AMEDICA Corp
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April 14, 2015

Prospectus Supplement Filed Pursuant to Rule 424(b)(3)

File No. 333-197470

PROSPECTUS SUPPLEMENT NO. 17

DATED April 14, 2015 (To Prospectus Dated August 7, 2014)

AMEDICA CORPORATION

2,326,409 Shares of Common Stock

This Prospectus Supplement No. 17, dated April 14, 2015 (Supplement No. 17), filed by Amedica Corporation (the Company), modifies and supplements certain information contained in the Company s prospectus, dated August 7, 2014 (as amended and supplemented from time to time, the Prospectus). This Supplement No. 17 is not complete without, and may not be delivered or used except in connection with, the Prospectus, including all amendments and supplements thereto. The Prospectus relates to the sale of up to 2,326,409 shares of our common stock by MG Partners II Ltd., or the Selling Stockholder, consisting of:

- 1,706,667 shares issued or issuable upon conversion of an aggregate principal amount of $6.4 million of our senior convertible notes, including accrued interest, subject to adjustment;
- 50,853 shares issued to the Selling Stockholder in connection with a securities purchase agreement dated June 30, 2014; and
- 568,889 shares issued or issuable to the Selling Stockholder upon exercise of warrants at an exercise price of $4.65 per share, subject to adjustment pursuant to the terms of the warrant.

This Supplement No. 17 incorporates into our prospectus the information contained in our attached Annual Report on Form 10-K, which was filed with the Securities and Exchange Commission on March 24, 2015.

We may further amend or supplement the Prospectus from time to time by filing additional amendments or supplements as required. This prospectus supplement is qualified by reference to the Prospectus except to the extent that the information in this prospectus supplement supersedes the information contained in the Prospectus. You should read the entire Prospectus and any amendments or supplements carefully before you make an investment decision.

THESE SECURITIES ARE SPECULATIVE AND INVOLVE A HIGH DEGREE OF RISK AND SHOULD BE CONSIDERED ONLY BY PERSONS WHO CAN AFFORD THE LOSS OF THEIR ENTIRE INVESTMENT. PLEASE REFER TO RISK FACTORS BEGINNING ON PAGE 8 OF THE ORIGINAL PROSPECTUS.

THE SECURITIES AND EXCHANGE COMMISSION AND STATE SECURITIES REGULATORS HAVE NOT APPROVED OR DISAPPROVED THESE SECURITIES OR DETERMINED IF THE PROSPECTUS, OR ANY OF THE SUPPLEMENTS OR AMENDMENTS RELATING THERETO, IS TRUTHFUL OR COMPLETE. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

The date of this Supplement No. 17 is April 14, 2015

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

FORM 10-K

x Annual report pursuant to section 13 or 15(d) of the Securities Exchange Act of 1934
For the fiscal year ended December 31, 2014

Or

¨Transition report pursuant to section 13 or 15(d) of the Securities Exchange Act of 1934
For the transition period from to

Commission File No. 001-33624

Amedica Corporation

(Exact name of registrant as specified in its charter)

Delaware	84-1375299
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification No.)

1885 West 2100 South, Salt Lake City, UT 84119

(Address of principal executive offices and Zip Code)

(801) 839-3500

(Registrant’s telephone number, including area code)

Title of each class	Name of each exchange on which registered
Common Stock, $0.01 par value	The NASDAQ Capital Market

Securities registered under Section 12(b) of the Act: Common Stock, Par Value $0.01

Securities registered under Section 12(g) of the Act:

None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ¨ No x

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ¨ No x

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No ¨

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, every interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T(§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No ¨

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to the this Form 10-K. x

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company.

Large Accelerated Filer ¨	Accelerated Filer ¨
Non-Accelerated Filer ¨ [Do not check if a smaller reporting company]	Smaller reporting company x

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ¨ No x

The aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold, or the average bid and asked price of such common equity, as of the last business day of the registrant's most recently completed second fiscal quarter was $48,738,000.

The number of shares outstanding of the registrant's common stock, $0.01 par value per share, as of March 6, 2015 was 26,756,808.

DOCUMENTS INCORPORATED BY REFERENCE: NONE

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CAUTIONARY NOTE CONCERNING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). All statements other than statements of historical fact are forward-looking statements. We have tried to identify forward-looking statements by using words such as "believe," "may," "might," "could," "will," "aim," "estimate," "continue," "anticipate," "intend," "expect, similar words. These forward-looking statements are based on our current assumptions, expectations and estimates of future events and trends. Forward-looking statements are only predictions and are subject to many risks, uncertainties and other factors that may affect our businesses and operations and could cause actual results to differ materially from those predicted. These risks and uncertainties include, but are not limited to, factors affecting our quarterly and annual results, our ability to manage our growth, our ability to sustain our profitability, demand for our products, our ability to compete successfully (including, without limitation, our ability to convince surgeons to use our products and our ability to attract and retain sales and other personnel), our ability to rapidly develop and introduce new products, our ability to develop and execute on successful business strategies, our ability to comply with changes and applicable laws and regulations that are applicable to our businesses, our ability to safeguard our intellectual property, our success in defending legal proceedings brought against us, trends in the medical device industry, and general economic conditions, and other risks set forth throughout this Annual Report, including under "Item 1, Business," "Item 1A, Risk Factors," and "Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations," and those discussed in other documents we file with the Securities and Exchange Commission (the "SEC"). Moreover, we operate in an evolving environment. New risk factors and uncertainties emerge from time to time and it is not possible for us to predict all risk factors and uncertainties, 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.

Given these risks and uncertainties, readers are cautioned not to place undue reliance on any forward-looking statements. Forward-looking statements contained in this Annual Report speak only as of the date of this Annual Report. We undertake no obligation to update any forward-looking statements as a result of new information, events or circumstances or other factors arising or coming to our attention after the date hereof.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the informational requirements of the Exchange Act. Accordingly, we file periodic reports and other information with the SEC. We will make our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports available through our Internet site, http://www.amedica.com/investors/sec_filings/as soon as reasonably practicable after electronically filing such materials with the SEC. They may also be obtained free of charge by writing to Amedica Corporation, Attn: Investor Relations, 1885 West 2100 South, Salt Lake City, UT 84119. In addition, copies of these reports may be obtained through the SEC's website at www.sec.gov or by visiting the SEC's Public Reference Room at 100 F Street, NE, Washington, DC 20549 or by calling the SEC at 800-SEC-0330. Our common stock trades on The NASDAQ Capital Market under the symbol "AMDA."

