on or before the date specified by the Company in the prescribed form (the "Release Deadline"). The Release Deadline will in no event be later than 60 days after your Separation. If you fail to return the release on or before the Release Deadline, or if you revoke the release, then you will not be entitled to the benefits described in this Section 5.

B. Salary Continuation. If you are subject to an Involuntary Termination, then the Company will continue to pay your base salary for a period of 12 months after your Separation. Your base salary will be paid at the rate in effect at the time of your Separation and in accordance with the Company's standard payroll procedures. The salary continuation payments will commence within 30 days after the Release Deadline and, once they commence, will be retroactive to the date of your Separation.

C. COBRA. If you are subject to an Involuntary Termination and you elect to continue your health insurance coverage under the Consolidated Omnibus Budget Reconciliation Act ("COBRA") following your Separation, then the Company will pay the same portion of your monthly premium under COBRA as it pays for active employees until the earliest of (i) the close of the 12-month period following your Separation, (ii) the expiration of your continuation coverage under COBRA or (iii) the date when you become eligible for substantially equivalent health insurance coverage in connection with new employment or self-employment.

"Cause" means (a) your unauthorized use or disclosure of the Company's confidential information or trade secrets, which use or disclosure causes material harm to the Company, (b) your material breach of any agreement between you and the Company, (c) your material failure to comply with the Company's written policies or rules, (d) your conviction of, or your plea of "guilty" or "no contest" to, a felony under the laws of the United States or any State, (e) your gross negligence or willful misconduct, (f) your continuing failure to perform assigned duties after receiving written notification of the failure from the Company's Board of Directors or (g) your failure to cooperate in good faith with a governmental or internal investigation of the Company or its directors, officers or employees, if the Company has requested your cooperation.

"Change in Control" means (a) the consummation of a merger or consolidation of the Company with or into another entity or (b) the dissolution, liquidation or winding up of the Company. The foregoing notwithstanding, a merger or consolidation of the Company does not constitute a "Change in Control" if immediately after the merger or consolidation a majority of the voting power of the capital stock of the continuing or surviving entity, or any direct or indirect parent corporation of the continuing or surviving entity, will be owned by the persons

who were the Company's stockholders immediately prior to the merger or consolidation in substantially the same proportions as their ownership of the voting power of the Company's capital stock immediately prior to the merger or consolidation.

"Good Reason" means that you resign within 12 months after one of the following conditions has come into existence without your consent:

1. A reduction in your base salary by more than 10%;
2. A change in your position with the Company that materially reduces your level of authority or responsibility; or
3. A relocation of your principal workplace by more than 30 miles.

A condition will not be considered "Good Reason" unless you give the Company written notice of the condition within 90 days after the condition comes into existence and the Company fails to remedy the condition within 30 days after receiving your written notice.

"Involuntary Termination" means a Separation resulting from either (a) your involuntary discharge by the Company for reasons other than Cause or Permanent Disability or (b) within 12 months after a Change in Control of the Company, your voluntary resignation for Good Reason.

"Permanent Disability" means that you are unable to perform the essential functions of your position, with or without reasonable accommodation, for a period of at least 120 consecutive days because of a physical or mental impairment.

"Separation" means a "separation from service," as defined in the regulations under Section 409A of the Internal Revenue Code of 1986, as amended (the "Code")

6. **Proprietary Information and Inventions Agreement**. Like all Company employees, you will be required, as a condition of your employment with the Company, to sign the Company's standard Proprietary Information and Inventions Agreement, a copy of which is attached hereto as **Exhibit A**.

7. **Employment Relationship**. Employment with the Company is for no specific period of time. Your employment with the Company will be "at will," meaning that either you or the Company may terminate your employment at any time and for any reason, with or without cause. Any contrary representations that may have been made to you are superseded by this letter agreement. This is the full and complete agreement between you and the Company on this term. Although your job duties, title, compensation and benefits, as well as the Company's personnel policies and procedures, may change from time to time, the "at will" nature of your employment may only be changed in an express written agreement signed by you and a duly authorized officer of the Company (other than you).

8. **Tax Matters**.

(a) **Withholding**. All forms of compensation referred to in this letter agreement are subject to reduction to reflect applicable withholding and payroll taxes and other deductions required by law.

(b) **Section 409A**. For purposes of Section 409A of the Code, each salary continuation payment under Section 5(b) is hereby designated as a separate payment. If the Company determines that you are a "specified employee" under Section 409A(a)(2)(B)(i) of the Code at the time of your Separation, then (i) the salary continuation payments under Section 5(b), to the extent that they are subject to Section 409A of the Code, will commence during the seventh month after your Separation and (ii) the installments that otherwise would have been paid during the first six months after your Separation will be paid in a lump sum when the salary continuation payments commence.

(c) **Tax Advice**. You are encouraged to obtain your own tax advice regarding your compensation from the Company. You agree that the Company does not have a duty to design its compensation policies in a manner that minimizes your tax liabilities, and you will not make any claim against the Company or its Board of Directors related to tax liabilities arising from your compensation.

9. **Interpretation, Amendment and Enforcement**. This letter agreement and Exhibit A constitute the complete agreement between you and the Company, contain all of the terms of your employment with the Company and supersede any prior agreements, representations or understandings (whether written, oral or implied) between you and the Company, including the Consulting Agreement. This letter agreement may not be amended or modified, except by an express written agreement signed by both you and a duly authorized officer of the Company. The terms of this letter agreement and the resolution of any disputes as to the meaning, effect, performance or validity of this letter agreement or arising out of, related to, or in any way connected with, this letter agreement, your employment with the Company or any other relationship between you and the Company (the "Disputes") will be governed by California law. excluding laws relating to conflicts or choice of law. You and the Company submit to the exclusive personal jurisdiction of the federal and state courts located in Santa Clara County in connection with any Dispute or any claim related to any Dispute.

* * * * *

We hope that you will accept our offer to join the Company. You may indicate your agreement with these terms and accept this offer by signing and dating both the enclosed duplicate original of this letter agreement and the enclosed Proprietary Information and Inventions Agreement and returning them to me. This offer, if not accepted, will expire at the close of business on December 25, 2009. As required by law, your employment with the Company is contingent upon your providing legal proof of your identity and authorization to work in the United States. Your employment is also contingent upon your starting work with the Company on January 1, 2010.

If you have any questions, please do not hesitate to contact me.

Very truly yours,

SI-BONE, Inc.

By: /s/ Ted Davis
Title: Ted Davis, BOD Member on behalf of the Board of Directors

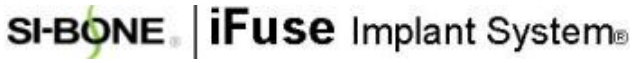
I have read and accept this employment offer:

/s/ Jeffrey W. Dunn
Signature of Jeffrey W. Dunn

Dated: 12.30.09

Attachment

Exhibit A: Proprietary Information and Inventions Agreement



SI-BONE, INC.
3055 OLIN AVENUE, SUITE 2200
SAN JOSE, CA 95128

April 27, 2015

Laura A. Francis
[Address intentionally omitted.]

RE: Employment Offer

Dear Laura:

We are pleased to offer you the position of Chief Financial Officer effective May 26, 2015. We believe that you will bring great value to SI-BONE Inc., and that your knowledge, skills and experience will be an asset to the Company and will offer a mutually beneficial opportunity. We are excited about you joining our team and hope that you will accept our offer.

Position. Your title will be Chief Financial Officer. This is a full time, exempt position. You will report directly to Jeff Dunn, President and CEO.

Cash Compensation. The Company will pay you a base semi-monthly salary of $12,083.34, equivalent to a yearly amount of $290,000, subject to applicable withholdings. This salary will be subject to adjustment pursuant to the Company's employee compensation policies in effect from time to time. SI-BONE paydays are semi-monthly. Based on your level, you will be also be eligible under the 2015 Bonus Plan to receive up to an additional 35% of your base salary based on the achievement of certain corporate and individual goals. This Bonus Plan is available to you in your first full quarter with the Company and beyond.

Stock Options. You are also eligible to participate in the Company's Stock Option Plan. Subject to the approval of the Company's Board of Directors, you will be granted an option to purchase a number of shares of the Company's Common Stock equal to 1.25% of the Company's fully diluted capitalization as of your first day of employment. The Board will determine the per-share exercise price when the option is granted. The option will be subject to the terms and conditions set forth in the Company's 2008 Stock Plan and in the applicable Stock Option Agreement. You will vest in 25% of the option shares after 12 months of continuous service, and the balance will vest in equal monthly installments over the next 36 months of continuous service, as described in the Stock Option Agreement. You will vest in 50% of the remaining unvested option shares if (a) the Company is subject to a Change in Control before your service with the Company terminates and (b) you are subject to an Involuntary Termination within 12 months after that Change in Control.

For the purposes of this letter, Change in Control is defined as (i) the consummation of a merger or consolidation of the Company with or into another entity or (ii) the dissolution, liquidation or winding up of the Company. The foregoing notwithstanding, a merger or consolidation of the Company does not constitute a "Change in Control" if immediately after the merger or consolidation a majority of the voting power of the capital stock of the continuing or surviving entity, or any direct or indirect parent corporation of the continuing or surviving entity, will be owned by the persons who were the Company's stockholders immediately prior to such merger or consolidation in substantially the same proportions as their ownership of the voting power of the Company's capital stock immediately prior to the merger or consolidation.

For purposes of this letter, Involuntary Termination is defined as the termination of your service by reason of: (i) your involuntary discharge by the Company (or the parent or subsidiary employing you) for reasons other than Cause (as defined under "Severance Benefits" below); or (ii) your voluntary resignation for Good Reason.

For purposes of this letter, Good Reason is defined as your resignation within 12 months after one of the following conditions has come into existence without your consent: (i) a reduction in your base salary by more than 10%; (ii) a material diminution of your authority, duties or responsibilities; or (iii) a relocation of your

principal workplace by more than 30 miles. A condition shall not be considered "Good Reason" unless you give the Company written notice of such condition within 90 days after such condition comes into existence and the Company fails to remedy such condition within 30 days after receiving your written notice.

Severance Benefits. In the event that you experience a Separation as a result of a termination of your employment by the Company for any reason other than for Cause, and provided that you (i) have returned all Company property in your possession and (ii) have executed a general release of all claims that you may have against the Company or persons affiliated with the Company, in the form prescribed by the Company then the Company will tender to you a lump-sum payment equal to three months of your then-current base salary, less tax withholding. Such payment will be made to you within 60 days after your Separation, but only if you have returned the release on or before the date specified in such release (which will in no event be later than 50 days after your Separation) and the release has become effective; however, if such 60-day period spans two calendar years, then the payment will be made in the second calendar year. For the purposes of this letter, Cause is defined as: (a) acts or omissions constituting gross negligence, recklessness or willful misconduct on your part with respect to your obligations or otherwise relating to Company business; (b) your material breach of this Agreement or the Company's Proprietary Information and Inventions Agreement (c) your conviction of entry of or a plea of *nolo contendere* to fraud, misappropriation or embezzlement, or any felony or crime of moral turpitude; (d) your willful neglect of duties as determined in the sale and exclusive discretion of the Company's CEO or Board of Directors; (e) your failure to perform the essential functions of your position, with or without a reasonable accommodation, due to a mental or physical disability; or (f) your death. For purposes of this letter, Separation is defined as a "separation from service," as defined in the regulations under Section 409A of the Internal Revenue Code of 1986, as amended (the "Code"). If the Company determines that you are a "specified employee" under Section 409A(a)(2)(B)(i) of the Code at the time of your Separation, then (i) the severance payment under this paragraph, to the extent that it is subject to Section 409A of the Code, will be paid on the first business day following (A) expiration of the six-month period measured from your Separation or (B) the date of your death.

Employee Benefits. As a regular employee of the Company, you will be eligible to participate in a number of Company-sponsored benefits. Participation in the Company's Benefits Program is effective on the first day of the month following your date of hire. Human Resources will give you detailed benefits information during your New Hire Orientation.

Proprietary Information and Inventions Agreement. Your employment is contingent upon your agreement to the terms and signing the Company's Proprietary Information and Inventions Agreement ("PIIA"), attached. The PIIA must be signed and returned prior to the effective date of your employment.

Employment Relationship. Please keep in mind that your employment with SI-BONE is at-will. This means that you are free to terminate your employment with SI-BONE at any time, with or without cause or advance notice. Likewise, SI-BONE has the right to terminate your employment, or otherwise discipline, transfer or demote you at any time, with or without cause, and with or without notice. This is the full and complete agreement between you and the Company on this term, and any contrary representations that may have been made to you are superseded by this letter. No one other than the Company CEO can alter this at-will arrangement and any such agreement must be in writing and must be signed by you and the CEO.

Tax Matters. All forms of compensation referred to in this letter are subject to reduction to reflect applicable withholding and payroll taxes and other deductions required by law. You are encouraged to obtain your own tax advice regarding your compensation from the Company. You agree that the Company does not have a duty to design its compensation policies in a manner that minimizes your tax liabilities, and you will not make any claim against the Company or its Board of Directors related to tax liabilities arising from your compensation.

Miscellaneous. While you render services to the Company, you will not engage in any other employment, consulting or other business activity (whether full-time or part-time) that would create a conflict of interest with the Company. By signing this letter, you confirm to the Company that you have no contractual commitments or other legal obligations that would prohibit you from performing your duties for the Company. This letter and the PIIA supersede and replace any prior agreements, representations or understandings (whether written, oral,

|implied or otherwise) between you and the Company and constitute the complete agreement between you and the Company regarding the subject matter set forth herein. This letter may not be amended or modified, except by an express written agreement signed by both you and a duly authorized officer of the Company. The terms of this letter and the resolution of any disputes as to the meaning, effect, performance or validity of this letter or arising out of, related to, or in any way connected with, this letter, your employment with the Company or any other relationship between you and the Company (the "Disputes") will be governed by California law, excluding laws relating to conflicts or choice of law. You and the Company submit to the exclusive personal jurisdiction of the federal and state courts located in Santa Clara County, California in connection with any Dispute or any claim related to any Dispute.

Employment Eligibility Verification. Pursuant to the immigration and Nationality Act, the Company is required to verify the identity and employment eligibility of all new hires. In order to comply with this legal obligation, we can only hire those individuals who are eligible to work in the United States. As a condition of employment, you will be required to provide documents verifying your identity and your eligibility to work in the United States; and to complete an Employment Eligibility Verification form I-9 within three (3) business days from your hire date. To verify your identity, we have enclosed a list of acceptable documents for the I-9 which you will complete at the New Hire Orientation. Please note that you will need to bring either (i) one document from List A or (ii) one document from List B and one document from List C. If you anticipate having difficulty producing the required documents, please contact the Human Resources department at (408) 207-0700.

To accept this offer, please sign in the space provided below, and return the signed letter to me by close of business on April 30, 2015.

This employment offer is also contingent upon your starting work with the Company on May 26, 2015, and the completion of an application for employment, satisfactory references and background checks.

We look forward to you joining the Company and hope that you find your employment with the Company enjoyable and professionally rewarding.

If you have any questions, please call me at 408-207-0700.

Very truly yours,
SI-BONE, Inc.

By: /s/ Jeff W. Dunn
Jeff W. Dunn

Title: President and CEO

I have read and accept this employment offer:

/s/ Laura Francis
Printed Name of Employee

Laura Francis
Signature of Employee

4/28/15
Date

Attachment
Proprietary Information and Inventions Agreement (PIIA)

Confidential and Proprietary

March 15, 2016

Ms. Laura A. Francis
[Address intentionally omitted.]

Re: Severance

Dear Laura:

This letter contains terms and conditions pertaining to separation payments and benefits that SI-BONE, Inc. ("the Company") is offering to you.