Unless otherwise indicated, all information contained in this Annual Report reflects a 1-for-25.7746 reverse split of our common stock which was effected on February 11, 2014.

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PART I

ITEM 1. BUSINESS

Overview

We are a commercial biomaterial company focused on using our silicon nitride technology platform to develop, manufacture and sell a broad range of medical devices. We currently market spinal fusion products and are developing products for use in total hip and knee joint replacements. We believe our silicon nitride technology platform enables us to offer new and transformative products in the orthopedic and other medical device markets. We believe we are the first and only company to use silicon nitride in medical applications. Over 20,000 of our silicon nitride spine products have been implanted in patients.

Biomaterials come in a variety of synthetic or natural materials available in a variety of forms that are used in virtually every medical specialty. We believe our silicon nitride biomaterial has superior characteristics compared to commonly used biomaterials in the markets we are targeting, including polyetheretherketone, or PEEK, which is the most common biomaterial used for interbody spinal fusion products. Specifically, we believe our silicon nitride has the following key attributes: promotion of bone growth; hardness, strength and resistance to fracture; resistance to wear; non-corrosive; anti-infective properties; biocompatibility; and superior diagnostic imaging compatibility.

We currently market our Valeo® family of silicon nitride interbody spinal fusion devices in the United States and Europe for use in the cervical and thoracolumbar areas of the spine. We believe our Valeo devices have a number of advantages over existing products due to silicon nitride's key characteristics, resulting in faster and more effective fusion and reduced risk of infection.

In addition to our silicon nitride-based spinal fusion products, we market a line of non-silicon nitride spinal fusion products which allows us to provide surgeons and hospitals with a broader range of products. These additional products are complementary to our fusion products and are designed for the treatment of deformity and degenerative spinal procedures. Although our non-silicon nitride products have accounted for approximately 52% and 66% of our product revenues for the years ended December 31, 2014 and 2013, respectively, we believe the continued promotion and potential for adoption of our silicon nitride products and product candidates, if approved, provides us the greatest opportunity to grow our business in new and existing markets and achieve our goal to become a leading biomaterial company.

In addition to the markets into which we directly sell our products, we are utilizing our silicon nitride technology platform to expand our current penetration in the spinal fusion market through original equipment manufacturer ("OEM") and private label partnerships. We also expect to do the same in other markets such as total hip and knee joint replacements, dental and sports medicine. We believe our biomaterial expertise, strong intellectual property and formulaic manufacturing process will allow us to transition currently available medical device products made of inferior biomaterials and manufacture them using silicon nitride and our technology platform to improve their characteristics.

We are also incorporating our silicon nitride technology into components for use in total hip and knee replacement product candidates that we plan on developing in collaboration with a strategic partner. We believe that our silicon nitride total hip and knee product candidates will provide competitive advantages over current products made with traditional biomaterials. We also believe our silicon nitride technology platform can be used for developing products in other markets and have developed prototypes for use in the dental, sports medicine and trauma markets. As a result of some of the key characteristics of our silicon nitride, we also believe our coating technology may be used to enhance our metal products as well as commercially available metal spinal fusion, joint replacement and other medical products.

We operate a 30,000 square foot manufacturing facility located at our corporate headquarters in Salt Lake City, Utah, and we are the only vertically integrated silicon nitride medical device manufacturer in the world. We market and sell our products to surgeons and hospitals in the United States and select markets in Europe and South America through our established network of more than 50 independent sales distributors who are managed by our experienced in-house sales and marketing management team. We have also started entering into OEM and private label relationships with third parties to further the commercialization of our silicon nitride technology platform beyond our own direct marketing and selling efforts.

Biomaterials

Biomaterials are synthetic or natural biocompatible materials that are used in virtually every medical specialty to improve or preserve body functionality. Various types of biomaterials are used as essential components in medical devices, drug delivery systems, replacement and tissue repair technologies, prostheses and diagnostic technologies.

There are four general categories of biomaterials:

- Metals. Metals commonly used as biomaterials include titanium, stainless steel, cobalt, chrome, gold, silver and platinum, and alloys of these metals. Examples of medical uses of metals include the repair or stabilization of fractured bones, stents, surgical instruments, bone and joint replacements, spinal fusion devices, dental implants and restorations and heart valves. According to MarketsandMarkets, a global market research firm, metals represented approximately 31% of the worldwide sales of all biomaterials in 2012.
- Polymers. Polymers are synthetic compounds consisting of similar molecules linked together that can be created to have specific properties. Polymers commonly used as biomaterials include nylon, silicon rubber, polyester, polyethylene, cross-linked polyethylene (a stronger version), polymethylmethacrylate, polyvinyl chloride and polyetheretherketone, which is commonly referred to as PEEK. Examples of medical uses of polymers include soft-tissue replacement, sutures, drug delivery systems, joint replacements, spinal fusion devices and dental restorations. Polymers represented approximately 29% of the worldwide sales of all biomaterials in 2012.
- Ceramics. Ceramics are hard, non-metallic, non-corrosive, heat-resistant materials made by shaping and then applying high temperatures. Traditional ceramics commonly used as biomaterials include carbon, oxides of aluminum, zirconium and titanium, calcium phosphate and zirconia-toughened alumina. Examples of medical uses of ceramics include repair, augmentation or stabilization of fractured bones, bone and joint replacements, spinal fusion devices, dental implants and restorations, heart valves and surgical instruments. Ceramics represented approximately 26% of the worldwide sales of all biomaterials in 2012.
- Natural biomaterials. Natural biomaterials are derived from human donors, animal or plant sources and include human bone, collagen, gelatin, cellulose, chitin, alginate and hyaluronic acid. Examples of medical uses of natural biomaterials include the addition or substitution of hard and soft tissue, cornea protectors, vascular grafts, repair and replacement of tendons and ligaments, bone and joint replacements, spinal fusion devices, dental restorations and heart valves. Natural biomaterials represented approximately 14% of the worldwide sales of all biomaterials in 2012.

According to MarketsandMarkets, orthopedics accounted for approximately $15.0 billion, or 34%, of the $44.0 billion total biomaterials market in 2012. Within orthopedics, biomaterials are extensively used in spinal fusion procedures, hip and knee replacements and the repair or stabilization of fractured bones.

Market Opportunity

Overview

We believe our silicon nitride technology platform provides us with numerous competitive advantages in the orthopedic biomaterials market. We market interbody spinal fusion devices and related products and are developing products for use as components in total hip and knee joint replacements. We believe we can also utilize our silicon nitride technology platform to develop future products in additional markets, such as the dental, sports medicine and trauma markets.

According to iData, in 2012, the markets for spinal implants in the United States and in combined major European markets were $5.3 billion and $1.0 billion, respectively. Interbody spinal fusion products accounted for over $1.2 billion and $172.2 million of these markets, respectively. In 2012, there were approximately 300,000 interbody spinal fusion procedures conducted in the United States, of which the significant majority utilized interbody devices comprised of PEEK and bone, with occasional use of metals and other materials including ceramics. The market for interbody spinal fusion devices has shifted over time as new biomaterials with superior characteristics have been incorporated into these devices and have launched into the market. For example, in the 1990s, metals quickly penetrated the interbody spinal fusion market because of the limitations of devices available at that time made from allograft bone and, more recently, products made of PEEK rapidly penetrated the market because of the limitations of devices available at that time made from metal or allograft bone. Similarly, we believe our silicon nitride interbody

spinal fusion products address the key limitations of other biomaterials currently used in interbody spinal fusion devices and demonstrate superior characteristics needed to improve clinical outcomes.

Additionally, Orthopedic Network News reported that the U.S. markets for total hip and knee replacements in 2012 were $2.7 billion and $4.0 billion, respectively. According to Orthopedic Network News, in 2012, there were more than 470,000 total hip replacement procedures and 734,000 total knee replacement procedures conducted in the United States. Orthopedic Network News also reported that in 2012, the U.S. markets for the components of total hip and knee replacement product candidates that we are initially developing were $455.0 million and $1.5 billion, respectively. The combinations of biomaterials most commonly used in joint replacement implants are metal-on-cross-linked polyethylene and traditional ceramic-on-cross-linked polyethylene.

We believe that the main drivers for the growth of the orthopedic biomaterials market, and, in particular, the spinal fusion and joint replacement markets, are the following:

- Favorable and Changing Demographics. With the growing number of elderly people, age-related ailments are expected to rise sharply, which we believe will increase the demand and need for biomaterials and devices with improved performance capabilities. Also, middle-aged and older patients increasingly expect to enjoy active lifestyles, and consequently demand effective treatments for painful spine and joint conditions, including better performing and longer-lasting interbody spinal fusion devices and joint replacements.
- Introduction of New Technologies. Better performing and longer-lasting biomaterials, improved diagnostics, and advances in surgical procedures allow for surgical intervention earlier in the continuum of care and better outcomes for patients. We believe surgical options using better performing and longer-lasting biomaterials will gain acceptance among surgeons and younger patients and drive accelerated growth and increase the size of the spinal fusion and joint replacement markets.
- Market Expansion into New Geographic Areas. MarketsandMarkets anticipates that demand for biomaterials and the associated medical devices will increase as the applications in which biomaterials are used are introduced to and become more widely accepted in underserved countries, such as China.

The Interbody Spinal Fusion Market

The human spinal canal is made up of 33 interlocking bones, referred to as vertebrae, separated by 23 intervertebral discs comprised of a hard outer ring made of collagen with a soft inner core, that act as shock absorbers between vertebrae. Disorders of the spine can result from degenerative conditions, deformities and trauma or tumor-related damage. Spinal fusion is the standard of care used to treat most spinal disorders and typically involves the placement of an interbody device between vertebrae to reestablish spacing between vertebrae and alignment of the spine. Generally, the interbody device is stabilized by screws and, in some procedures, plates or rods. To enhance bone attachment, surgeons often pack the interbody device with a biomaterial that induces bone growth. Following successful treatment, new bone tissue grows in and around the interbody device over time, which helps fuse the vertebrae and create long-term stability of the interbody device, leading to the alleviation of pain and increase in mobility. We selected this market as the first application for our silicon nitride technology because of its size, the limitations of currently available products and the key characteristics silicon nitride possesses, which are critical for a superior interbody spinal fusion device.

- Promotion of Bone Growth. The biomaterial should be both osteoconductive and create an osteoinductive environment to promote bone growth in and around the interbody device to further support fusion and stability. Osteoconduction occurs when material serves as a scaffold to support the growth of new bone in and around the material. Osteoinduction involves the stimulation of osteoprogenitor cells to develop, or differentiate, into osteoblasts, which are cells that are needed for bone growth.
- Strength and Resistance to Fracture. The biomaterial should be strong and resistant to fracture during implantation of the device and to successfully restore intervertebral disc space and spinal alignment during the fusion process. The biomaterial should have high flexural strength, which is the ability to resist breakage during bending, and high compressive strength, which is the ability to resist compression under pressure, to withstand the static and dynamic forces exerted on the spine during daily activities over the long term.
- Anti-Infective. Spinal fusion devices can become colonized with bacteria, which may limit fusion to adjacent vertebrae or cause serious infection. Treating device-related infection is costly and generally requires repeat surgery, including surgery to replace the device, referred to as revision surgery, which may extend hospital stays, suffering and disability for patients. A biomaterial that has anti-infective properties can reduce the incidence of bacteria colonization in and around the interbody device that can lead to infection, revision surgery and associated increased costs.
- Imaging Compatibility. The biomaterial should be visible through, and not inhibit the effective use of, common surgical and diagnostic imaging techniques, such as X-ray, CT and MRI. These imaging techniques are used by

surgeons during and after spinal fusion procedures to assist in the proper placement of interbody devices and to assess the quality of post-operative bone fusion.

Limitations of Biomaterials used in Interbody Spinal Fusion Devices

The three biomaterials most commonly used in interbody spinal fusion devices are PEEK, human cadaver bone, also referred to as allograft bone, and metals. We believe these materials do not possess the key characteristics required to form the optimal interbody spinal fusion device and are susceptible to potential fracture, implant-related infection, pain, limited fusion and instability, which have resulted in revision surgeries.