1. **Benefits upon Separation from Employment - No Change in Control**. In the event that the Company terminates your employment for any reason other than for Cause (as defined below), the Company will tender to you the following benefits (collectively, the "Severance Benefits") within sixty (60) calendar days of the termination date:
    a. A lump-sum payment equal to three (3) months of your then-current base salary; and
    b. A lump-sum payment in the amount of $5,700.00
2. **Benefits upon Separation from Employment Prior to or Following a Change in Control**. Notwithstanding the foregoing, in the event the Company terminates your employment for any reason other than for Cause or if you resign your employment for Good Reason either three (3) months prior to or twelve (12) months following the consummation of a Change in Control, the Company will tender to you the following benefits (collectively, "the Change in Control Severance Benefits") within sixty (60) calendar days of the termination date:
    a. A lump-sum payment equal to six (6) months of your then-current base salary;
    b. A lump-sum payment in the amount of $11,300.00;
    c. Accelerated vesting of any unvested Company stock options such that 100% of your unvested option shares shall vest as of your termination date; and
    d. A lump-sum equal to your target annual bonus, prorated for partial months of service prior to your separation date.

3. **Definitions**. The following definitions apply to this letter agreement:

   a. Change of Control: (i) the consummation of a merger or consolidation of the Company with or into another entity; or (ii) the dissolution, liquidation or winding up of the Company. The foregoing notwithstanding, a merger or consolidation of the Company does not constitute a "Change in Control" if immediately after the merger or consolidation a majority of the voting power of the capital stock of the continuing or surviving entity, or any direct or indirect parent corporation of the continuing or surviving entity, will be owned by the persons who were the Company's stockholders immediately prior to such merger or consolidation in substantially the same proportions as their ownership of the voting power of the Company's capital stock immediately prior to the merger or consolidation.

   b. Cause: (1) acts or omissions constituting gross negligence, recklessness or willful misconduct on your part with respect to your obligations or otherwise relating to Company business; (ii) your material breach of this agreement or the Company's Proprietary Information and Inventions Agreement; (iii) your conviction of, entry of or a plea of nolo contendere to fraud, misappropriation or embezzlement, or any felony or crime of moral turpitude; (iv) your willful neglect of duties as determined in the sole and exclusive discretion of the Company's Chief Executive Officer or Board of Directors; (v) your failure to perform the essential functions of your position, with or without a reasonable accommodation, due to a mental or physical disability; or (vi) your death.

   c. Good Reason: the occurrence of one or more of the following without your express written consent: (i) a reduction in your base salary by more than 10%; (ii) a material diminution of your authority, duties or responsibilities; or (iii) relocation of your principal workplace by more than thirty (30) miles. A condition shall not be considered "Good Reason" unless you give the Company written notice of such condition within ninety (90) days after such condition comes into existence and the Company fails to remedy such condition within thirty (30) days after receiving your written notice.

4. **Contingencies for Receipt of Separation Payment(s)**. Your receipt of the Severance Benefits or the Change in Control Severance Benefits will be contingent upon the following: (a) your return of all Company property in your possession; (b) if applicable, your resignation from your position as a member of the Company's Board of Directors and the Board of Directors of any Company subsidiary; (c) your continued adherence to the terms and conditions of the Proprietary Information and Inventions Agreement between you and the Company, including without limitation the ongoing obligations following the

termination of your employment set forth in that agreement; and (d) your execution and non-revocation of a standard form release of claims against the Company in a form proscribed by the Company.

5. **Tax Matters**.

   a. Withholding. All benefits referred to in this letter agreement will be subject to applicable tax withholding and deductions.

   b. IRC Section 280G Payments. In the event that the Severance Benefits and/or the Change in Control Severance Benefits constitute an "excess parachute payment" under the Sections 280G and 4999 of the Internal Revenue Code of 1986, as amended (the "Code"), the Severance Benefits and/or Change in Control Severance Benefits shall be reduced to the maximum amount that does not trigger the excise tax provisions of the Code unless, in the Company's determination, you would receive greater post-tax payments and benefits in the absence of such reduction.

   c. Section 409A. If the Company determines that you are a "specified employee" under Section 409(a)(2)(B)(i) of the Code as such definition shall apply as of your termination date, then, to the extent that any portion of the Severance Benefits and/or Change in Control Severance Benefits are subject to Section 409A of the Code, those payments shall be tendered to you (or your estate) on the first business day following the earlier of: (i) six (6) months following your separation date; or (ii) the date of your death.

   d. No Tax Advice. Notwithstanding the foregoing, by your signature below you agree and acknowledge that the Company does not have a duty to tender to you tax advice and has no duty to design compensation policies to minimize your tax liabilities.

6. **At-Will Employment**. Your employment with the Company remains at-will, which means that either you or the Company may end your employment at any time, with or without reason, notice, or cause.

7. **Miscellaneous**. This letter agreement expressly supersedes and replaces any prior agreements, representations or understandings, written or oral or express or implied, between you and the Company as to the subject matter herein, including without limitation the Offer Letter dated April 27, 2015 and the Severance Letter dated November 24, 2015. This agreement will be construed and interpreted in accordance with the laws of the State of California. This letter agreement may only be modified or amended in a writing signed by both you and a duly-authorized Company officer or member of the Board of Directors. This agreement will bind the heirs, personal representatives, successors and assigns of both you and the Company, and will inure to the benefit of both you and the Company, and

your/its heirs, successors and assigns. If any provision of this letter agreement is determined to be invalid or unenforceable, in whole or in part, this determination will not affect any other provision of this agreement and the provision in question will be modified to be rendered enforceable.

To signify your acceptance of these terms and conditions, please sign and return a copy of this letter agreement to me on or before March 22, 2016.

Sincerely,

SI-BONE, Inc

/s/ A. Eleftheriadis

Agape Eleftheriadis
Director, Human Resources

ACCEPTED AND AGREED TO:

/s/ Laura A. Francis
Laura A. Francis

Date Signed: 3/16/16

Exhibit 10.12

SI-BONE, INC.

March 1, 2017

Laura Francis
Chief Financial Officer
SI-BONE, Inc.
3055 Olin Avenue, Suite 2200
San Jose, CA 95128

Re: Amendment and Restatement of Letter Agreement

Dear Laura:

Reference is made to that certain Letter Agreement (the "Previous Letter Agreement") dated August 10, 2015 between you and SI-BONE, Inc. (the "Company"). Pursuant to this Amended and Restated Letter Agreement, you are eligible to earn a bonus if the Company completes a Qualified IPO, as more fully described in this letter agreement.

A. Qualified IPO Bonus. If the Company completes a Qualified IPO and you remain an employee of the Company in good standing through the Determination Date, then you will be eligible to receive a bonus of $200,000, which will be paid within sixty (60) days after the Determination Date. Any such payment will be subject to reduction to reflect all applicable federal and state income and employment withholding taxes and other deductions required by law.

B. At Will Employment. Your employment with the Company will continue to be "at will," meaning that either you or the Company may terminate your employment at any time and for any reason, with or without cause.

C. Entire Agreement. This letter agreement constitutes the complete agreement between you and the Company with respect to the matters set forth herein and supersedes any prior agreements, representations or understandings (whether written, oral or implied), including the Previous Letter Agreement, between you and the Company.

D. Source of Payments. The Company will make all payments under this letter agreement from its general assets. The Company's obligations under this letter agreement are unfunded and unsecured, and you have no rights other than those of general creditors.

E. Miscellaneous. All determinations related to this letter agreement will be made by the Company's Board of Directors or a duly authorized committee of the Company's Board of Directors. The determinations of the Company's Board of Directors with regard to this letter agreement will be final, conclusive, and binding on all parties.

F. Definitions. The following terms used in this letter agreement have the meaning set forth below.

"Common Stock" means the Company's common stock.

"Determination Date" means the date that is thirty (30) trading days after an IPO that results in a Qualified IPO.

"IPO" means the consummation of a firm commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, covering the offer and sale by the Company of its equity securities, following which the shares of the Company's Common Stock are publicly held.

"Qualified IPO" means an IPO that the Board of Directors of the Company or the Pricing Committee of the Board of Directors of the Company, in its sole discretion, reasonably determines to be satisfactory.

Please indicate your agreement to these terms by signing and dating this amended and restated letter agreement and returning it to me.

Very truly yours,

SI-BONE, INC.

/s/ Jeffrey Dunn
Member of the Board of Directors

ACCEPTED AND AGREED TO:

/s/ Laura Francis
Laura Francis

3/1/17
Date

SI-BONE, INC.
3055 OLIN AVENUE, SUITE 2200
SAN JOSE, CA 95128

February 7, 2012

Dr. W. Carlton Reckling
[Address intentionally omitted.]

Dear Dr. Reckling:

SI-BONE, Inc. (the "Company") is pleased to offer you employment effective March 5, 2012 on the following terms:

1. Position. Your initial title will be Vice President of Medical Affairs, and you will initially report to me, Jeff Dunn, President and CEO. This is a full time position. While you render services to the Company you will not engage in any other employment, consulting or other business activity that would create a conflict of interest with the Company. The only exceptions to this are 1) as specified in Exhibit D regarding the transition from your current medical practice, and 2) for any general orthopedic activities consulting or business activities that you participate in that do not relate directly to lower back and/or SI joint conditions. By signing this letter agreement, you confirm to the Company that you have no contractual commitments or other legal obligations that would prohibit you from performing your duties for the Company.

2. Cash Compensation. The Company will pay you a base salary at the rate of $225,000 per year, payable in accordance with the Company's standard payroll schedule. This salary will be subject to adjustment pursuant to the Company's employee compensation policies in effect from time to time. Reasonable and customary business expenses, including the IRS mandated rate for business automobile mileage, will be reimbursed to you by the Company. You will also be reimbursed by the Company for all reasonable subscriptions, dues and Continuing Medical Education in order to maintain your current medical certifications. As well the Company will reimburse you for your attainment of an MBA that is mutually agreed upon. In addition, the Company will reimburse you for a insurance "tail" coverage for your past medical practice, upon mutual agreement of the arrangement between you and the Company. The estimate of these non-salary costs are summarized in the attached Exhibit E and reimbursement will be within these 10% of these estimates or the excess must be approved by the Company's Compensation Committee of the Board of Directors.

3. Employee Benefits. As a regular employee of the Company, you will be eligible to participate in a number of Company-sponsored benefits. You will be then be eligible for SI¬Bone, Inc. Medical and Dental Benefits on April 1, 2012. In addition, you will be entitled to paid vacation in accordance with the Company's vacation policy, as in effect from time to time.

4. Proprietary Information and Inventions Agreement. Like all Company employees, you will be required, as a condition of your employment with the Company, to sign the Company's standard Proprietary Information and Inventions Agreement, a copy of which is attached hereto as **Exhibit A**.

5. Employment Relationship. Employment with the Company is for no specific period of time. Your employment with the Company will be "at will," meaning that either you or the Company may terminate your employment at any time and for any reason, with or without cause. Any contrary representations that may have been made to you are superseded by this letter agreement. This is the full and complete agreement between you and the Company on this term. Although your job duties, title, compensation and benefits, as well as the Company's personnel policies and procedures, may change from time to time, the "at will" nature of your employment may only be changed in an express written agreement signed by you and a duly authorized officer of the Company (other than you).

6. Non-Competition. During the term of your employment, and for a period of twelve (12) months after termination of your employment, you shall not (i) endorse, promote, sell, distribute, solicit orders for or otherwise dispose of, directly or indirectly, any products which are similar to or competitive with the products of the Company, (ii) consult with, advise or assist in any way, whether or not for consideration, any person or entity to endorse, promote, sell, distribute, solicit orders for or otherwise dispose of, directly or indirectly, any products which are similar to or competitive with the products of the Company, (iii) induce or attempt to induce any customer or supplier of the Company to reduce the business done by such customer or supplier with the Company and/or (iv) engage in any practice the purpose or result of which is to circumvent the provisions of this covenant not to compete.

7. Taxes. All forms of compensation referred to in this letter agreement are subject to reduction to reflect applicable withholding and payroll taxes and other deductions required by law. You agree that the Company does not have a duty to design its compensation policies in a manner that minimizes your tax liabilities, and you will not make any claim against the Company or its Board of Directors related to tax liabilities arising from your compensation.

8. Indemnification.

a) Indemnification of Expenses. Subject to the provisions of Section 8(b) below, the Company shall indemnify You for Expenses to the fullest extent permitted by law if You were or are or become a party to or witness or other participant in, or are threatened to be made a party to or witness or other participant in, any Claim (whether by reason of or arising in part out of a Covered Event), including all interest, assessments and other charges paid or payable in connection with or in respect of such Expenses.

b) Exceptions. Notwithstanding any other provision of this Agreement, the Company shall not be obligated pursuant to the terms of this Agreement:

1) Excluded Action or Omissions. To indemnify You for Expenses resulting from acts, omissions or transactions for which You are prohibited from receiving indemnification under this letter agreement or applicable law.

2) Claims Initiated by You. To indemnify or make Expense advances to You with respect to Claims initiated or brought voluntarily by You and not by way of defense., counterclaim or cross claim, except (i) with respect to actions or proceedings brought to establish or enforce a right to indemnification under this letter agreement or any other agreement or insurance policy or under the Company's charter documents relating to Claims for Covered Events, (ii) in specific cases if the Board of Directors has approved the initiation or bringing of such Claim, (iii) as otherwise required under Section 145 of the Delaware General Corporation Law (relating to indemnification of officers, directors, employees and agents); and (iv) with respect to actions or proceedings under any insurance policies maintained by the Company to enforce any of the terms thereof, regardless of whether You ultimately are determined to be entitled to such indemnification or insurance recovery, as the case may be.

3) Lack of Good Faith. To indemnify You for any Expenses incurred by You with respect to any action instituted (i) by You to enforce or interpret this letter agreement, if a court having jurisdiction over such action determines that each of the material assertions made by You as a basis for such action was not made in good faith or was frivolous, or (ii) by or in the name of the Company to enforce or interpret this letter agreement, if a court having jurisdiction over such action determines that each of the material defenses asserted by You in such action was made in bad faith or was frivolous.

c) Definitions.

1) "Claim" shall mean with respect to a Covered Event (as defined below): any threatened, pending or completed action, suit, proceeding or alternative dispute resolution mechanism, or any hearing, inquiry or investigation that You in good faith believes might lead to the institution of any such action, suit, proceeding or alternative dispute resolution mechanism, whether civil, criminal, administrative, investigative or other.

2) "Covered Event" shall mean any event or occurrence related to the fact that You are or were an, officer, employee, agent and/or fiduciary of the Company, or any subsidiary of the Company, or is or was serving at the request of the Company as a director, officer, employee, agent and/or fiduciary of another corporation, partnership, joint venture, trust or other enterprise, or by reason of any action or inaction on Your part while serving in such capacity.

3) "Expenses" shall mean any and all expenses (including attorneys' fees and all other costs, expenses and obligations incurred in connection with investigating, defending, being a party to or witness in or participating in (including on appeal), or preparing to defend, to be a party to or witness in or to participate in, any action, suit, proceeding, alternative dispute resolution mechanism, hearing, inquiry or investigation), judgments, fines, penalties and amounts paid in settlement (if such settlement is approved in advance by the Company, which approval shall not be unreasonably withheld, conditioned or delayed), actually and reasonably incurred, of any Claim and any federal, state, local or foreign taxes imposed on You as a result of the actual or deemed receipt of any payments under this letter agreement.

9. Interpretation, Amendment and Enforcement. This letter agreement and Exhibit A constitute the complete agreement between you and the Company, contain all of the terms of

your employment with the Company and supersede any prior agreements, representations or understandings (whether written, oral or implied) between you and the Company. This letter agreement may not be amended or modified, except by an express written agreement signed by both you and a duly authorized officer of the Company. The terms of this letter agreement and the resolution of any disputes OS to the meaning, effect, performance or validity of this letter agreement or arising out of related to or in any way connected with. this letter agreement, your employment with the Company or any other relationship between you and the Company (the -Disputes") will be governed by California law, excluding laws relating to conflicts or choice of law_ You and the Company submit to the exclusive personal jurisdiction of the federal and state courts located in California in connection with any Dispute or any claim related to any Dispute.