PEEK (polyetheretherketone)

PEEK is the most frequently used biomaterial for interbody spinal devices and accounted for approximately 70% of the interbody spinal devices implanted in the United States in 2013. We believe PEEK has the following limitations:

- Restricts Bone Growth. Due to PEEK's hydrophobic nature, the human body may recognize PEEK as a foreign substance and, therefore, may encapsulate the device with fibrous tissue. Although it is still possible for bone to grow through the device, bone may not adhere to the surface of the device if this tissue develops.
- Lacks Strength and Resistance to Fracture. PEEK lacks sufficient flexural strength, compressive strength and resistance to fracture necessary to reduce the risk of deformity or fracture during the fusion process. In addition, PEEK devices may fracture during implantation in certain interbody spinal fusion procedures. For example, in December 2012, Zimmer Spine recalled its PEEK Ardis® Interbody System Inserter, a surgical instrument used to implant a PEEK interbody spinal fusion device, because it resulted in the PEEK implants being susceptible to breakage when too much lateral force was applied to the inserter during implantation.
- Lacks Anti-Infective Properties. PEEK does not have any inherent anti-infective properties. In fact, a biofilm may form around a PEEK device that allows the colonization of bacteria, which can lead to infection.
- Lacks Imaging Compatibility. PEEK is invisible on X-rays. As a result, manufacturers of PEEK devices add metal markers to their devices so surgeons can see the location of the devices by X-ray. These markers, however, do not show the full outline of the device, which makes it difficult to assess the accuracy of the placement of the device. In addition, the metal markers cause artifacts on CT and MRI that can compromise the quality of the image.

Allograft Bone

Allograft bone is the second most frequently used biomaterial in interbody spinal fusion devices and accounted for less than 15% of the devices implanted in the United States in 2013. Allograft bone has the following limitations:

- Limited Promotion of Bone Growth. Allograft bone has limited osteoinductive characteristics and therefore may not effectively promote bone growth in and around the interbody device.
- Lacks Strength and Resistance to Fracture. Generally, allograft bone is not as strong as live bone within the body or other materials used in interbody devices. In addition, techniques used to sterilize allograft bone, like gamma irradiation, can cause the allograft to become brittle and more likely to fracture.
- Lacks Anti-Infective Properties and Risk of Disease Transmission. In addition to not having inherent anti-infective properties, allograft bone exposes patients to a greater risk of disease transmission and auto-immune response.

In addition, allograft bone is subject to inconsistent quality and size, which may require surgeons to make compromises on the fit of the device during surgery.

Metals

Metal interbody devices accounted for less than 10% of the devices implanted in the United States in 2013. Metals have the following limitations:

- Limited Promotion of Bone Growth. Metals have limited osteoinductive characteristics and therefore do not effectively promote bone growth in and around the interbody device.
- Lack Anti-Infective Properties. Metals do not have inherent anti-infective properties and do not suppress the colonization of bacteria in and around the device which can lead to infection.
- Lack Imaging Compatibility. Metals are opaque in X-rays and can cause significant imaging artifacts in CTs and MRIs. This can make it difficult for surgeons to detect the extent and quality of bone growth in and around the device in post-operative diagnostic imaging procedures.

The Hip and Knee Joint Replacement Market

Total joint replacement involves removing the diseased or damaged joint and replacing it with an artificial implant consisting of components made from several different types of biomaterials. The key components of a total hip implant include an artificial femoral head, consisting of a ball mounted on an artificial stem attached to the femur, and a liner, which is placed inside a cup affixed into the pelvic bone. The femoral head and liner move against each other to replicate natural motion in what is known as an articulating implant. Total knee replacement implants also use articulating components and are comprised of the following four main components:

a femoral condyle, which is a specially shaped bearing that is affixed to the lower end of the femur; a tibial tray that is affixed to the upper end of the tibia; a tibial insert that is rigidly fixed to the tibial tray and serves as the surface against which the femoral condyle articulates; and a patella, or knee cap, which also articulates against the femoral condyle.

Implants for total hip and knee replacements are primarily differentiated by the biomaterials used in the components that articulate against one another. The combinations of biomaterials most commonly used in hip and knee replacement implants in the United States are metal-on-cross-linked polyethylene and traditional ceramic-on-cross-linked polyethylene. The use of hip replacement implants incorporating metal-on-metal and traditional ceramic-on-traditional ceramic biomaterials experienced a steep decline in the United States over the last several years due to their significant limitations. We believe that the most common currently used biomaterials in joint replacement implants also have limitations, and do not possess all of the following key characteristics required for optimal total joint replacement implants:

- Resistance to Wear. The biomaterials should have sufficient hardness and toughness, as well as extremely smooth surfaces, to effectively resist wear. Because the articulating implants move against each other, they are subject to friction, which frequently lead to abrasive wear and the release of small wear particles. This may cause an inflammatory response which results in osteolysis, or bone loss. Surgeons have identified osteolysis as a leading cause of joint implant failure, resulting in the need for revision surgery to replace the failed implant. One of the most commonly used combinations of biomaterials, metal-on-cross-linked polyethylene, as well as metal-on-metal implants tend to generate a large number of metal wear particles, which can cause osteolysis and a moderate to severe allergic reaction to the metal, referred to as metal sensitivity. While less common, metal implants may also cause a serious condition called metallosis. Both metal sensitivity and metallosis can result in revision surgery.
- Non-Corrosive. The biomaterials should be non-corrosive and should not cause adverse patient reactions. Metal placed in the human body corrodes over time and also results in the formation of metal ions, which leads to metal sensitivity in approximately 10% to 15% of the population and, less commonly, metallosis. As a result, there are significant increased risks from using metal-on-cross-linked polyethylene and metal-on-metal implants.
- Hardness, Strength and Resistance to Fracture. The biomaterials should be hard, strong and resistant to fracture to adequately bear the significant loads placed on joints like the hip and knee during daily activities. We believe there are strength limitations associated with traditional ceramic-on-cross-linked polyethylene and traditional ceramic-on-traditional ceramic implants.
- Anti-Infective. The biomaterials should have anti-infective properties to reduce the risk of bacteria colonization in and around the components that can lead to infection, revision surgeries and associated increased costs. Anti-infective properties reduce the risk of bacteria colonization in and around the components and reduce the likelihood of infection, revision surgeries and associated increased costs. None of the most commonly used biomaterials in joint replacement implants have anti-infective properties.

Our Silicon Nitride Technology Platform

We believe we are the first and only company to use silicon nitride in medical applications. Silicon nitride is a chemical compound comprised of the elements silicon and nitrogen, with the chemical formula Si_3N_4. Silicon nitride, an advanced ceramic, is lightweight, resistant to fracture and strong, and is used in many demanding mechanical, thermal and wear applications, such as in space shuttle bearings, jet engine components and body armor.

We believe our silicon nitride is ideally suited for use in many medical applications and has the following characteristics that make it superior to other biomaterials, including PEEK, bone, metal and traditional ceramics, which do not possess all of these characteristics:

- Promotes Bone Growth. Our silicon nitride is osteoconductive through its inherent surface topography that provides support for new bone growth. We also believe our silicon nitride promotes an ideal environment for osteoinduction.

As a hydrophilic material, silicon nitride attracts protein cells and nutrients that stimulate osteoprogenitor cells to differentiate into osteoblasts, which are needed for bone growth. Our silicon nitride also has an inherent surface chemistry that is more similar to bone than PEEK and metals are. As a result, we believe our silicon nitride has superior osteoconductive and osteoinductive properties when compared to other biomaterials, including those commonly used in interbody spinal fusion devices, such as PEEK, allograft bone and metal. These properties are highlighted in an in vivo study, where we measured the force required to separate devices from the spine after being implanted for three months, which indicates the level of osteointegration. In the absence of bacteria, the force required to separate our silicon nitride from its surrounding bone was approximately three times that of PEEK, and nearly two times that of titanium. In the presence of bacteria, the force required to separate our silicon nitride from its surrounding bone was over five times that of titanium, while there was effectively no separation force required for PEEK, indicating essentially no osteointegration.

- Hard, Strong and Resistant to Fracture. Our silicon nitride is hard, strong and possesses superior resistance to fracture over traditional ceramics and greater strength than polymers currently on the market. For example, our silicon nitride's flexural strength is more than five times that of PEEK and our silicon nitride's compressive strength is over twenty times that of PEEK. Unlike PEEK interbody spinal fusion devices, we believe our silicon nitride interbody spinal fusion devices can withstand the forces exerted during implantation and daily activities over the long term.
- Anti-Infective . We have demonstrated in in vitro and in vivo studies that silicon nitride has inherent anti-infective properties, which reduce the risk of infection in and around a silicon nitride device. PEEK, traditional ceramics, metals and bone do not have inherent anti-infective characteristics. These properties were highlighted in an in vitro study, where live bacteria counts were between 8 and 30 times lower on our silicon nitride than PEEK and up to 8 times lower on our silicon nitride than titanium. In addition to improving patient outcomes, we believe the anti-infective properties of our silicon nitride should make it an attractive biomaterial to hospitals and surgeons who are not reimbursed by third-party payors for the treatment of hospital-acquired infections. Additionally, silicon nitride is synthetic and, therefore, there is a lower risk of disease transmission through cross-contamination or of an adverse auto-immune response, sometimes associated with the use of allograft bone.
- Imaging Compatible. Our silicon nitride interbody spinal fusion devices are semi-radiolucent and clearly visible in X-rays, and produce no distortion under MRI and no scattering under CT. These characteristics enable an exact view of the device for precise intra-operative placement and post-operative bone fusion assessment in spinal fusion procedures. We believe these qualities provide surgeons with greater certainty of outcomes with our silicon nitride devices than with other biomaterials, such as PEEK and metals.
- Resistant to Wear. We believe our silicon nitride joint implant product candidates will have comparable or higher resistance to wear than metal-on-cross-linked polyethylene and traditional ceramic-on-cross-linked polyethylene joint implants, the two most commonly used total hip replacement implants. Also, debris associated with metal implants increases the risk of metal sensitivity and metallosis. Wear debris is a primary reason for early failures of metal and polymer articulating joint components.
- Non-Corrosive. Our silicon nitride does not have the drawbacks associated with the corrosive nature of metal within the body, including metal sensitivity and metallosis, nor does it result in the release of metal ions into the body. As a result, we believe our silicon nitride products will have lower revision rates and fewer complications than comparable metal products.

Our Forms of Silicon Nitride

The chemical composition of our in-house formulation of silicon nitride, processing and manufacturing experience allow us to produce silicon nitride in four distinct forms. This capability provides us with the ability to utilize our silicon nitride in a variety ways depending on its intended application, which, together with our silicon nitride's key characteristics, distinguishes us from manufacturers of products using other biomaterials.

We currently produce silicon nitride for use in our commercial products and product candidates in the following forms:

- Solid Silicon Nitride, or MC^2. This form of silicon nitride is a fully dense, load-bearing solid, and is used for devices that require high strength, toughness, fracture resistance and low wear, including for interbody spinal fusion devices, hip and knee replacement implants and dental implants.

- Porous Silicon Nitride, or C^SC. While this form of silicon nitride has a chemical composition that is identical to that of MC^2, the C^SC form of silicon nitride has a porous structure, which is engineered to mimic cancellous bone, the spongy like bone tissue that typically makes up the interior of human bones. Our porous silicon nitride has interconnected pores ranging in size between about 90 and 600 microns, which is similar to that of cancellous bone. This form of silicon nitride can be used for the promotion of bone in-growth and attachment. Our porous silicon nitride is used as a substitute for the orthobiologics currently used to fill interbody devices in an effort to stimulate fusion and as a bone void filler, and as a porous scaffold for medical devices.

- Composite Silicon Nitride. This form of silicon nitride is a combination, or composite, of MC^2 and C^S C forms of silicon nitride. This composite may be used to manufacture devices and implants that mimic the structure of natural bone by incorporating both a fully dense, load-bearing solid MC^2 component on the outside and a porous C^SC component intended to promote bone in-growth on the inside. This composite form of silicon nitride is used in interbody spinal fusion devices and can be used in components for total hip and knee replacement implants.

- Silicon Nitride Coating. With a similar chemical composition as our other forms of silicon nitride, this form of silicon nitride can be applied as an adherent coating to metallic substrates, including cobalt-chromium, titanium and steel alloys. We believe applying silicon nitride as a coating may provide a highly wear-resistant articulation surface, such as on femoral heads, which may reduce problems associated with metal or polymer wear debris. We also believe that the silicon nitride coating can be applied to devices that require firm fixation and functional connections between the device or implant and the surrounding tissue, such as hip stems and screws. The use of silicon nitride coating may also create an anti-infective barrier between the device and the adjacent bone or tissue.