*****

We hope that you will accept our offer to join the Company. You may indicate your agreement with these terms and accept this oiler by signing and dating both the enclosed duplicate original of this letter agreement and the enclosed Proprietary information and Inventions Agreement and returning them to me. This offer, if not accepted, will expire at the close of business on 1; February 13, 2012, As required by law, your employment with the Company is contingent upon your providing legal proof of your identity and authorisation to work in the United States, as well as the satisfactory completion of background checks, which you approve of through the acceptance of this offer. Your employment is also contingent upon your starting work with the Company on March 5, 2012.

If you have any questions, please call me at 408-207-0700.

Very truly yours,

SI-BONE

By: */s/ Jeffrey W. Dunn*
Jeffrey W. Dunn
Title: President and Chief Executive Officer

I have read and accept this employment offer

/s/ W. Carlton Reckling
Signature of Employee

Dated: February 14, 2012

Attachments

Exhibit A: Proprietary Information and Inventions Agreement

Exhibit B: California Labor Code Section 2870

Exhibit C: Prior Matter

EXHIBIT D — Transition Plan

It is known and understood by both parties that Dr. Reckling will transition to the Position at SI-BONE from his current medical practice as follows and be paid his base salary at the percentage applicable:

a. Month One: 12 business days out of 20 (60 % of the time for SI-BONE).

b. Month Two: 12 business days out of 20 (60 % of the time for SI-BONE).

c. Month Three and Forward; Full-time with SI-BONE.

Confidential and Proprietary

March 15, 2016

Mr. W. Carlton Reckling, M.D.
[Address intentionally omitted.]

Re: Severance

Dear Carlton:

This letter contains terms and conditions pertaining to separation payments and benefits that SI-BONE, Inc. ("the Company") is offering to you.

1. **Benefits upon Separation from Employment - No Change in Control**. In the event that the Company terminates your employment for any reason other than for Cause (as defined below), the Company will tender to you the following benefits (collectively, the "Severance Benefits") within sixty (60) calendar days of the termination date:

    a. A lump-sum payment equal to three (3) months of your then-current base salary; and

    b. A lump-sum payment in the amount of $5,700.00

2. **Benefits upon Separation from Employment Prior to or Following a Change in Control**. Notwithstanding the foregoing, in the event the Company terminates your employment for any reason other than for Cause or if you resign your employment for Good Reason either three (3) months prior to or twelve (12) months following the consummation of a Change in Control, the Company will tender to you the following benefits (collectively, "the Change in Control Severance Benefits") within sixty (60) calendar days of the termination date:

    a. A lump-sum payment equal to six (6) months of your then-current base salary;

    b. A lump-sum payment in the amount of $11,300.00;

    c. Accelerated vesting of any unvested Company stock options such that 100% of your unvested option shares shall vest as of your termination date; and

    d. A lump-sum equal to your target annual bonus, prorated for partial months of service prior to your separation date.

3. **Definitions**. The fallowing definitions apply to this letter agreement:

    a. Change of Control: (i) the consummation of a merger or consolidation of the Company with or into another entity; or (ii) the dissolution, liquidation or winding up of the Company. The foregoing notwithstanding, a merger or consolidation of the Company does not constitute a "Change in Control" if immediately after the merger or consolidation a majority of the voting power of the capital stock of the continuing or surviving entity, or any direct or indirect parent corporation of the continuing or surviving entity, will be owned by the persons who were the Company's stockholders immediately prior to such merger or consolidation in substantially the same proportions as their ownership of the voting power of the Company's capital stock immediately prior to the merger or consolidation.

b. Cause: (i) acts or omissions constituting gross negligence, recklessness or willful misconduct on your part with respect to your obligations or otherwise relating to Company business; (ii) your material breach of this agreement or the Company's Proprietary Information and Inventions Agreement; (iii) your conviction of, entry of or a plea of *nolo contendere* to fraud, misappropriation or embezzlement, or any felony or crime of moral turpitude; (iv) your willful neglect of duties as determined in the sole and exclusive discretion of the Company's Chief Executive Officer or Board of Directors; [v) your failure to perform the essential functions of your position, with or without a reasonable accommodation, due to a mental or physical disability; or (vi) your death.

c. Good Reason: the occurrence of one or more of the following without your express written consent: (i) a reduction in your base salary by more than 10%; (ii) a material diminution of your authority, duties or responsibilities; or (iii) relocation of your principal workplace by more than thirty (30) miles. A condition shall not be considered ''Good Reason" unless you give the Company written notice of such condition within ninety (90) days after such condition comes into existence and the Company fails to remedy such condition within thirty (30) days after receiving your written notice.

4. **Contingencies for Receipt of Separation Payment(s)**. Your receipt of the Severance Benefits or the Change in Control Severance Benefits will be contingent upon the following: (a) your return of all Company property in your possession; (b) if applicable, your resignation from your position as a member of the Company's Board of Directors and the Board of Directors of any Company subsidiary; (c) your continued adherence to the terms and conditions of the Proprietary Information and Inventions Agreement between you and the Company, including without limitation the ongoing obligations following the termination of your employment set forth in that agreement; and (d) your execution and non-revocation of a standard form release of claims against the Company in a form proscribed by the Company.

5. **Tax Matters**.

a. Withholding. All benefits referred to in this letter agreement will be subject to applicable tax withholding and deductions.

b. IRC Section 280G Payments. In the event that the Severance Benefits and/or the Change in Control Severance Benefits constitute an "excess parachute payment" under the Sections 280G and 4999 of the Internal Revenue Code of 1986, as amended (the "Code"), the Severance Benefits and/or Change in Control Severance Benefits shall be reduced to the maximum amount that does not trigger the excise tax provisions of the Code unless, in the Company's determination, you would receive greater post-tax payments and benefits in the absence of such reduction.

c. Section 409A. If the Company determines that you are a "specified employee" under Section 409(a)(2)(B)(i) of the Code as such definition shall apply as of your termination date, then, to the extent that any portion of the Severance Benefits and/or Change in Control Severance Benefits are subject to Section 409A of the Code, those payments shall be tendered to you (or your estate) on the first business day following the earlier of: (i) six (6) months following your separation date; or (ii) the date of your death.

d. No Tax Advice. Notwithstanding the foregoing, by your signature below you agree and acknowledge that the Company does not have a duty to tender to you tax advice and has no duty to design compensation policies to minimize your tax liabilities.

6. **At-Will Employment**. Your employment with the Company remains at-will, which means that either you or the Company may end your employment at any time, with or without reason, notice, or cause.

7. **Miscellaneous**. This letter agreement expressly supersedes and replaces any prior agreements, representations or understandings, written or oral or express or implied, between you and the Company as to the subject matter herein, including without limitation the Offer Letter dated February 7, 2012, the Severance Letter dated June 28, 2013 and the Severance Letter dated November 24, 2015. This agreement will be construed and interpreted in accordance with the laws of the State of California. This letter agreement may only be modified or amended in a writing signed by both you and a duly-authorized Company officer or member of the Board of Directors. This agreement will bind the heirs, personal representatives, successors and assigns of both you and the Company, and will inure to the benefit of both you and the Company, and your/its heirs, successors and assigns. If any provision of this letter agreement is determined to be invalid or unenforceable, in whole or in part, this determination will not affect any other provision of this agreement and the provision in question will be modified to be rendered enforceable.

To signify your acceptance of these terms and conditions, please sign and return a copy of this letter agreement to me on or before March 22, 2016.

Sincerely,

SI-BONE, Inc.

/s/ Agape Eleftheriadis

Agape Eleftheriadis
Director, Human Resources

ACCEPTED AND AGREED TO:

/s/ W. Carlton Reckling, M.D.
W. Carlton Reckling, M.D.

Date Signed: 4/8/16

SI-BONE, INC.
3055 OLIN AVENUE, SUITE 2200
SAN JOSE, CA 95128

January 18, 2017

Dr. W. Carlton Reckling
[Address intentionally omitted.]

Dear Carlton:

On behalf of SI-BONE, Inc. (the company) it is our pleasure to offer you a promotion effective February 1, 2017 on the following terms:

Position: Your title will be Chief Medical Officer and VP of Medical Affairs and you will continually report to me.

Cash Compensation: The Company will pay you a base semi-monthly salary of $12,500 equivalent to a yearly amount of $300,000 subject to applicable withholdings. SI-BONE paydays are semi-monthly.

Employment Relationship. The remainder of the terms and conditions of your employment with the Company, including without limitation to the at-will nature of your employment, will remain as set forth in the offer letter between you and the Company dated February 7, 2012.

Carlton, we hope that you will accept this offer of promotion to assume this position within the Company. Please indicate your acceptance by signing this document below and retuning a signed copy at your earliest convenience.

If you have any questions, please call me at 408-207-0700.

Very truly yours,

SI-BONE, INC.

By: /s/ Jeffrey W. Dunn
Jeffrey W. Dunn
President, CEO and Chairman

I have read and accept this employment offer:

/s/ W. Dr. W. Carlton Reckling
Signature of Dr. W. Carlton Reckling

Dated: 2/22/2017

SI-BONE, INC.
550 SOUTH WINCHESTER BLVD., SUITE 620
SAN JOSE, CA 95128

December 16, 2010

Mr. Scott Yerby
[Address intentionally omitted.]

Dear Scott:

SI-BONE, Inc. (the "Company") is pleased to offer you employment effective January 17, 2011 on the following terms:

1. **Position**. Your initial title will be Vice President and Chief Technology Officer, and you will initially report to Jeffrey Dunn, President and CEO. This is a full-time position. While you render services to the Company, you will not engage in any other employment, consulting or other business activity (whether fall-time or part-time) that would create a conflict of interest with the Company. By signing this letter agreement, you confirm to the Company that you have no contractual commitments or other legal obligations that would prohibit you from performing your duties for the Company.

2. **Cash Compensation**. The Company will pay you a starting salary at the rate of $180,000 per year, payable in accordance with the Company's standard payroll schedule. This salary will be subject to adjustment pursuant to the Company's employee compensation policies in effect from time to time.

3. **Employee Benefits**. As a regular employee of the Company, you will be eligible to participate in a number of Company-sponsored benefits. You will be eligible for Medical and Dental Benefits on February 1, 2011. In addition, you will be entitled to paid vacation in accordance with the Company's vacation policy, as in effect from time to time.

4. **Stock Options**. Subject to the approval of the Company's Board of Directors or its Compensation Committee, you will be granted an option to purchase 1,166,556 shares of the Company's Common Stock, which currently represents 1.015% of fully diluted shares outstanding. The exercise price per share will be determined by the Board of Directors or the Compensation Committee when the option is granted. The option will be subject to the terms and conditions applicable to options granted under the Company's 2008 Stock Plan (the "Plan"), as described in the Plan and the applicable Stock Option Agreement. You will vest in 25% of the option shares after 12 months of continuous service, and the balance will vest in equal monthly installments over the next 36 months of continuous service, as described in the applicable Stock Option Agreement. In addition, if the Company is subject to a Change in Control (as defined below), before your service with the Company terminates, the Option will vest an additional 50% of the unvested shares at that time.

"Change in Control" means (a) the consummation of a merger or consolidation of the Company with or into another entity or (b) the dissolution, liquidation or winding up of the Company. The foregoing notwithstanding, a merger or consolidation of the Company does not constitute a "Change in Control" if immediately after the merger or consolidation a majority of the voting power of the capital stock of the continuing or surviving entity, or any direct or indirect parent corporation of the continuing or surviving entity, will be owned by the persons who were the Company's stockholders immediately prior to such merger or consolidation in substantially the same proportions as their ownership of the voting power of the Company's capital stock immediately prior to the merger or consolidation.

5. **Proprietary Information and Inventions Agreement**. Like all Company employees, you will be required, as a condition of your employment with the Company, to sign the Company's standard Proprietary Information and Inventions Agreement, a copy of which is attached hereto as **Exhibit A**.

6. **Employment Relationship**. Employment with the Company is for no specific period of time. Your employment with the Company will be "at will," meaning that either you or the Company may terminate your employment at any time and for any reason, with or without cause. Any contrary representations that may have been made to you are superseded by this letter agreement. This is the full and complete agreement between you and the Company on this term. Although your job duties, title, compensation and benefits, as well as the Company's personnel policies and procedures, may change from time to time, the "at will" nature of your employment may only be changed in an express written agreement signed by you and a duly authorized officer of the Company (other than you).

7. **Taxes**. All forms of compensation referred to in this letter agreement are subject to reduction to reflect applicable withholding and payroll taxes and other deductions required by law. You agree that the Company does not have a duty to design its compensation policies in a manner that minimizes your tax liabilities, and you will not make any claim against the Company or its Board of Directors related to tax liabilities arising from your compensation.

8. **Interpretation, Amendment and Enforcement**. This letter agreement and Exhibit A constitute the complete agreement between you and the Company, contain all of the terms of your employment with the Company and supersede any prior agreements, representations or understandings (whether written, oral or implied) between you and the Company. This letter agreement may not be amended or modified, except by an express written agreement signed by both you and a duly authorized officer of the Company. The terms of this letter agreement and the resolution of any disputes as to the meaning, effect, performance or validity of this letter agreement or arising out of, related to, or in any way connected with, this letter agreement, your employment with the Company or any other relationship between you and the Company (the "Disputes") will be governed by California law, excluding laws relating to conflicts or choice of law. You and the Company submit to the exclusive personal jurisdiction of the federal and state courts located in California in connection with any Dispute or any claim related to any Dispute.

* * * * *

We hope that you will accept our offer to join the Company. You may indicate your agreement with these terms and accept this offer by signing and dating both the enclosed duplicate original of this letter agreement and the enclosed Proprietary Information and Inventions Agreement and returning them to me. This offer, if not accepted, will expire at the close of business on December 21, 2010. As required by law, your employment with the Company is contingent upon your providing legal proof of your identity and authorization to work in the United States. Your employment is also contingent upon your starting work with the Company on January 17, 2011.

If you have any questions, please call me at 408-207-0700 x2201.

Very truly yours,

SI-BONE, Inc.

By: /s/ Jeffrey W. Dunn
Jeffrey W. Dunn
Title: President and CEO

I have read and accept this employment offer:

/s/ Scott Yerby
Signature of Employee

Dated: 12-16-10

Attachment
Exhibit A: Proprietary Information and Inventions Agreement
Exhibit B: California Labor Code Section 2870
Exhibit C: Prior Matter

Confidential and Proprietary

March 15, 2016

Mr. Scott Yerby
[Address intentionally omitted.]

Re: Severance

Dear Scott:

This letter contains terms and conditions pertaining to separation payments and benefits that SI-BONE, Inc. ("the Company") is offering to you.

1. **Benefits upon Separation from Employment** - No Change in Control. In the event that the Company terminates your employment for any reason other than for Cause (as defined below), the Company will tender to you the following benefits (collectively, the "Severance Benefits") within sixty (60) calendar days of the termination date:
    a. A lump-sum payment equal to three (3) months of your then-current base salary; and
    b. A lump-sum payment in the amount of $5,700.00
2. **Benefits upon Separation from Employment Prior to or Following a Change in Control**. Notwithstanding the foregoing, in the event the Company terminates your employment for any reason other than for Cause or if you resign your employment for Good Reason either three (3) months prior to or twelve (12) months following the consummation of a Change in Control, the Company will tender to you the following benefits (collectively, "the Change in Control Severance Benefits") within sixty (60) calendar days of the termination date:
    a. A lump-sum payment equal to six (6) months of your then-current base salary;
    b. A lump-sum payment in the amount of $11,300.00;
    c. Accelerated vesting of any unvested Company stock options such that 100% of your unvested option shares shall vest as of your termination date; and
    d. A lump-sum equal to your target annual bonus, prorated for partial months of service prior to your separation date.