Our Competitive Strengths

We believe we can use our silicon nitride technology platform to become a leading biomaterial company and have the following principal strengths:

- Sole Provider of Silicon Nitride Medical Devices. We believe we are the only company that designs, develops, manufactures and sells medical grade silicon nitride-based products. Due to its key characteristics, we believe our silicon nitride enables us to offer new and transformative products across multiple medical specialties. In addition, with the FDA clearance of our silicon nitride Valeo products, we are one of only three companies that have developed and manufacture a ceramic for use in FDA cleared orthopedic medical devices in the United States.
- In-House Manufacturing Capabilities. We operate a 30,000 square foot manufacturing facility located at our corporate headquarters in Salt Lake City, Utah. This operation complies with the FDA's quality system regulation, or QSR, and is certified under the International Organization for Standardization's, or ISO, standard 13485 for medical devices. This facility allows us to rapidly design and produce silicon nitride products, while controlling the entire manufacturing process from raw material to finished goods. We have also entered to a manufacturing, development and supply agreement with Kyocera Industrial Ceramics Corporation, or Kyocera, under which Kyocera will become a second qualified manufacturer of our silicon nitride-based spinal fusion products and product candidates.

- Established Commercial Infrastructure. We market and sell our products to surgeons and hospitals in the United States, and select markets in Europe and South America through our established network of more than 50 independent sales distributors who are managed by our experienced in-house sales and marketing management team. As a result, our product revenue is driven by end-user prices, unlike other biomaterial companies that sell their products at lower prices to OEMs who then sell their products to the end user. Our control over the sales and marketing processes also allows us greater flexibility to selectively collaborate with distributors when we believe their experience or geographic reach can be beneficial to us.
- Portfolio of Non-Silicon Nitride Products. In addition to designing, developing, manufacturing and commercializing silicon nitride interbody spinal fusion devices, we sell a complementary line of non-silicon nitride spinal fusion products. We offer a full suite of spinal fusion products, which increases our access to surgeons and hospitals, and allows us to more effectively market our silicon nitride spinal fusion products to our customers. Product revenue from the sale of these non-silicon nitride products also supports further development of our silicon nitride products and product candidates.
- Highly Experienced Management and Surgeon Advisory Team. Members of our management team have experience in product development, launching of new products into the orthopedics market and selling to hospitals through direct sales organizations, distributors, manufacturers and other orthopedic companies. We also collaborate with a network of leading surgeon advisors in the design, development and use of our silicon nitride products and product candidates.

Our Strategy

Our goal is to become a leading biomaterial company focused on using our silicon nitride technology platform to develop, manufacture and commercialize a broad range of medical devices. Key elements of our strategy to achieve this goal are the following:

- Drive Further Adoption of our Silicon Nitride Interbody Spinal Fusion Devices. We believe that increasing the awareness of our silicon nitride technology by educating surgeons about its key benefits, and the design improvements to our silicon nitride products and related instruments, will accelerate the adoption of our products and ultimately help improve patient outcomes. To drive further awareness of our products and the associated benefits offered by our silicon nitride technology, we will continue to educate surgeons through multiple channels, including industry conferences and meetings, media outlets and through our sales and marketing efforts.
- Establish and Develop OEM Partnerships and Distribution Arrangements. Because we believe silicon nitride is a superior platform and technology for application in the spine and total joint markets, we seek to establish partnerships with other orthopedic companies to replace their inferior materials and products with silicon nitride. If successful, we will duplicate their designs and characteristics and leverage their existing instrumentation by providing the market place with a superior solution at a competitive price.
- Continue to Implement our Design and Build Program. As our first foray into an OEM partnership strategy, we initiated a commercialization strategy in 2013, referred to as our Design and Build Program. This program allows for close collaboration with influential surgeons to develop customized silicon nitride spinal fusion products and instruments. We first sell these products to the designing surgeons and a team of evaluating surgeons. After evaluation and acceptance by these surgeons, we then introduce these products more broadly into the market. The first products designed under this program were sold for initial evaluation in the third quarter of 2013.
- Enhance our Commercial Infrastructure. We expect to increase the productivity of our sales and marketing team by continuing to engage experienced independent sales distributors with strong orthopedic surgeon relationships. For example, in September 2013, we entered into a new European sales agent agreement with K2M, Inc. We may also establish distribution collaborations in the United States and abroad when access to large or well-established sales and marketing organizations may help us gain access to new markets, increase sales in our existing markets or accelerate market penetration for selected products.
- Develop Silicon Nitride for Total Joint Components. We are incorporating our silicon nitride technology into silicon nitride-coated metal components for use in total hip and knee replacement product candidates that we plan to develop in collaboration with a strategic partner. We also have designs for solid silicon nitride components and are working

with the FDA to continue down the regulatory pathway required for development of these components.

- Apply our Silicon Nitride Technology Platform to Other OEM Opportunities. Our silicon nitride technology platform is adaptable and we believe it may be used to develop products to address other significant opportunities, such as in the dental, sports medicine, cardiovascular and trauma markets. We have manufactured prototypes of dental implants, sports medicine and trauma products, and we have developed a process to coat metals with our silicon nitride to enhance current medical devices and instruments. We plan to collaborate with other companies to develop and commercialize any future products in those areas or we may develop any one of them by ourselves should sufficient resources become available.

Our Products and Product Candidates

We currently market a family of silicon nitride interbody spinal fusion devices and other non-silicon nitride spinal fusion products for use in cervical and lumbar spinal fusion surgical procedures to treat patients who suffer from degenerative, diseased and traumatic spine conditions. We are also developing multiple silicon nitride components for use in our total hip and knee replacement product candidates.

Spinal Fusion Products and Product Candidates

Our Valeo Silicon Nitride Products and Product Candidates

Our first generation Valeo silicon nitride spinal fusion device received 510(k) regulatory clearance and a CE mark in 2008. Based on surgeon feedback, we developed a second generation of Valeo products. In 2012, we received 510(k) clearance to market this second generation family of Valeo interbody spinal fusion devices, and we launched them with a select number of surgeons in 2013. Our second generation Valeo interbody spinal fusion devices offer distinct improvements over the first generation. The instrumentation of the second generation devices allow for better control of the device during implantation. The device allows for improved stability and potentially improved fusion after implantation and is offered in a broader selection of sizes. We completed the full launch of our second generation AL, PL, OL and TL Valeo interbody spinal fusion devices in the United States in 2014. We expect to launch our second generation Cervical Valeo interbody spinal fusion devices in the second half of 2015.