3. **Definitions**. The following definitions apply to this letter agreement:

   a. Change of Control: (i) the consummation of a merger or consolidation of the Company with or into another entity; or [ii] the dissolution, liquidation or winding up of the Company. The foregoing notwithstanding, a merger or consolidation of the Company does not constitute a "Change in Control" if immediately after the merger or consolidation a majority of the voting power of the capital stock of the continuing or surviving entity, or any direct or indirect parent corporation of the continuing or surviving entity, will be owned by the persons who were the Company's stockholders immediately prior to such merger or consolidation in substantially the same proportions as their ownership of the voting power of the Company's capital stock immediately prior to the merger or consolidation.

   b. Cause: (i) acts or omissions constituting gross negligence, recklessness or willful misconduct on your part with respect to your obligations or otherwise relating to Company business; (ii) your material breach of this agreement or the Company's Proprietary Information and Inventions Agreement; (iii) your conviction of, entry of or a plea of nolo contendere to fraud, misappropriation or embezzlement, or any felony or crime of moral turpitude; (iv) your willful neglect of duties as determined in the sole and exclusive discretion of the Company's Chief Executive Officer or Board of Directors; [v) your failure to perform the essential functions of your position, with or without a reasonable accommodation, due to a mental or physical disability; or (vi) your death.

   c. Good Reason: the occurrence of one or more of the following without your express written consent: (i) a reduction in your base salary by more than 10%; (ii) a material diminution of your authority, duties or responsibilities; or (iii) relocation of your principal workplace by more than thirty (30) miles. A condition shall not be considered ''Good Reason" unless you give the Company written notice of such condition within ninety (90) days after such condition comes into existence and the Company fails to remedy such condition within thirty (30) days after receiving your written notice.

4. **Contingencies for Receipt of Separation Payment(s)**. Your receipt of the Severance Benefits or the Change in Control Severance Benefits will be contingent upon the following: (a) your return of all Company property in your possession; (b) if applicable, your resignation from your position as a member of the Company's Board of Directors and the Board of Directors of any Company subsidiary; (c) your continued adherence to the terms and conditions of the Proprietary information and Inventions Agreement between you and the Company, including without limitation the ongoing obligations following the

termination of your employment set forth in that agreement; and (d) your execution and non-revocation of a standard form release of claims against the Company in a form proscribed by the Company.

5. **Tax Matters**.

   a. Withholding. All benefits referred to in this letter agreement will be subject to applicable tax withholding and deductions.

   b. IRC Section 280G Payments. In the event that the Severance Benefits and/or the Change in Control Severance Benefits constitute an "excess parachute payment" under the Sections 280G and 4999 of the Internal Revenue Code of 1986, as amended (the "Code"), the Severance Benefits and/or Change in Control Severance Benefits shall be reduced to the maximum amount that does not trigger the excise tax provisions of the Code unless, in the Company's determination, you would receive greater post-tax payments and benefits in the absence of such reduction.

   c. Section 409A. If the Company determines that you are a "specified employee" under Section 409(a)(2)(B)(i) of the Code as such definition shall apply as of your termination date, then, to the extent that any portion of the Severance Benefits and/or Change in Control Severance Benefits are subject to Section 409A of the Code, those payments shall be tendered to you (or your estate) on the first business day following the earlier of: (0 six (6) months following your separation date; or (ii) the date of your death.

   d. No Tax Advice. Notwithstanding the foregoing, by your signature below you agree and acknowledge that the Company does not have a duty to tender to you tax advice and has no duty to design compensation policies to minimize your tax liabilities.

6. **At-Will Employment**. Your employment with the Company remains at-will, which means that either you or the Company may end your employment at any time, with or without reason, notice, or cause.

7. **Miscellaneous**. This letter agreement expressly supersedes and replaces any prior agreements, representations or understandings, written or oral or express or implied, between you and the Company as to the subject matter herein, including without limitation the Offer Letter dated December 16, 2010, the Severance Letter dated June 28, 2013 and the Severance Letter dated November 24, 2015. This agreement will be construed and interpreted in accordance with the laws of the State of California. This letter agreement may only be modified or amended in a writing signed by both you and a duly-authorized Company officer or member of the Board of Directors. This agreement will bind the heirs, personal

representatives, successors and assigns of both you and the Company, and will inure to the benefit of both you and the Company, and your/its heirs, successors and assigns. If any provision of this letter agreement is determined to be invalid or unenforceable, in whole or in part, this determination will not affect any other provision of this agreement and the provision in question will be modified to be rendered enforceable.

To signify your acceptance of these terms and conditions, please sign and return a copy of this letter agreement to me on or before March 22, 2016.

Sincerely,

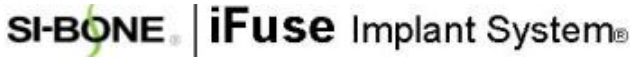
SI-BONE, Inc.

/s/ Agape Eleftheriadis
Agape Eleftheriadis
Director, Human Resources

ACCEPTED AND AGREED TO:

/s/ Scott Yerby
Scott Yerby

Date Signed: March 16, 2016



SI-BONE, INC.
3055 OLIN AVENUE, SUITE 2200
SAN JOSE, CA 95128

June 19, 2016

Mr. Anthony J. Recupero
[Address intentionally omitted.]

RE: Employment Offer

Dear Tony:

We are pleased to offer you the position of Chief Commercial Officer with SI-BONE, Inc. ("**SI-BONE**" or "the **Company**") We believe that you will bring great value to SI-BONE and that your knowledge, skills and experience will be an asset to the Company and will offer a mutually beneficial opportunity. We are excited about you joining our team and hope that you will accept our offer.

Position. Your title will be Chief Commercial Officer. This is a full time, exempt position. You will report directly to Jeffrey Dunn, President and CEO. We anticipate your start date will be July 5, 2016 or a mutually agreed upon date.

Cash Compensation. The Company will pay you a semi-monthly base salary of $13,125, equivalent to a yearly base of $315,000, subject to applicable withholdings. This salary will be subject to adjustment in the Company's sole discretion. SI-BONE paydays are semi-monthly. Based on your role, you will be also be eligible under the Company's 2016 Bonus Plan ("the **Bonus Plan**") to receive up to an additional 40% of your base salary based on the achievement of certain corporate and individual goals. This Bonus Plan is available to you in your first full quarter with the Company and beyond. In the event of a dispute between the terms and conditions of this offer letter and the Bonus Plan, the Bonus Plan shall control.

Stock Options. You are also eligible to participate in the Company's 2008 Stock Option Plan. Subject to the approval of the Company's Board of Directors, you will be granted an option to purchase a number of shares of the Company's Common Stock equal to 0.7% of the Company's fully diluted capitalization as of your first day of employment, with an exercise price equal to the fair market value of our Common Stock on the date of grant as determined by the Board of Directors. Subject in each case to your continuous service to the Company, you will vest in 25% of the shares on the one-year anniversary of your Start Date, and the balance of the shares will vest In equal monthly installments over the following 36 months. The option will be subject to the terms and conditions set forth in our 2008 Stock Option Plan and the applicable Stock Option Agreement.

Employee Benefits. As a regular employee of the Company, you will be eligible to participate in a number of Company-sponsored benefits. Participation in the Company's benefits programs are generally effective on the first day of the month following your date of hire, subject to the terms and conditions of specific benefit plan documentation. Human Resources will give you detailed benefits information during your new hire orientation.

Proprietary Information and Inventions Agreement. Your employment is contingent upon your execution of the Company's Proprietary information and Inventions Agreement ("PIIA"), which is enclosed and should be signed and returned with this letter.

Employment Relationship. Please keep in mind that your employment with SI-BONE is at-will. This means that you are free to terminate your employment with SI-BONE at any time, with or without cause or advance notice. Likewise, SI-BONE has the right to terminate your employment, or otherwise discipline, transfer or demote you at any time, with or without cause, and with or without notice. This is the full and complete agreement between you and the Company on this term, and any contrary representations that may have been made to you are superseded by this letter. No one other than the Company CEO can alter this at-will arrangement and any such agreement must be in writing and must be signed by you and the CEO.

Severance. Notwithstanding the foregoing, you will be eligible for the severance benefits set forth on Exhibit A to this Agreement, subject to the terms and conditions of that Exhibit A, which is hereby incorporated by reference.

Tax Matters. All forms of compensation referred to in this letter are subject to reduction to reflect applicable withholding and payroll taxes and other deductions required by law. You are encouraged to obtain your own tax advice regarding your compensation from the Company.

Miscellaneous. While you render services to the Company, you will not engage in any other employment, consulting or other business activity (whether full-time or part-time) that would create a conflict of interest with the Company. By signing this letter, you confirm to the Company that you have no contractual commitments or other legal obligations that would prohibit you from performing your duties for the Company.

Complete Agreement. This letter, inclusive of Exhibit A and the PlIA, supersedes and replaces any prior agreements, representations or understandings (whether written, oral, implied or otherwise) between you and the Company and constitutes the complete agreement between you and the Company regarding the subject matter set forth herein. This letter may not be amended or modified except by an express written agreement signed by both you and a duly-authorized officer of the Company.

Employment Eligibility Verification. Pursuant to the immigration and Nationality Act, the Company is required to verify the identity and employment eligibility of all new hires. In order to comply with this legal obligation, we can only hire those individuals who are eligible to work in the United States. As a condition of employment, you will be required to provide documents verifying your identity and your eligibility to work in the United States, and to complete an Employment Eligibility Verification form I-9 within three (3) business days from your start date. This employment offer is also contingent upon your starting work with the Company on July 1, 2016 and the completion of an application for employment, satisfactory references and background checks.

To accept this offer, please sign in the space provided below and in the space set forth on Exhibit A and return the signed letter, Exhibit and PIIA to me by close of business on June 22, 2016.

We look forward to you joining the Company and hope that you find your employment with the Company enjoyable and professionally rewarding.

If you have any questions, please call me at 408-718-9027.

Very truly yours,
SI-BONE, Inc.

By: /s/ Laura Francis
Laura Francis
Title: CFO

I have read and accept this employment offer.

Anthony J. Recupero
Printed Name of Employee

/s/ Anthony J. Recupero
Signature of Employee

June 20, 2016
Date

Attachments:

Exhibit A
Proprietary Information and Inventions Agreement (PIIA)

Exhibit A

This exhibit contains terms and conditions pertaining to separation payments and benefits that SI-BONE, Inc. ("the Company") is offering to you.

1. **Benefits upon Separation from Employment No Change in Control**. In the event that the Company terminates your employment for any reason other than for Cause (as defined below), the Company will tender to you the following benefits (collectively, the 'Severance Benefits") within sixty (60) calendar days of the termination date:

    a. A lump-sum payment equal to three (3) months of your then-current base salary; and

    b. A lump-sum payment in the amount of $4,000.00

2. **Benefits upon Separation from Employment Prior to or Following a Change in Control**. Notwithstanding the foregoing. in the event the Company terminates your employment for any reason other than Cause or if you resign your employment for Good Reason either three (3) months prior to or twelve (12) months following the consummation of a Change in Control, the Company will tender to you the following benefits (collectively, "the Change in Control Severance Benefits") within sixty (60) calendar days of the termination date:

    a. A lump-sum equal to six (6) months of your then-current base salary;

    b. A lump-sum payment in the amount of $8,000.00;

    c. Accelerated vesting of any unvested Company stock options such that 100% of your unvested option shares shall vest as of your termination date; and

    d. A lump-sum equal to your target annual bonus, prorated for partial months of service prior to your separation date.

3. **Definitions**. The following definitions apply to this Exhibit A:

    a. Change of Control: (i) the consummation of a merger or consolidation of the Company with or into another entity; or (ii) the dissolution, liquidation or winding up of the Company. The foregoing notwithstanding, a merger or consolidation of the Company does not constitute a 'Change in Control" if immediately after the merger or consolidation a majority of the voting power of the capital stock of the continuing or surviving entity, or any direct or indirect parent corporation of the continuing or surviving entity, will be owned by the persons who were the Company's stockholders immediately prior to such merger or consolidation in substantially the same proportions as their ownership of the voting power of the Company's capital stock immediately prior to the merger or consolidation.

    b. Cause: (i) acts or omissions constituting gross negligence, recklessness or willful misconduct on your part with respect to your obligations or otherwise relating to Company business; (ii) your material breach of this agreement or the Company's Proprietary Information and inventions Agreement; (iii) your conviction of, entry of or a plea of *nolo contendere* to fraud, misappropriation or embezzlement, or any felony or crime of moral turpitude; (iv) your willful neglect of duties as determined in the sole and exclusive discretion of the Company's Chief Executive Officer or Board of Directors; (v) your failure to perform the essential functions of your position, with or without a reasonable accommodation, due to a mental or. physical disability; or (vi) your death.

    c. Good Reason: the occurrence of one or more of the following without your express written consent: (i) a reduction in your base salary by more than 10%; (ii) a material diminution of your authority, duties or responsibilities; or (iii) relocation of your principal workplace by more than thirty (30) miles. A condition shall not be considered "Good Reason" unless you give the Company written notice of such condition within ninety (90) days after such condition comes into existence and the Company fails to remedy such condition within thirty (30) days after receiving your written notice.

4. **Contingencies for Receipt of Separation Payment(s)**. Your receipt of the Severance Benefits or the Change in Control Severance Benefits will be contingent upon the following: (a) your return of all Company property in your possession; (b) if applicable, your resignation from your position as a member of the Company's Board of Directors and the Board of Directors of any Company subsidiary; (c) your continued adherence to the terms and conditions of the Proprietary information and

Inventions Agreement between you and the Company, including without limitation the ongoing obligations following the termination of your employment set forth in that agreement; and (d) your execution and non-revocation of a standard form release of claims against the Company in a form proscribed by the Company.

5. **Tax Matters**

   a. Withholding. All benefits referred to in this Exhibit will be subject to applicable tax withholding and deductions.

   b. IRC Section 280G Payments. In the event that the Severance Benefits and/or the Change in Control Severance Benefits constitute an "excess parachute payment" under the Sections 280G and 4999 of the Internal Revenue Code of 1986, as amended (the "Code"), the Severance Benefits and/or Change in Control Severance Benefits shall be reduced to the maximum amount that does not trigger the excise tax provisions of the Code unless, in the Company's determination, you would receive greater post-tax payments and benefits in the absence of such reduction.

   c. Section 409A. If the Company determines that you are a "specified employee" under Section 409(a)(2)(B)(i) of the Code as such definition shall apply as of your termination date, then, to the extent that any portion of the Severance Benefits and/or Change in Control Severance Benefits are subject to Section 409A of the Code, those payments shall be tendered to you (or your estate) on the first business day following the earlier of (i) six (6) months following your separation date; or (ii) the date of your death.

   d. No Tax Advice. Notwithstanding the foregoing, by your signature below you agree and acknowledge that the Company does not have a duty to tender to you tax advice and has no duty to design compensation policies to minimize your tax liabilities.

6. **At-Will Employment**. Your employment with the Company remains at-will, which means that either you or the Company. may end your employment at any time, with or without reason, notice, or cause.

7. **Miscellaneous**. This Exhibit A expressly supersedes and replaces any prior agreements, representations or understandings, written or oral or express or implied, between you and the Company as to the subject matter herein. This Exhibit A may only be modified or amended in a writing signed by both you and a duly-authorized Company officer or member of the Board of Directors. This Exhibit A will bind the heirs, personal representatives, successors and assigns of both you and the Company, and will inure to the benefit of both you and the Company, and your/its heirs, successors and assigns. if any provision of this Exhibit A is determined to be invalid or unenforceable, in whole or in part, this determination will not affect any other provision of this agreement and the provision in question will be modified to be rendered enforceable.

To signify your acceptance of these terms and conditions, please sign and return a copy of this Exhibit A to me on or before June 22, 2016.

Very truly yours,
SI-BONE, Inc.