Our current products are:

Valeo Interbody Fusion Devices	Generation
AL: Anterior Lumbar	1st and 2nd
PL: Posterior Lumbar	1st and 2nd
OL: Oblique Lumbar	1st and 2nd
TL: Transforaminal Lumbar	1st and 2nd
C: Cervical	1st and 2nd
CORP: Corpectomy	1st

In 2009, we received a CE Mark to commercialize our Valeo interbody spinal fusion devices made from our composite silicon nitride. The porous C^SC center structure of these devices is designed to facilitate bone growth into the device, which we believe will allow surgeons to reduce or eliminate the use of allograft bone and other osteoconductive biomaterials. We are currently marketing these devices in the Netherlands, Spain and Germany. Additionally, we conducted a prospective clinical trial in Europe, named CASCADE, comparing our Valeo composite silicon nitride interbody devices to PEEK interbody devices filled with autograft bone to obtain additional safety and efficacy data to support the 510(k) clearance in the United States. The CASCADE study enrolled 104 patients in a prospective clinical trial that independently scored fusion rates and clinical outcomes at 12 months follow-up. Neck Disability Index scores decreased similarly in both patient groups, consistent with clinical improvements reported in the literature. Importantly, the incidence of cervical spine fusion was statistically identical between study groups, and consistent with figures reported in other studies. We filed a 510(k) submission with the FDA in January 2015.

Valeo Composite ($MC^2 + C^2C$)

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Our Non-Silicon Nitride Spinal Fusion Products

We sell a line of complementary non-silicon nitride spinal fusion products to provide surgeons and hospitals with a broader range of products. Product revenue from the sale of our non-silicon nitride spinal fusion products further supports development of our silicon nitride products and product candidates. We plan to enhance our metal spinal fusion products with a silicon nitride coating. The following table lists our marketed non-silicon nitride spinal products.

CATEGORY	PRODUCT NAME	BIOMATERIAL
Facet Fixation System	Facet Gun Max/Facet Bolt Javelin: MIS Locking Facet System	Metal
Lumbar Spine Fixation	Preference Classic Spine System Preference 2 Spine System Preference 2 Complex Spine System	Metal
Interbody Spinal Fusion Device	Phantom Plus PLIF/TLIF IBFD Phantom Plus Cervical Spacer	PEEK

Our Total Hip and Knee Joint Replacement Product Candidates

Our Total Hip Implant Product Candidates

We have developed a femoral head that is made from our solid MC^2 silicon nitride and could be used for total hip replacement product candidates. This femoral head is expected to articulate against a cross-linked polyethylene liner, fixed into a metal acetabular cup. Together with a strategic partner, we intend to initiate biomechanical testing with our silicon nitride-coated femoral head for use in total hip replacement procedures to support a 510(k) submission to the FDA. If clearance is obtained, we intend to commercially launch products for use in total hip replacement in 2017.

Our Total Knee Implant Product Candidates

We have developed a femoral condyle design made from our solid MC^2 silicon nitride. The femoral condyle component will attach to the lower end of the femur. The femoral condyle is expected to articulate against a cross-linked polyethylene tibial insert that will attach to the tibial tray at the upper end of the tibia, which we expect will be made from metal. We have successfully made prototypes of this design. We intend to initiate biomechanical testing with our components for use in knee replacement procedures to support a 510(k) submission to the FDA. If clearance is obtained we intend to commercialize our products for use in total knee replacement surgeries post-FDA clearance.

Other Product Opportunities

Our silicon nitride technology platform is adaptable and we believe it may be used to develop products to address other significant opportunities, such as in the dental, sports medicine and trauma markets.

We also believe our coating technology may be used to enhance our marketed metal products as well as other commercially available metal spinal fusion and joint replacement products. We have produced feasibility prototypes of dental implants, other components for use in total hip implants in addition to our total hip and knee implant product candidates discussed above, a suture anchor for sports medicine and prototypes of silicon nitride-coated plates for potential trauma applications. We have also developed a process to apply our silicon nitride as a coating on other biomaterials.

The FDA has not evaluated any of these potential products and we are not currently advancing the development of any of these product candidates. We plan to collaborate with medical device companies to complete the development of and commercialize any product candidates we advance in these areas or develop any one of them ourselves if sufficient resources should become available.

Supporting Data

We and a number of independent third parties have conducted extensive biocompatibility, biomechanical, in vivo and in vitro testing on our silicon nitride to establish its safety and efficacy in support of regulatory clearance of our biomaterial, products and product candidates. We have also completed additional testing of our silicon nitride products and product candidates. The results of this testing have been published in peer review publications. Additionally, we have initiated prospective randomized clinical trials in humans in vivo and in vitro to support and expand our understanding of our silicon nitride’s performance relative to other biomaterials and medical devices. We believe our product development strategy is consistent with the manner in which other biomaterials have been

successfully introduced into the market and adopted as the standard of care. Listed below is an overview of some of the key testing completed on our silicon nitride biomaterial, products and product candidates to date, as well as other information about our silicon nitride and other biomaterials.

Biocompatibility

Before our silicon nitride was first used in commercial products in 2008, we conducted a series of biocompatibility tests following the guidelines of the FDA and ISO and submitted the results to the FDA as part of the regulatory clearance process. These tests confirmed that our silicon nitride products meet required biocompatibility standards for human use.

Promotion of Bone Growth

In 2012, we conducted two separate studies at Brown University, the results of which suggest that the chemistry and inherent surface topography of our solid MC^2 silicon nitride provides an optimal environment for bone growth onto and around the device.

The first study was a series of in vitro analyses of protein adsorption, or presence on the surface of the biomaterial, onto silicon nitride, PEEK and titanium. The results of this study indicated that adsorption of two key proteins necessary for bone growth (fibronectin and vitronectin) were up to eight times greater on our silicon nitride than on PEEK, and up to four times greater than on titanium. A third important protein (laminin) had up to two times greater adsorption on our silicon nitride than on PEEK, and up to two-and-one-half times greater adsorption than on titanium.