By: /s/ Laura Francis
Laura Francis
Title: CFO

ACCEPTED AND AGREED TO:

/s/ Anthony J. Recupero
Anthony J. Recupero

Date Signed: June 20, 2016

Exhibit 10.19

SI-BONE, INC.

AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

JUNE 2, 2016

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AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT

THIS AMENDED AND RESTATED INVESTORS' RIGHTS AGREEMENT (the "Agreement") is made as of the 2nd day of June, 2016, by and among SI-BONE, Inc., a Delaware corporation (the "Company") and the investors listed on Schedule A hereto, each of which is herein referred to as an "Investor".

RECITALS

WHEREAS, the Company and certain of the Investors (the "Prior Investors") have previously entered into that certain Amended and Restated Investors' Rights Agreement dated as of April 21, 2014 (the "Prior Rights Agreement"), pursuant to which the Company granted the Prior Investors certain rights;

WHEREAS, the Prior Agreement may be amended, and any provision therein waived, with the consent of the Company and the holders of at least a majority of the voting power of the Company's Series 1, 2, 3, 4, 5 and 6 Preferred Stock (collectively with the Series 7 Preferred Stock, the "Preferred Stock") outstanding (voting together as a single class and on an as-converted to common basis);

WHEREAS, the Company and certain of the Investors (the "Series 7 Investors") are parties to that certain Series 7 Preferred Stock Purchase Agreement of even date herewith (the "Series 7 Purchase Agreement") by and among the Company and certain of the Investors, pursuant to which the Series 7 Investors are purchasing shares of the Company's Series 7 Preferred Stock (the "Series 7 Preferred Stock"); and

WHEREAS, in order to induce the Series 7 Investors to purchase Series 7 Preferred Stock pursuant to the Series 7 Purchase Agreement, the Prior Investors and the Company hereby agree that this Agreement shall govern certain rights of the Investors as they relate to the shares Common Stock of the Company (the "Common Stock") issued or issuable to them, including registration rights, financial information rights, rights of first refusal, and certain other matters as set forth herein.

NOW, THEREFORE, in consideration of the mutual promises and covenants set forth herein, the Prior Investors and the Company hereby agree that the Prior Agreement shall be superseded and replaced in its entirety by this Agreement, and the parties hereto further agree as follows:

1. Registration Rights. The Company covenants and agrees as follows:

1.1 Definitions. For purposes of this Agreement:

(a) The term "Act" means the Securities Act of 1933, as amended.

(b) The term "Affiliate" means, with respect to any specified person, any other person who or which, directly or indirectly, controls, is controlled by, or is under common control with such specified person, including, without limitation, any general partner,

officer, director or manager of such person and any venture capital fund now or hereafter existing that is controlled by one or more general partners or managing members of, or is under common investment management with, such person.

(c) The term "Form S-3" means such form under the Act as in effect on the date hereof or any registration form under the Act subsequently adopted by the SEC that permits inclusion or incorporation of substantial information by reference to other documents filed by the Company with the SEC.

(d) The term "Free Writing Prospectus" means a free-writing prospectus, as defined in Rule 405.

(e) The term "Holder" means any person owning or having the right to acquire Registrable Securities or any assignee thereof in accordance with Section 1.11 hereof.

(f) The term "Initial Offering" means the Company's first firm commitment underwritten public offering of its Common Stock under the Act.

(g) The term "1934 Act" means the Securities Exchange Act of 1934, as amended.

(h) The terms "register," "registered," and "registration" refer to a registration effected by preparing and filing a registration statement or similar document in compliance with the Act, and the declaration or ordering of effectiveness of such registration statement or document.

(i) The term "Registrable Securities" means (i) the Common Stock issuable or issued upon conversion of the Preferred Stock and (ii) any Common Stock of the Company issued as (or issuable upon the conversion or exercise of any warrant, right or other security that is issued as) a dividend or other distribution with respect to, or in exchange for, or in replacement of, the shares referenced in (i) above, excluding in all cases, however, any Registrable Securities sold by a person in a transaction in which his rights under this Section 1 are not assigned. In addition, the number of shares of Registrable Securities outstanding shall equal the aggregate of the number of shares of Common Stock outstanding that are, and the number of shares of Common Stock issuable pursuant to then exercisable or convertible securities that are, Registrable Securities.

(j) The term "Restated Certificate" shall mean the Company's Restated Certificate of Incorporation, as amended and/or restated from time to time.

(k) The term "Rule 144" shall mean Rule 144 under the Act.

(l) The term "Rule 144(b)(1)(i)" shall mean subsection (b)(1)(i) of Rule 144 under the Act as it applies to persons who have held shares for more than one (1) year.

(m) The term "Rule 405" shall mean Rule 405 under the Act.

(n) The term "SEC" shall mean the Securities and Exchange Commission.

1.2 Request for Registration.

(a) Subject to the conditions of this Section 1.2, if the Company shall receive at any time after the earlier of (i) five (5) years after the date of this Agreement or (ii) one hundred eighty (180) days after the effective date of the Initial Offering, a written request from the Holders of forty percent (40%) or more of the Registrable Securities then outstanding (for purposes of this Section 1.2, the "Initiating Holders") that the Company file a registration statement under the Act covering the registration of at least twenty percent (20%) of the then outstanding Registrable Securities (or a lesser percentage provided that the anticipated aggregate offering price is at least $10,000,000 (net of any underwriters' discounts or commissions)), then the Company shall, within twenty (20) days of the receipt thereof, give written notice of such request to all Holders, and subject to the limitations of this Section 1.2, use best efforts to effect, as soon as practicable, the registration under the Act of all Registrable Securities that the Holders request to be registered in a written request received by the Company within twenty (20) days of the mailing of the Company's notice pursuant to this Section 1.2(a).

(b) If the Initiating Holders intend to distribute the Registrable Securities covered by their request by means of an underwriting, they shall so advise the Company as a part of their request made pursuant to this Section 1.2, and the Company shall include such information in the written notice referred to in Section 1.2(a). In such event the right of any Holder to include its Registrable Securities in such registration shall be conditioned upon such Holder's participation in such underwriting and the inclusion of such Holder's Registrable Securities in the underwriting (unless otherwise mutually agreed by a majority in interest of the Initiating Holders and such Holder) to the extent provided herein. All Holders proposing to distribute their securities through such underwriting shall enter into an underwriting agreement in customary form with the underwriter or underwriters selected for such underwriting by those Initiating Holders holding a majority of the Registrable Securities held by all Initiating Holders (which underwriter or underwriters shall be reasonably acceptable to the Company). Notwithstanding any other provision of this Section 1.2, if the underwriter advises the Company that marketing factors require a limitation on the number of securities underwritten (including Registrable Securities), then the Company shall so advise all Holders of Registrable Securities that would otherwise be underwritten pursuant hereto, and the number of shares that may be included in the underwriting shall be allocated to the Holders of such Registrable Securities pro rata based on the number of Registrable Securities held by all such Holders (including the Initiating Holders). In no event shall any Registrable Securities be excluded from such underwriting unless all other securities are first excluded. Any Registrable Securities excluded or withdrawn from such underwriting shall be withdrawn from the registration.

(c) Notwithstanding the foregoing, the Company shall not be required to effect a registration pursuant to this Section 1.2:

(i) in any particular jurisdiction in which the Company would be required to execute a general consent to service of process in effecting such registration, unless the Company is already subject to service in such jurisdiction and except as may be required under the Act; or

(ii) after the Company has effected two (2) registration pursuant to this Section 1.2, and such registrations have been declared or ordered effective; or

(iii) during the period starting with the date sixty (60) days prior to the Company's good faith estimate of the date of the filing of and ending on a date one hundred eighty (180) days following the effective date of a Company initiated registration subject to Section 1.3 below, provided that the Company is actively employing in good faith all commercially reasonable efforts to cause such registration statement to become effective; or

(iv) if the Initiating Holders propose to dispose of Registrable Securities that may be registered on Form S 3 pursuant to Section 1.4 hereof;

(v) if the Company shall furnish to Holders requesting a registration statement pursuant to this Section 1.2 a certificate signed by the Company's Chief Executive Officer or Chairman of the Board of Directors stating that in the good faith judgment of the Board of Directors of the Company, it would be seriously detrimental to the Company and its stockholders for such registration statement to be effected at such time, in which event the Company shall have the right to defer such filing for a period of not more than ninety (90) days after receipt of the request of the Initiating Holders, provided that such right shall be exercised by the Company not more than once in any twelve (12) month period and provided further that the Company shall not register any securities for the account of itself or any other stockholder during such ninety (90) day period (other than a registration relating solely to the sale of securities of participants in a Company stock plan, a registration relating to a corporate reorganization or transaction under Rule 145 of the Act, a registration on any form that does not include substantially the same information as would be required to be included in a registration statement covering the sale of the Registrable Securities, or a registration in which the only Common Stock being registered is Common Stock issuable upon conversion of debt securities that are also being registered); or

(vi) if the Company, within thirty (30) days of receipt of the request for registration pursuant to this Section 1.2, gives notice to the requesting Holders of its bona fide intention to effect the filing of a registration statement with the SEC within ninety (90) days of receipt of such request (other than a registration effected solely to qualify an employee benefit plan or to effect a business combination pursuant to Rule 145), provided that the Company is actively employing in good faith all commercially reasonable efforts to cause such registration statement to become effective.

1.3 Company Registration.

(a) If (but without any obligation to do so) the Company proposes to register (including for this purpose a registration effected by the Company for stockholders other than the Holders) any of its stock or other securities under the Act in connection with the public offering of such securities (other than (i) a registration relating to a demand pursuant to Section 1.2 or (ii) a registration relating solely to the sale of securities of participants in a Company stock

plan, a registration relating to a corporate reorganization or transaction under Rule 145 of the Act, a registration on any form that does not include substantially the same information as would be required to be included in a registration statement covering the sale of the Registrable Securities, or a registration in which the only Common Stock being registered is Common Stock issuable upon conversion of debt securities that are also being registered), the Company shall, at such time, promptly give each Holder written notice of such registration. In such event, if the Company intends to distribute the securities covered by the registration by means of an underwriting, the right of any Holder to include its Registrable Securities in such registration shall be conditioned upon such Holder's participation in such underwriting and the inclusion of such Holder's Registrable Securities in the underwriting (unless otherwise mutually agreed by a majority in interest of the Initiating Holders and such Holder) to the extent provided herein. All Holders proposing to distribute their securities through such underwriting shall enter into an underwriting agreement in customary form with the underwriter or underwriters selected for such underwriting by the Company (which underwriter or underwriters shall be reasonably acceptable to those Initiating Holders holding a majority of the Registrable Securities held by all Initiating Holders). Upon the written request of each Holder given within twenty (20) days after mailing of such notice by the Company in accordance with Section 3.5, the Company shall, subject to the provisions of Section 1.3(c), use all commercially reasonable efforts to cause to be registered under the Act all of the Registrable Securities that each such Holder requests to be registered.

(b) Right to Terminate Registration. The Company shall have the right to terminate or withdraw any registration initiated by it under this Section 1.3 prior to the effectiveness of such registration whether or not any Holder has elected to include securities in such registration. The expenses of such withdrawn registration shall be borne by the Company in accordance with Section 1.7 hereof.

(c) Underwriting Requirements. In connection with any offering involving an underwriting of shares of the Company's capital stock, the Company shall not be required under this Section 1.3 to include any of the Holders' securities in such underwriting unless they accept the terms of the underwriting as agreed upon between the Company and the underwriters selected by the Company (or by other persons entitled to select the underwriters) and enter into an underwriting agreement in customary form with such underwriters, and then only in such quantity as the underwriters determine in their sole discretion will not jeopardize the success of the offering by the Company. If the total amount of securities, including Registrable Securities, requested by stockholders to be included in such offering exceeds the amount of securities sold other than by the Company that the underwriters determine in their sole discretion is compatible with the success of the offering, then the Company shall be required to include in the offering only that number of such securities, including Registrable Securities, that the underwriters determine in their sole discretion will not jeopardize the success of the offering. In no event shall any Registrable Securities be excluded from such offering unless all other stockholders' securities have been first excluded. In the event that the underwriters determine that less than all of the Registrable Securities requested to be registered can be included in such offering, then the Registrable Securities that are included in such offering shall be apportioned pro rata among the selling Holders based on the number of Registrable Securities held by all selling Holders or in such other proportions as shall mutually be agreed to by all such selling Holders. Notwithstanding the foregoing, in no event shall the amount of securities of the selling Holders included in the offering be reduced below fifteen percent (15%) of the total amount of

securities included in such offering, unless such offering is the Initial Offering, in which case the selling Holders may be excluded if the underwriters make the determination described above and no other stockholder's securities (other than the Initiating Holders) are included in such offering. For purposes of the preceding sentence concerning apportionment, for any selling stockholder that is a Holder of Registrable Securities and that is a venture capital fund, partnership or corporation, the affiliated venture capital funds, partners, retired partners and stockholders of such Holder, or the estates and family members of any such partners and retired partners and any trusts for the benefit of any of the foregoing persons shall be deemed to be a single "selling Holder," and any pro rata reduction with respect to such "selling Holder" shall be based upon the aggregate amount of Registrable Securities owned by all such related entities and individuals.

1.4 Form S-3 Registration. After the Initial Offering, the Company shall use its commercially reasonable efforts to qualify for registration on Form S-3 or any comparable or successor form or forms. In case the Company shall receive from the Holders of at least 5,000,000 Registrable Securities (for purposes of this Section 1.4, the "S-3 Initiating Holders") a written request or requests that the Company effect a registration on Form S-3 and any related qualification or compliance with respect to all or a part of the Registrable Securities owned by such Holder or Holders, the Company shall:

(a) promptly give written notice of the proposed registration, and any related qualification or compliance, to all other Holders; and

(b) use all commercially reasonable efforts to effect, as soon as practicable, such registration and all such qualifications and compliances as may be so requested and as would permit or facilitate the sale and distribution of all or such portion of such Holders' Registrable Securities as are specified in such request, together with all or such portion of the Registrable Securities of any other Holders joining in such request as are specified in a written request given within fifteen (15) days after receipt of such written notice from the Company, provided, however, that the Company shall not be obligated to effect any such registration, qualification or compliance, pursuant to this Section 1.4:

(i) if Form S-3 is not available for such offering by the Holders;

(ii) if the Holders, together with the holders of any other securities of the Company entitled to inclusion in such registration, propose to sell Registrable Securities and such other securities (if any) at an aggregate price to the public (net of any underwriters' discounts or commissions) of less than $3,000,000;

(iii) if the Company shall furnish to all Holders requesting a registration statement pursuant to this Section 1.4 a certificate signed by the Company's Chief Executive Officer or Chairman of the Board of Directors stating that in the good faith judgment of the Board of Directors of the Company, it would be seriously detrimental to the Company and its stockholders for such registration statement to be effected at such time, in which event the Company shall have the right to defer such filing for a period of not more than ninety (90) days after receipt of the request of the S-3 Initiating Holders, provided that such right shall be exercised by the Company not more than once in any twelve (12) month period and provided

further that the Company shall not register any securities for the account of itself or any other stockholder during such ninety (90) day period (other than a registration relating solely to the sale of securities of participants in a Company stock plan, a registration relating to a corporate reorganization or transaction under Rule 145 of the Act, a registration on any form that does not include substantially the same information as would be required to be included in a registration statement covering the sale of the Registrable Securities, or a registration in which the only Common Stock being registered is Common Stock issuable upon conversion of debt securities that are also being registered);

(iv) if the Company has, within the twelve (12) month period preceding the date of such request, already effected one (1) registration on Form S-3 pursuant to this Section 1.4;

(v) in any particular jurisdiction in which the Company would be required to qualify to do business or to execute a general consent to service of process in effecting such registration, qualification or compliance;

(vi) if the Company, within thirty (30) days of receipt of the request of such S-3 Initiating Holders, gives notice of its bona fide intention to effect the filing of a registration statement with the SEC within ninety (90) days of receipt of such request (other than a registration effected solely to qualify an employee benefit plan or to effect a business combination pursuant to Rule 145), provided that the Company is actively employing in good faith all commercially reasonable efforts to cause such registration statement to become effective; or

(vii) during the period starting with the date thirty (30) days prior to the Company's good faith estimate of the date of the filing of and ending on a date ninety (90) days following the effective date of a Company-initiated registration subject to Section 1.3 above, provided that the Company is actively employing in good faith all commercially reasonable efforts to cause such registration statement to become effective.

(c) If the S-3 Initiating Holders intend to distribute the Registrable Securities covered by their request by means of an underwriting, they shall so advise the Company as a part of their request made pursuant to this Section 1.4 and the Company shall include such information in the written notice referred to in Section 1.4(a). The provisions of Section 1.2(b) shall be applicable to such request (with the substitution of Section 1.4 for references to Section 1.2).

(d) Subject to the foregoing, the Company shall file a registration statement covering the Registrable Securities and other securities so requested to be registered as soon as practicable after receipt of the request or requests of the S-3 Initiating Holders.

1.5 Obligations of the Company. Whenever required under this Section 1 to effect the registration of any Registrable Securities, the Company shall, as expeditiously as reasonably possible:

(a) prepare and file with the SEC a registration statement with respect to such Registrable Securities and use all commercially reasonable efforts to cause such

registration statement to become effective, and, upon the request of the Holders of a majority of the Registrable Securities registered thereunder, keep such registration statement effective for a period of up to one hundred eighty (180) days or, if earlier, until the distribution contemplated in the Registration Statement has been completed;

(b) prepare and file with the SEC such amendments and supplements to such registration statement and the prospectus used in connection with such registration statement as may be necessary to comply with the provisions of the Act with respect to the disposition of all securities covered by such registration statement;

(c) furnish to the Holders such number of copies of a prospectus, including a preliminary prospectus and any Free Writing Prospectus, in conformity with the requirements of the Act, and such other documents as they may reasonably request in order to facilitate the disposition of Registrable Securities owned by them;

(d) use all commercially reasonable efforts to register and qualify the securities covered by such registration statement under such other securities or Blue Sky laws of such jurisdictions as shall be reasonably requested by the Holders, provided that the Company shall not be required in connection therewith or as a condition thereto to qualify to do business or to file a general consent to service of process in any such states or jurisdictions;

(e) in the event of any underwritten public offering, enter into and perform its obligations under an underwriting agreement, in usual and customary form, with the managing underwriter of such offering;

(f) notify each Holder of Registrable Securities covered by such registration statement at any time when a prospectus or Free Writing Prospectus (to the extent prepared by or on behalf of the Company) relating thereto is required to be delivered under the Act of the happening of any event as a result of which the prospectus included in such registration statement, as then in effect, includes an untrue statement of a material fact or omits to state a material fact required to be stated therein or necessary to make the statements therein not misleading in the light of the circumstances then existing, and, at the request of any such Holder, the Company will, as soon as reasonably practicable, file and furnish to all such Holders a supplement or amendment to such prospectus or Free Writing Prospectus (to the extent prepared by or on behalf of the Company) so that, as thereafter delivered to the purchasers of such Registrable Securities, such prospectus will not contain an untrue statement of a material fact or omit to state any fact necessary to make the statements therein not misleading in light of the circumstances under which they were made;

(g) cause all such Registrable Securities registered pursuant to this Section 1 to be listed on a national exchange or trading system and on each securities exchange and trading system on which similar securities issued by the Company are then listed;

(h) provide a transfer agent and registrar for all Registrable Securities registered pursuant to this Agreement and a CUSIP number for all such Registrable Securities, in each case not later than the effective date of such registration;

(i) use all reasonable efforts to prevent the issuance of any stop order ("Stop Order") suspending the effectiveness of a registration statement, or of any order suspending or preventing the use of any related prospectus or suspending the qualification of any securities included in such registration statement for sale in any jurisdiction, and, in the event of such issuance, the Company shall immediately notify the Holders of Registrable Securities covered by such registration statement of the receipt by the Company of such notification and shall use all reasonable efforts promptly to obtain the withdrawal of such order, and, in the event of the withdrawal of such order, the Company shall immediately notify such Holders thereof;

(j) use its commercially reasonable efforts to obtain one or more "cold comfort" letters, dated the effective date of the related registration statement (and, if such registration includes an underwritten public offering, dated the date of the closing under the underwriting agreement), signed by the Company's independent public accountants in customary form and covering such matters of the type customarily covered by "cold comfort" letters as the Holders holding a majority of the Registrable Securities being sold reasonably request;

(k) use its commercially reasonable efforts to provide, at the request of any Holder participating in such registration, on the date such securities are delivered to the underwriters for sale pursuant to such registration or, if such securities are not being sold through underwriters, on the date the registration statement with respect to such securities becomes effective, a legal opinion of the Company's outside counsel, dated the effective date of such registration statement (and, if such registration includes an underwritten public offering, dated the date of the closing under the underwriting agreement), with respect to the registration statement, each amendment and supplement thereto, the prospectus included therein (including the preliminary prospectus) and such other documents relating thereto in customary form and covering such matters of the type customarily covered by legal opinions of such nature;

(l) to the extent the Company is a well-known seasoned issuer (as defined in Rule 405) (a "WKSI") at the time any request for registration is submitted to the Company in accordance with Section 1.4, (i) if so requested, file an automatic shelf registration statement (as defined in Rule 405) (an "Automatic Shelf Registration Statement") to effect such registration, and (ii) remain a WKSI (and not become an ineligible issuer (as defined in Rule 405)) during the period during which such Automatic Shelf Registration Statement is required to remain effective in accordance with this Agreement;

(m) if at any time when the Company is required to re-evaluate its WKSI status for purposes of an Automatic Shelf Registration Statement used to effect a request for registration in accordance with Section 1.4 (i) the Company determines that it is not a WKSI, (ii) the registration statement is required to be kept effective in accordance with this Agreement and (iii) the registration rights of the applicable Holders have not terminated, promptly amend the registration statement onto a form the Company is then eligible to use or file a new registration statement on such form, and keep such registration statement effective in accordance with the requirements otherwise applicable under this Agreement; and

(n) if (A) a registration made pursuant to a shelf registration statement is required to be kept effective in accordance with this Agreement after the third anniversary of the initial effective date of the shelf registration statement and (B) the registration rights of the

applicable Holders have not terminated, file a new registration statement with respect to any unsold Registrable Securities subject to the original request for registration prior to the end of the three (3) year period after the initial effective date of the shelf registration statement, and keep such registration statement effective in accordance with the requirements otherwise applicable under this Agreement.

Notwithstanding the provisions of this Section 1, the Company shall be entitled to postpone or suspend, for a reasonable period of time, not to exceed ninety (90) days in any one (1) year period, the filing, effectiveness or use of, or trading under, any registration statement if the Company shall determine that any such filing or the sale of any securities pursuant to such registration statement would in the good faith judgment of the Board of Directors of the Company:

(i) materially impede, delay or interfere with any material pending or proposed financing, acquisition, corporate reorganization or other similar transaction involving the Company for which the Board of Directors of the Company has authorized negotiations;

(ii) materially adversely impair the consummation of any pending or proposed material offering or sale of any class of securities by the Company; or

(iii) require disclosure of material nonpublic information that, if disclosed at such time, would be materially harmful to the interests of the Company and its stockholders; provided, however, that during any such period all executive officers and directors of the Company are also prohibited from selling securities of the Company (or any security of any of the Company's subsidiaries or affiliates).

In the event of the suspension of effectiveness of any registration statement pursuant to this Section 1.5, the applicable time period during which such registration statement is to remain effective shall be extended by that number of days equal to the number of days the effectiveness of such registration statement was suspended.

1.6 Information from Holder. It shall be a condition precedent to the obligations of the Company to take any action pursuant to this Section 1 with respect to the Registrable Securities of any selling Holder that such Holder shall furnish to the Company such information regarding itself, the Registrable Securities held by it, and the intended method of disposition of such securities as shall be reasonably required to effect the registration of such Holder's Registrable Securities.

1.7 Expenses of Registration. All expenses other than underwriting discounts and commissions incurred in connection with registrations filings or qualifications of (i) up to two (2) registrations pursuant to Section 1.2, (ii) all registrations pursuant to Section 1.3 and (ii) up to four (4) registrations pursuant to Section 1.4, including, without limitation, all registration, filing and qualification fees, printers' and accounting fees, fees and disbursements of counsel for the Company and the reasonable fees and disbursements of one counsel for the selling Holders shall be borne by the Company. Notwithstanding the foregoing, the Company shall not be required to pay for any expenses of any registration proceeding begun pursuant to Sections 1.2

or 1.4 if the registration request is subsequently withdrawn at the request of the Holders of a majority of the Registrable Securities to be registered (in which case all participating Holders shall bear such expenses pro rata based upon the number of Registrable Securities that were to be included in the withdrawn registration), unless, in the case of a registration requested under Section 1.2, the Holders of a majority of the Registrable Securities agree to forfeit their right to one demand registration pursuant to Section 1.2 and provided, however, that if at the time of such withdrawal, the Holders have learned of a material adverse change in the condition, business or prospects of the Company from that known to the Holders at the time of their request and have withdrawn the request with reasonable promptness following disclosure by the Company of such material adverse change, then the Holders shall not be required to pay any of such expenses and shall retain their rights pursuant to Section 1.4.

1.8 Delay of Registration. No Holder shall have any right to obtain or seek an injunction restraining or otherwise delaying any such registration as the result of any controversy that might arise with respect to the interpretation or implementation of this Section 1.

1.9 Indemnification. In the event any Registrable Securities are included in a registration statement under this Section 1:

(a) To the extent permitted by law, the Company will indemnify and hold harmless each Holder, the partners, members, officers, directors and stockholders of each Holder, legal counsel and accountants for each Holder, any underwriter (as defined in the Act) for such Holder and each person, if any, who controls such Holder or underwriter within the meaning of the Act or the 1934 Act, against any losses, claims, damages or liabilities (joint or several) to which they may become subject under the Act, the 1934 Act, any state securities laws or any rule or regulation promulgated under the Act, insofar as such losses, claims, damages, or liabilities (or actions in respect thereof) arise out of or are based upon any of the following statements, omissions or violations (collectively a "Violation"): (i) any untrue statement or alleged untrue statement of a material fact contained in such registration statement, including any preliminary prospectus, final prospectus, or Free Writing Prospectus contained therein or any amendments or supplements thereto, any issuer information (as defined in Rule 433 of the Act) filed or required to be filed pursuant to Rule 433(d) under the Act or any other document incident to such registration prepared by or on behalf of the Company or used or referred to by the Company, (ii) the omission or alleged omission to state in such registration statement a material fact required to be stated therein, or necessary to make the statements therein not misleading or (iii) any violation or alleged violation by the Company of the Act, the 1934 Act, any state securities laws or any rule or regulation promulgated under the Act, the 1934 Act or any state securities laws, and the Company will reimburse each such Holder, underwriter, controlling person or other aforementioned person for any legal or other expenses reasonably incurred by them in connection with investigating or defending any such loss, claim, damage, liability or action as such expenses are incurred; provided, however, that the indemnity agreement contained in this subsection l.8(a) shall not apply to amounts paid in settlement of any such loss, claim, damage, liability or action if such settlement is effected without the consent of the Company (which consent shall not be unreasonably withheld), nor shall the Company be liable in any such case for any such loss, claim, damage, liability or action to the extent that it arises out of or is based upon a Violation that occurs in reliance upon and in conformity with written information furnished expressly for use in connection with such registration by any such Holder, underwriter, controlling person or other aforementioned person.

(b) To the extent permitted by law, each selling Holder, severally and not jointly, will indemnify and hold harmless the Company, each of its directors, each of its officers who has signed the registration statement, each person, if any, who controls the Company within the meaning of the Act, legal counsel and accountants for the Company, any underwriter, any other Holder selling securities in such registration statement and any controlling person of any such underwriter or other Holder, against any losses, claims, damages or liabilities (joint or several) to which any of the foregoing persons may become subject, under the Act, the 1934 Act, any state securities laws or any rule or regulation promulgated under the Act, the 1934 Act or any state securities laws, insofar as such losses, claims, damages or liabilities (or actions in respect thereto) arise out of or are based upon any Violation, in each case to the extent (and only to the extent) that such Violation occurs in reliance upon and in conformity with written information furnished by such Holder expressly for use in connection with such registration; and each such Holder will reimburse any person intended to be indemnified pursuant to this subsection l.8(b) for any legal or other expenses reasonably incurred by such person in connection with investigating or defending any such loss, claim, damage, liability or action as such expenses are incurred; provided, however, that the indemnity agreement contained in this subsection l.8(b) shall not apply to amounts paid in settlement of any such loss, claim, damage, liability or action if such settlement is effected without the consent of the Holder (which consent shall not be unreasonably withheld), and provided that in no event shall any indemnity under this subsection l.8(b) exceed the gross proceeds from the offering received by such Holder.

(c) Promptly after receipt by an indemnified party under this Section 1.8 of notice of the commencement of any action (including any governmental action) for which a party may be entitled to indemnification, such indemnified party will, if a claim in respect thereof is to be made against any indemnifying party under this Section 1.8, deliver to the indemnifying party a written notice of the commencement thereof and the indemnifying party shall have the right to participate in and, to the extent the indemnifying party so desires, jointly with any other indemnifying party similarly noticed, to assume the defense thereof with counsel mutually satisfactory to the parties; provided, however, that an indemnified party (together with all other indemnified parties that may be represented without conflict by one counsel) shall have the right to retain one (1) separate counsel, with the fees and expenses to be paid by the indemnifying party, if representation of such indemnified party by the counsel retained by the indemnifying party would be inappropriate due to actual or potential differing interests between such indemnified party and any other party represented by such counsel in such proceeding. The failure to deliver written notice to the indemnifying party within a reasonable time of the commencement of any such action, if prejudicial to its ability to defend such action, shall relieve such indemnifying party of any liability to the indemnified party under this Section 1.8 to the extent of such prejudice, but the omission to so deliver written notice to the indemnifying party will not relieve it of any liability that it may have to any indemnified party otherwise than under this Section 1.8.

(d) If the indemnification provided for in this Section 1.8 is held by a court of competent jurisdiction to be unavailable to an indemnified party with respect to any loss, liability, claim, damage or expense referred to herein, then the indemnifying party, in lieu of

indemnifying such indemnified party hereunder, shall contribute to the amount paid or payable by such indemnified party as a result of such loss, liability, claim, damage or expense in such proportion as is appropriate to reflect the relative fault of the indemnifying party on the one hand and the indemnified party on the other hand in connection with the statements or omissions that resulted in such loss, liability, claim, damage or expense, as well as any other relevant equitable considerations; provided, however, that (i) no contribution by any Holder, when combined with any amounts paid by such Holder pursuant to Section 1.8(b), shall exceed the gross proceeds from the offering received by such Holder and (ii) no person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Act) will be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation; and provided further that in no event shall a Holder's liability pursuant to this Section 1.8(d), when combined with the amounts paid or payable by such Holder pursuant to Section 1.8(b), exceed the proceeds from the offering received by such Holder (net of any expenses paid by such Holder). The relative fault of the indemnifying party and the indemnified party shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the indemnifying party or by the indemnified party and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission.

(e) Notwithstanding the foregoing, to the extent that the provisions on indemnification and contribution contained in the underwriting agreement entered into in connection with the underwritten public offering are in conflict with the foregoing provisions, the provisions in the underwriting agreement shall control.

(f) The obligations of the Company and Holders under this Section 1.8 shall survive the completion of any offering of Registrable Securities in a registration statement under this Section 1 and otherwise.

1.10 Reports Under the 1934 Act. With a view to making available to the Holders the benefits of Rule 144 and any other rule or regulation of the SEC that may at any time permit a Holder to sell securities of the Company to the public without registration or pursuant to a registration on Form S-3, the Company agrees to:

(a) make and keep public information available, as those terms are understood and defined in Rule 144, at all times after the effective date of the Initial Offering;

(b) file with the SEC in a timely manner all reports and other documents required of the Company under the Act and the 1934 Act; and

(c) furnish to any Holder, so long as the Holder owns any Registrable Securities, forthwith upon request (i) a written statement by the Company that it has complied with the reporting requirements of Rule 144 (at any time after ninety (90) days after the effective date of the first registration statement filed by the Company), the Act and the 1934 Act (at any time after it has become subject to such reporting requirements), or that it qualifies as a registrant whose securities may be resold pursuant to Form S-3 (at any time after it so qualifies), (ii) a copy of the most recent annual or quarterly report of the Company and such other reports and documents so filed by the Company and (iii) such other information as may be reasonably requested to avail any Holder of any rule or regulation of the SEC that permits the selling of any such securities without registration or pursuant to such form.

1.11 Assignment of Registration Rights. The rights to cause the Company to register Registrable Securities pursuant to this Section 1 may be assigned (but only with all related obligations) by a Holder to a transferee or assignee of such securities that (a) is an Affiliate, subsidiary, parent, partner, limited partner, retired partner or stockholder of a Holder, (b) is a Holder's family member or trust for the benefit of an individual Holder, or (c) after such assignment or transfer, holds at least one million (1,000,000) shares of Registrable Securities (appropriately adjusted for any stock split, dividend, combination or other recapitalization), provided: (i) the Company is, within a reasonable time after such transfer, furnished with written notice of the name and address of such transferee or assignee and the securities with respect to which such registration rights are being assigned; (ii) such transferee or assignee agrees in writing to be bound by and subject to the terms and conditions of this Agreement, including, without limitation, the provisions of Section 1.12 below; and (iii) such assignment shall be effective only if immediately following such transfer the further disposition of such securities by the transferee or assignee is restricted under the Act.

1.12 Limitations on Subsequent Registration Rights. From and after the date of this Agreement, the Company shall not, without the prior written consent of the Holders holding a majority of the voting power (as determined in accordance with Section IV(B)(5)(a) of the Restated Certificate) represented by the Registrable Securities then held by all Holders (voting together as a single class and on an as-converted basis), enter into any agreement with any holder or prospective holder of any securities of the Company that would allow such holder or prospective holder (a) any registration rights the terms of which are equal to or more favorable than the registration rights granted to Holders hereunder or (b) to demand registration of their securities.

1.13 "Market Stand-Off" Agreement.

(a) Each Holder hereby agrees that it will not, without the prior written consent of the managing underwriter, during the period commencing on the date of the final prospectus relating to the Company's Initial Offering and ending on the date specified by the Company and the managing underwriter (such period not to exceed one hundred eighty (l80) days) (i) lend, offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock (whether such shares or any such securities are then owned by the Holder or are thereafter acquired) held immediately prior to the effectiveness of the Registration Statement for such offering, or (ii) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the Common Stock, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or other securities, in cash or otherwise. The foregoing provisions of this Section 1.13 shall apply only to the Company's initial offering of equity securities, shall not apply to the sale of any shares to an underwriter pursuant to an underwriting agreement, and shall only be applicable to the Holders if all officers, directors and greater than one percent (1%) stockholders of the Company enter into

similar agreements. The underwriters in connection with the Company's Initial Offering are intended third-party beneficiaries of this Section 1.13 and shall have the right, power and authority to enforce the provisions hereof as though they were a party hereto. Each Holder further agrees to execute such agreements as may be reasonably requested by the underwriters in the Company's Initial Offering that are consistent with this Section 1.13 or that are necessary to give further effect thereto. Any discretionary waiver or termination of the restrictions of any or all of such agreements by the Company or the underwriters shall apply to all Holders subject to such agreements pro rata based on the number of shares subject to such agreements.

In order to enforce the foregoing covenant, the Company may impose stop transfer instructions with respect to the Registrable Securities of each Holder (and the shares or securities of every other person subject to the foregoing restriction) until the end of such period. Notwithstanding the foregoing, in the event the Company is not an "emerging growth company" as defined in Section 101 of the Jumpstart Our Business Startups Act of 2012, and, if (i) during the last seventeen (17) days of the one hundred eighty (180)-day restricted period, the Company issues an earnings release or material news or a material event relating to the Company occurs; or (ii) prior to the expiration of the one hundred eighty (180)-day restricted period, the Company announces that it will release earnings results during the sixteen (16)-day period beginning on the last day of the one hundred eighty (180)-day period, the restrictions imposed by this Section 1.13 shall continue to apply until the expiration of the eighteen (18)-day period beginning on the issuance of the earnings release or the occurrence of the material news or material event.

(b) Each Holder agrees that a legend reading substantially as follows shall be placed on all certificates representing all Registrable Securities of each Holder (and the shares or securities of every other person subject to the restriction contained in this Section 1.13):

> THE SECURITIES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO A LOCK-UP PERIOD AFTER THE EFFECTIVE DATE OF THE ISSUER'S REGISTRATION STATEMENT FILED UNDER THE ACT, AS AMENDED, AS SET FORTH IN AN AGREEMENT BETWEEN THE COMPANY AND THE ORIGINAL HOLDER OF THESE SECURITIES, A COPY OF WHICH MAY BE OBTAINED AT THE ISSUER'S PRINCIPAL OFFICE. SUCH LOCK-UP PERIOD IS BINDING ON TRANSFEREES OF THESE SHARES.

1.14 Termination of Registration Rights. No Holder shall be entitled to exercise any right provided for in this Section 1 (a) after four (4) years following the consummation of the Initial Offering, (b) as to any Holder, such earlier time after the Initial Offering at which such Holder (i) can sell all shares held by it in compliance with Rule 144(b)(1)(i) or (ii) holds one percent (1%) or less of the Company's outstanding Common Stock and all Registrable Securities held by such Holder (together with any Affiliate of the Holder with whom such Holder must aggregate its sales under Rule 144) can be sold in any three (3) month period without registration in compliance with Rule 144 or (c) after the consummation of a Liquidation Event, as that term is defined in the Restated Certificate.

2. Covenants of the Company.

2.1 Delivery of Financial Statements. The Company shall, upon request, deliver to each Investor (or transferee of an Investor) that holds at least 4,000,000 shares of Registrable Securities (appropriately adjusted for any stock split, dividend, combination or other recapitalization) (a "Major Investor"):

(a) as soon as practicable, but in any event within ninety (90) days after the end of each fiscal year of the Company, an income statement for such fiscal year, a balance sheet of the Company and statement of stockholders' equity as of the end of such year, and a statement of cash flows for such year, such year-end financial reports to be in reasonable detail, prepared in accordance with generally accepted accounting principles ("GAAP") consistently applied and setting forth in each case in comparative form the figures for the previous fiscal year, all in reasonable detail, and audited and certified by independent public accountants of nationally recognized standing selected by the Company;

(b) as soon as practicable, but in any event within forty-five (45) days after the end of each of the first three (3) quarters of each fiscal year of the Company, an unaudited income statement, statement of cash flows for such fiscal quarter and an unaudited balance sheet as of the end of such fiscal quarter, all prepared in accordance with GAAP (except that such financial statements may (i) be subject to normal year-end audit adjustments and (ii) not contain all notes thereto that may be required in accordance with GAAP);

(c) within thirty (30) days of the end of each month, an unaudited income statement and statement of cash flows for such month, and an unaudited balance sheet as of the end of such month, all prepared in accordance with GAAP (except that such financial statements may (i) be subject to normal year-end audit adjustments and (ii) not contain all notes thereto that may be required in accordance with GAAP) and with a comparison to plan;

(d) as soon as practicable, but in any event prior to the end of each fiscal year, a budget and business plan for the next fiscal year, prepared on a monthly basis, including balance sheets, income statements and statements of cash flows for such months and, as soon as prepared, any other budgets or revised budgets prepared by the Company; and

(e) as soon as practicable but in any event within thirty (30) days after the end of each fiscal year of the Company, a statement showing the number of shares of each class and series of capital stock and securities convertible into or exercisable for shares of capital stock outstanding at the end of the period, the Common Stock issuable upon conversion or exercise of any outstanding securities convertible or exercisable for Common Stock and the exchange ratio or exercise price applicable thereto, and the number of shares of issued stock options and stock options not yet issued but reserved for issuance, if any, all in sufficient detail as to permit the recipient to calculate their respective percentage equity ownership in the Company.

2.2 Inspection. The Company shall permit each Major Investor, at such Major Investor's expense, to visit and inspect the Company's properties, to examine its books of account and records and to discuss the Company's affairs, finances and accounts with its officers, all at such reasonable times as may be requested by the Major Investor; provided, however, that the Company shall not be obligated pursuant to this Section 2.2 to provide access

to any information that it reasonably considers to be a trade secret or similar confidential information until the Major Investor signs a confidentiality agreement in a form reasonably acceptable to the Company.

2.3 Termination of Information and Inspection Covenants. The covenants set forth in Sections 2.1 and 2.2 shall terminate and be of no further force or effect upon the earlier to occur of (i) the consummation of a Qualified Public Offering (as defined in the Restated Certificate) or (ii) the consummation of a Liquidation Event, (as defined in Restated Certificate).

2.4 Right of First Offer. Subject to the terms and conditions specified in this Section 2.4, the Company hereby grants to each Major Investor a right of first offer with respect to future sales by the Company of its Shares (as hereinafter defined). For purposes of this Section 2.4, the term "Major Investor" includes any general partners and affiliates of a Major Investor. A Major Investor shall be entitled to apportion the right of first offer hereby granted it among itself and its partners and Affiliates in such proportions as it deems appropriate.

Each time the Company proposes to offer any shares of, or securities convertible into or exchangeable or exercisable for any shares of, its capital stock (including, without limitation, any unit of debt or equity securities) ("Shares"), the Company shall first make an offering of such Shares to each Major Investor in accordance with the following provisions:

(a) The Company shall deliver a notice in accordance with Section 3.5 ("Notice") to the Investors stating (i) its bona fide intention to offer such Shares, (ii) the number of such Shares to be offered and (iii) the price and terms upon which it proposes to offer such Shares.

(b) By written notification received by the Company within twenty (20) calendar days after the giving of Notice, each Major Investor may elect to purchase, at the price and on the terms specified in the Notice, up to that portion of such Shares that equals the proportion that the number of shares of Common Stock issued and held, or issuable upon conversion of Preferred Stock then held, by such Investor bears to the total number of shares of Common Stock of the Company then outstanding (assuming full conversion and exercise of all convertible and exercisable securities then outstanding). The Company shall promptly, in writing, inform each Major Investor that elects to purchase all the shares available to it (a "Fully-Exercising Major Investor") of any other Major Investor's failure to do likewise. During the ten (10) day period commencing after such information is given, each Fully-Exercising Major Investor may elect to purchase that portion of the Shares for which Major Investors were entitled to subscribe, but which were not subscribed for by the Major Investors, that is equal to the proportion that the number of shares of Common Stock held by such Fully-Exercising Major Investor (assuming full conversion and exercise of all convertible and exercisable securities then outstanding) bears to the number of shares of Common Stock held by all Fully-Exercising Major Investors (assuming full conversion and exercise of all convertible and exercisable securities then outstanding).

(c) If all Shares that Major Investors are entitled to obtain pursuant to subsection 2.4(b) are not elected to be obtained as provided in subsection 2.4(b)

hereof, the Company may, during the ninety (90) day period following the expiration of the period provided in subsection 2.4(b) hereof, offer the remaining unsubscribed portion of such Shares to any person or persons at a price not less than that, and upon terms no more favorable to the offeree than those, specified in the Notice. If the Company does not enter into an agreement for the sale of the Shares within such period, or if such agreement is not consummated within sixty (60) days of the execution thereof, the right provided hereunder shall be deemed to be revived and such Shares shall not be offered unless first reoffered to the Major Investors in accordance herewith.

(d) The right of first offer in this Section 2.4 shall not be applicable to (i) the issuance or sale of shares of Common Stock (or options therefor) to employees, directors, consultants and other service providers for the primary purpose of soliciting or retaining their services pursuant to plans or agreements approved by the Company's Board of Directors (which approval shall include the affirmative vote of the Series 4 Director, Series 5 Director, Series 6 Director or Series 7 Director (each as defined in that certain Amended and Restated Voting Agreement, by and between the Company and certain stockholders, dated as of the date hereof, collectively, the "Preferred Directors"); (ii) the issuance of securities pursuant to a bona fide, firmly underwritten public offering of shares of Common Stock registered under the Act, (iii) the issuance of securities pursuant to the conversion or exercise of convertible or exercisable securities outstanding as of the date hereof, (iv) the issuance of securities in connection with a bona fide business acquisition of or by the Company, whether by merger, consolidation, sale of assets, sale or exchange of stock or otherwise, approved by the Company's Board of Directors (which approval shall include the vote of a Preferred Director), (v) the issuance and sale of Series 7 Preferred Stock pursuant to the Series 7 Purchase Agreement, (vi) the issuance of stock, warrants or other securities or rights to persons or entities with which the Company has business relationships, provided such issuances are primarily for non-equity financing purposes (which approval shall include the affirmative vote of a Preferred Director), or (vii) the issuance of securities to non-Affiliates that are specifically deemed not to be subject to the right of first offer in this Section 2.4 by the written consent or affirmative vote of the Major Investors holding greater than fifty percent (50%) of the Registrable Securities then held by all Major Investors. In addition to the foregoing, the right of first offer in this Section 2.4 shall not be applicable with respect to any Investor in any subsequent offering of Shares if (i) at the time of such offering, the Investor is not an "accredited investor," as that term is then defined in Rule 501(a) of the Act and (ii) such offering of Shares is otherwise being offered only to accredited investors.

(e) The rights provided in this Section 2.4 may not be assigned or transferred by any Major Investor; provided, however, that a Major Investor that is a venture capital fund may assign or transfer such rights to its Affiliates.

(f) The covenants set forth in this Section 2.4 shall terminate and be of no further force or effect upon the consummation of (i) a Qualified Public Offering or (ii) a Liquidation Event.

2.5 D&O Insurance. The Company shall have in place at all times at least $5,000,000 in directors and officers insurance policies or an amount approved by the Board of Directors, including a majority of the Preferred Directors.

2.6 Proprietary Information and Inventions Agreements. The Company shall require all employees and consultants with access to confidential information to execute and deliver a Proprietary Information and Inventions Agreement in substantially the form approved by the Company's Board of Directors.

2.7 Employee Agreements. Unless approved by the Board of Directors of the Company, all future employees of the Company who shall purchase, or receive options to purchase, shares of Common Stock following the date hereof shall be required to execute stock purchase or option agreements providing for (a) vesting of shares over a four (4) year period with the first twenty five percent (25%) of such shares vesting following twelve (12) months of continued employment or services, and the remaining shares vesting in equal monthly installments over the following thirty six (36) months thereafter and (b) a one hundred and eighty (180)-day lockup period (plus an additional period of up to eighteen (18) days) in connection with the Company's initial public offering; provided, however, that all future equity issuances to current employees of the Company may vest in equal monthly installments over a forty eight (48) month period; provided further, however, that all future equity issuances to current employees of the Company that have not provided twelve (12) months of continued employment or services to the Company shall provide for vesting of shares over a four (4) year period with the first twenty five percent (25%) of such shares following twelve (12) months of continued employment or services. The Company shall retain a right of first refusal on transfers until the Company's initial public offering and the right to repurchase unvested shares at cost. Notwithstanding the foregoing, any future grants of Common Stock equivalents to Jeffrey Dunn, Leonard Rudolf or Mark Reiley (collectively, the "Founders") shall provide that all of such unvested Common Stock equivalents held by a Founder shall vest immediately upon a change of control transaction where the stockholders of the Company immediately prior to the consummation of such transaction do not own 50% of the shares of capital stock of the surviving entity, provided that the Founder agrees to work for the acquirer or the surviving entity to facilitate an integration of the Company into the acquirer or surviving entity for a period not to exceed six (6) months unless otherwise agreed to by the Founder, the Company and the acquirer or surviving entity.

2.8 Preservation of Qualified Small Business Stock Status. The Company shall use commercially reasonable efforts to not take, or fail to take, any action which would cause the Preferred Stock (or Common Stock issuable upon conversion of Preferred Stock (the "IOC Common")) to fail to qualify as "qualified small business stock" within the meaning of Sections 1045 and 1202 of the Code and Sections 18152.5 and 18038.5 of the California Revenue and Taxation Code; provided that, notwithstanding the foregoing, the Company shall not be obligated to take any action, or refrain from any action, which the Board of Directors, including at least one Preferred Director, approves after taking into consideration the relevant "qualified small business stock" issues. In the event that the Company is or becomes aware that the Preferred Stock and/or IOC Common will or may fail to qualify as "qualified small business stock" within the meaning of Sections 1045 and 1202 of the Code or Sections 18152.5 and 18038.5 of the California Revenue and Taxation Code, the Company will promptly notify the holders of the Preferred Stock and/or IOC Common and will take such action as may be reasonably requested by such holders to avoid any loss of benefit attributable to such change.

2.9 Board Expenses. The Company shall reimburse the nonemployee directors for all reasonable out-of-pocket expenses incurred in connection with attending meetings of the Board of Directors.

2.10 Board Committees. The Series 7 Director (as defined in that certain Amended and Restated Voting Agreement, by and between the Company and certain stockholders, dated as of the date hereof) shall be entitled in such person's discretion to be a member of any Board of Directors committee.

2.11 Termination of Certain Covenants. The covenants set forth in Sections 2.5, 2.6, 2.7, 2.8, 2.9 and 2.10 shall terminate and be of no further force or effect upon the consummation of (i) a Qualified Public Offering or (ii) a Liquidation Event.

3. Miscellaneous.

3.1 Successors and Assigns. Except as otherwise provided herein, the terms and conditions of this Agreement shall inure to the benefit of and be binding upon the respective successors and assigns of the parties (including transferees of any shares of securities). Nothing in this Agreement, express or implied, is intended to confer upon any party other than the parties hereto or their respective successors and assigns any rights, remedies, obligations or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement.

3.2 Governing Law. This Agreement shall be governed by and construed under the laws of the State of Delaware as applied to agreements among Delaware residents entered into and to be performed entirely within Delaware.

3.3 Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

3.4 Titles and Subtitles. The titles and subtitles used in this Agreement are used for convenience only and are not to be considered in construing or interpreting this Agreement.

3.5 Notices. All notices and other communications given or made pursuant hereto shall be in writing and shall be deemed effectively given: (i) upon personal delivery to the party to be notified, (ii) when sent by confirmed electronic mail or facsimile if sent during normal business hours of the recipient; if not, then on the next business day, (iii) five (5) days after having been sent by registered or certified mail, return receipt requested, postage prepaid, or (iv) one (1) business day after deposit with a nationally recognized overnight courier, specifying next day delivery, with written verification of receipt and (ii) for persons located outside the United States, two (2) business days after deposit with an internationally recognized overnight courier, with written verification of receipt. All communications shall be sent to the respective parties at the addresses set forth on the signature pages attached hereto (or at such other addresses as shall be specified by notice given in accordance with this Section 3.5).

3.6 Expenses. If any action at law or in equity is necessary to enforce or interpret the terms of this Agreement, the prevailing party shall be entitled to reasonable attorneys' fees, costs and necessary disbursements in addition to any other relief to which such party may be entitled.

3.7 Entire Agreement; Amendments and Waivers. This Agreement (including the Exhibits hereto, if any) constitutes the full and entire understanding and agreement among the parties with regard to the subjects hereof and thereof. Any term of this Agreement (other than Section 2.1, Section 2.2, Section 2.3, Section 2.4 and 3.10) may be amended and the observance of any term of this Agreement may be waived (either generally or in a particular instance and either retroactively or prospectively) only with the written consent of the Company and the holders of at least a majority of the voting power (as determined in accordance with Section IV(B)(5)(a) of the Restated Certificate) of Preferred Stock outstanding (voting together as a single class and on an as-converted to common basis). The provisions of Section 2.1, Section 2.2, Section 2.3 and Section 2.4 may be amended or waived (either generally or in a particular instance and either retroactively or prospectively) only with the written consent of the Company and the holders of at least a majority of the voting power (as determined in accordance with Section IV(B)(5)(a) of the Restated Certificate) of Preferred Stock outstanding that is held by all of the Major Investors (voting together as a single class and on an as-converted to common basis). The provisions of Section 3.10 may be amended or waived (either generally or in a particular instance and either retroactively or prospectively) only with the written consent of Novo A/S. Notwithstanding the foregoing, this Agreement may not be amended or terminated and the observance of any term hereof may not be waived with respect to any Major Investor without the written consent of such Major Investor, unless such amendment, termination, or waiver applies to all Major Investors in the same fashion (it being agreed that (i) a waiver of the provisions of Section 2.4 with respect to a particular transaction shall be deemed to apply to all Major Investors in the same fashion if such waiver does so by its terms, notwithstanding the fact that certain Major Investors may nonetheless, by agreement with the Company, purchase securities in such transaction and (ii) any amendment of the definition of Major Investor which would result in any Major Investor losing its status as a Major Investor shall require the consent of such adversely impacted Major Investor). Any amendment or waiver effected in accordance with this paragraph shall be binding upon each holder of any securities, each future holder of all such securities, and the Company. Notwithstanding this Section 3.7, no consent shall be necessary to add holders of the Company's Preferred Stock as signatories to this Agreement and to update Schedule A accordingly.

3.8 Severability. If one or more provisions of this Agreement are held to be unenforceable under applicable law, such provision(s) shall be excluded from this Agreement and the balance of the Agreement shall be interpreted as if such provision(s) were so excluded and shall be enforceable in accordance with its terms.

3.9 Aggregation of Stock. All securities held or acquired by affiliated entities (including affiliated venture capital funds) or persons shall be aggregated together for the purpose of determining the availability of any rights under this Agreement.

3.10 Limitation of Liability; Freedom to Operate Affiliates. The total 3.10 liability, in the aggregate, of any of Novo A/S and its respective officers, directors, employees and agents, for any and all monetary claims, losses, costs or damages, including attorneys' and accountants' fees and expenses and costs of any nature whatsoever or claims or

expenses resulting from or in any way related to this Agreement from any cause or causes shall be several and not joint with the other Stockholders and shall not exceed the aggregate purchase price paid to the Company by Novo A/S for securities of the Company, under the Series 7 Purchase Agreement or any other contract. It is intended that this limitation apply to any and all monetary liabilities or causes of action however alleged or arising, unless otherwise prohibited by law; provided, however, that this Section 3.10 shall in no way limit the Company's right to equitable relief, including injunctive relief and specific performance from Novo A/S. Nothing in this Agreement or the Ancillary Agreements (as defined in the Purchase Agreement) shall restrict Novo A/S's freedom to operate any of its affiliates (including any such affiliate that is a potential competitor of the Company).

3.11 Termination of Prior Agreement. Upon the effectiveness of this Agreement, the Prior Rights Agreement shall terminate and be of no further force and effect, and shall be superseded and replaced in its entirety by this Agreement.

3.12 Preemptive Rights Waiver. Each Investor hereby waives any rights to notice of and any rights to participate in the issuance of shares of Series 7 Preferred Stock pursuant to the Series 7 Purchase Agreement that such Investor may have, and, furthermore, each Investor, on its behalf and on behalf of all Major Investors (as such term is defined in the Prior Rights Agreement), hereby waives all rights set forth in Section 2.4 of the Prior Rights Agreement with respect to the transactions contemplated by the Series 7 Purchase Agreement.

[Remainder of page intentionally left blank.]

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

SI-BONE, INC.

By: /s/ Jeffrey Dunn
Name: Jeffrey Dunn
Title: Chief Executive Officer

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

INVESTOR:

SKYLINE VENTURE PARTNERS V, L.P.

By: Skyline Venture Management V, LLC
Its: General Partner

By: /s/ John G. Freund
John G. Freund
Its: Managing Director

Address: _____

_____

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

INVESTOR:

MONTREUX EQUITY PARTNERS IV, LP

By: Montreux Equity Management IV, LLC, its General Partner

By: /s/ Daniel K Turner III
Name: Daniel K. Turner III
Title: Managing Member

Address:

Montreux Equity Partners
One Ferry Building
Suite 255
San Francisco, CA 94111

MONTREUX IV ASSOCIATES, LLC

By: Montreux Equity Management IV, LLC, its General Partner

By: /s/ Daniel K Turner III
Name: Daniel K. Turner III
Title: Managing Member

Address: [Address intentionally omitted.]

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

INVESTOR:

MONTREUX IV ASSOCIATES IV, LLC

By: Montreux Equity Management IV, LLC, its General Partner

By: /s/ Daniel K Turner III
Name: Daniel K. Turner III
Title: Managing Member

Address: [Address intentionally omitted.]

INVESTOR:

NOVO A/S

By: /s/ Thomas Dyrberg
Name: Thomas Dyrberg
Title: Managing Partner Novo Ventures

Address: [Address intentionally omitted.]

INVESTOR:

KEITH VALENTINE

By: /s/ Keith Valentine
Name: K. Valentine
Title:

Address: [Address intentionally omitted.]

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

INVESTOR:

OrbiMed Private Investments V, LP

By: OrbiMed Capital GP V LLC,
its General Partner

By: OrbiMed Advisors LLC,
its Managing Member

By: /s/ Jonathan Silverstein
Name: Jonathan Silverstein
Title: Member

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

INVESTOR:

Redline Capital Management S.A.

By: /s/ Buyanov A.
Name: Buyanov A.
Title: Managing Partner

Address: [Address intentionally omitted.]

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

INVESTOR:

Arboretum Ventures IV, L.P.

By Arboretum Investment Manager IV, LLC
Its General Partner

By /s/ Timothy Petersen
Timothy Petersen
Its Managing Director

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

INVESTOR:

Gregory K. Hinckley and Mary C. Hinckley as Community Property with the Right of Survivorship

By: /s/ Gregory K. Hinckley
/s/ Mary C. Hinckley

Name: Gregory K. Hinckley and Mary C. Hinckley

Title:

Address: [Address intentionally omitted.]

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

Dennis M. Vaughan Revocable Trust

By: /s/ Dennis M. Vaughan
Name: Dennis M. Vaughan
Title: Trustee

Address: [Address intentionally omitted.]

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

STEPHEN COOPER M.D. INC. 401K PROFIT SHARING PENSION PLAN

By: /s/ Stephen Cooper, M.D.
Name: Stephen Cooper
Title: Trustee

Address: [Address intentionally omitted.]

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

JONATHAN B. ELLMAN

/s/ Jonathan B. Ellman

Address: [Address intentionally omitted.]

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

ISAAC APPLBAUM

/s/ Isaac Applbaum

Address: [Address intentionally omitted.]

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

JAY CHATHAM

/s/ Jay Chatham

Address: [Address intentionally omitted.]

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

G&H PARTNERS

By: /s/ Stefan J. Palmer Jr.
Name: Stefan J. Palmer Jr.
Title: General Partner and Director of Investments

Address: [Address intentionally omitted.]

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

MATTHEW HOWARD DAHNKE

/s/ Matthew Howard Dahnke

Address: [Address intentionally omitted.]

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

MIN UNG YOON

/s/ Min Ung Yoon

Address: [Address intentionally omitted.]

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

ANNETTE BLANDFORD & TERESA JOHNSON

By: /s/ Annette Blandford
Name: Annette Blandford/Teresa Johnson
Title: Owners

Address: [Address intentionally omitted.]

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

LORNA W. STROTZ AND CHARLES R. STROTZ, TRUSTEES STROTZ FAMILY LIVING TRUST UNDER AGREEMENT DATED 10/15/2002

By: /s/ Lorna Strotz /s/ C.R. Strotz
Name: Lorna Strotz and C.R. Strotz
Title: Trustees

Address: [Address intentionally omitted.]

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

SYLVIE RUDOLF

/s/ Sylvie Rudolf

Address: _____

_____

IN WITNESS WHEREOF, the parties have executed this Amended and Restated Investors' Rights Agreement as of the date first above written.

THE 1996 KLISZEWSKI FAMILY TRUST

By: /s/ Mark A. Kliszewski
Name: Mark A. Kliszewski
Title: Trustor

Address: [Address intentionally omitted.]

Schedule A

INBONE Technologies, Inc.
Berkeley Orthopaedic Medical Profit Sharing Plan, F.B.O. Charles R. Strotz
Barry Jacobson
The 1996 Kliszewski Family Trust
Shirin & Dave Kollar
Ross Myerson
Judd Myerson
Timothy C. Reiley
Sylvie Rudolf
Brian Todd True
Mark Reiley
Annette Blandford & Teresa E. Johnson
John T. & Janet A. Mattson
Min Ung Yoon
National Financial Services, LLC, FBO Min Yoon
National Financial Services, LLC, FBO Leslie Kennedy
William L. Brizendine and Emily L. Brizendine, Trustees of the William and Emily Brizendine Trust
Terry Hensle & Elizabeth Reiley
JPMCC fbo Terry W. Hensle IRA
Matthew H. Dahnke
Jay Chatham
John & Dana Kirby
Jonathan B. Ellman
Rosalie Auster & Simon Auster
Frank Scherkenbach and Kimberly McGovern
Peterschmidt Ventures LLC
Jayshree Desai
Wayne and Christine Guidici
Joseph and Elena Caselle TTEEs of the Caselle Family Trust DTD 6/6/03
IRA Services Trust Company custodian FBO Joseph Caselle
Matthew A. Reiley
Richard W. Dunn
Isaac Applbaum
Dennis M. Vaughan Revocable Trust
Dennis M. Vaughan
Braxton Robert Richardson III
Daniel P. Murray
Jerry Floyd
Skyline Venture Partners Fund V, L.P.
Leonard Rudolf
G&H Partners
Greg Hinckley
Gregory K. Hinckley and Mary C. Hinckley as Community Property with the Right of Survivorship

Citigroup Global Markets Inc. as IRA Rollover Custodian FBO Landis Dibble, ACCT #240-66176
Joseph Caselle
Hansen Le
Citigroup Global Markets Inc. FBO Frederick Dibble SEP IRA
O. Barry McKinley & Gail G. McKinley, The McKinley Family Trust U/A Dated 1/24/97
Lily Chen, MD
Christopher J. Redmond
The 1996 Kliszewski Family Trust
Will Griffin
Sheldon C. Brown & Janet Roth Brown Revocable Trust
Stephen Cooper
Stephen Cooper M.D. Inc. 401k Profit Sharing Pension Plan
Montreux Equity Partners IV, LP
INBONE Technologies, Inc.
Montreux IV Associates, LLC
Novo A/S
OrbiMed Private Investments V, LP
Timothy E. Davis, Jr.
Redline Capital Management S.A.
Shea Ventures Opportunity Fund II, LP
Andrew Chase Trustee of the Andrew Chase 2005 Revocable Trust UAD 3/29/05
Tatiana Evtushenkova
Jonathan McHardy
Bengala Investment S.A.
Alastair Cookson
Brian Dickie
David Spector
The Dennis M. Vaughan Revocable Trust, Dennis M. Vaughan TTEE
The Mattson Trust
Arboretum Ventures IV, L.P.
Montreux IV Associates IV, LLC
Keith Valentine
Sylvie Rudolf
The 1996 Kliszewski Family Trust