The second study was an in vivo investigation of the osteointegration characteristics of these same three biomaterials after they had been surgically implanted into the skulls of laboratory rats. This study included an examination of the effect of Staphylococcus epidermidis bacteria on osteointegration. At time intervals of up to three months after implantation of the biomaterial, the amount of new bone growth within the surgical site and in direct contact with the implanted biomaterial was evaluated. In the absence of bacteria, new bone formation within the surgical site surrounding our silicon nitride was approximately 69%, compared with 36% and 24% for titanium and PEEK, respectively. Similarly, bone in direct contact, or apposition, with our silicon nitride, titanium and PEEK was 59%, 19% and 8%, respectively. As is common, in the presence of bacteria, new bone formation within the surgical site was suppressed, but still significantly greater for our silicon nitride than for the other two biomaterials. Observed new bone growth within the surgical site surrounding our silicon nitride was 41%, compared with 26% and 21% for titanium and PEEK, respectively. At the implant interface, the bone apposition for our silicon nitride, titanium and PEEK was 23%, 9% and 5%, respectively. To further characterize the extent of osteointegration, the force needed to separate each implant from its surrounding bone was measured. A larger force needed to separate the implant is an indication of improved osteointegration. At three months after implantation, in the absence of bacteria, the force required to separate our silicon nitride from its surrounding bone was approximately three times that of PEEK, and nearly two times that of titanium. In the presence of bacteria, there was effectively no separation force required for PEEK, indicating essentially no osteointegration. Our silicon nitride required over five times the force to separate it from its surrounding bone in the presence of bacteria in comparison to titanium.

In 2008, we conducted an animal study in which we evaluated the level of osteointegration of our porous C^SC silicon nitride with a knee-defect model in adult sheep. At three months after implantation, three out of five of the silicon nitride implants had extensive new bone formation at and into the implant surface, showing that the bone had grown into our C^S C silicon nitride to a depth of 3 millimeters, or mm. This animal study demonstrated the rapid osteointegration potential of our C^SC silicon nitride.

Hardness, Strength and Resistance to Fracture

Comparative Information

As shown in the table of comparative information publicly available about various biomaterials below:

- the hardness, or a material's resistance to deformity, of silicon nitride is comparable to traditional ceramics, but is substantially higher than either polymers or metals;
- the strength of silicon nitride is comparable or higher than metals and traditional ceramics, and is about sixteen to fifty-five times stronger than highly-cross-linked polyethylene, and four to eight times stronger than PEEK; and
- silicon nitride has the highest fracture resistance of any medical ceramic material and is three to eleven times more resistant to fracture than PEEK or highly-cross-linked polyethylene. This is due to the interwoven microstructure of silicon nitride. Metals have the highest fracture resistance.

Comparison of Mechanical Properties Among Orthopedic Biomaterials

Material	Hardness (GPa)(1)	Strength (MPa)(1)	Fracture Resistance (MPa·m $^{1/2}$)(1)
Silicon Nitride	13 – 16	800 – 1200	8 – 11
Aluminum Oxide Ceramic	14 – 19	300 – 500	3 – 5
Zirconia-Toughened Alumina Ceramic	12 – 19	700 – 1150	5 – 10
PEEK	0.09 – 0.28	160 – 180	2 – 3
Highly-Cross-Linked Polyethylene Polymer	0.03 – 0.07	22 – 48	1 – 2
Cobalt-Chromium Metal	3 – 4	700 – 1000	50 – 100
Titanium Alloy Metal	3 – 4	920 – 980	75

(1) GPa is a giga-pascal. MPa is a mega-pascal. Pascals are a measure of pressure. MPa·$m^{1/2}$ is mega-pascal times a square root meter and is a measure related to the energy required to initiate fracture of a material.

We believe that the combination of high hardness, strength and fracture resistance positions our silicon nitride as an ideal biomaterial for many medical applications.

Burst Strength

In 2006, we conducted in-house comparative “burst strength” tests on femoral heads made from our silicon nitride produced by a contract manufacturer to our specifications and femoral heads made from one of the strongest commercially available ceramics, BIOLOX® delta (zirconia-toughened alumina). These tests were performed on three designs of 28 mm femoral heads using accepted testing protocols. The tests involved applying a load to each femoral head while mounted on a cobalt-chromium simulated hip implant stem, until the head burst. This enabled us to directly compare the strength of the femoral heads made of the two biomaterials. The results also provided an indication of each biomaterial’s resistance to fracture. The results of these tests are shown in the chart below.

The average burst test strength for the silicon nitride femoral heads in these tests was 75 kilonewtons, or kNs, compared with 65 kN for BIOLOX® delta, or about a 15% improvement. The burst strengths observed in our tests for BIOLOX® delta femoral heads are comparable to those observed by an independent party testing the same design BIOLOX® delta femoral heads as we did. We also conducted burst strength tests of 36 mm femoral heads made from our silicon nitride which showed those femoral heads had burst strengths that averaged 164 kN.

Resistance to Wear

In 2011, we commissioned an independent laboratory to conduct a wear study using our silicon nitride femoral heads. We tested our 28 mm silicon nitride femoral heads articulated against cross-linked polyethylene acetabular liners and our 40 mm silicon nitride femoral heads articulated against cross-linked polyethylene acetabular liners using well-established protocols in a hip simulator for their wear performance over 5 million cycles. We then compared the results for our silicon nitride product candidates to the results for the cobalt chrome femoral head and publicly available data from other commonly paired products. The results and comparison showed that:

- our silicon nitride-on-cross-linked polyethylene had approximately half the wear rate of that publicly reported for cobalt chrome-on-cross-linked polyethylene articulating hip components; and

- our silicon nitride-on-cross-linked polyethylene had comparable wear to that publicly reported for traditional ceramic-on-cross-linked polyethylene articulating hip components.

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Anti-Infective Properties

The results of the two studies at Brown University in 2012, demonstrate that our solid MC^2 silicon nitride has anti-infective properties. The objective of the in vitro study was to determine how our silicon nitride, PEEK and titanium interact with bacteria, protein and bone cells without the use of antibiotics and compared the growth of five different types of bacteria on silicon nitride, PEEK and titanium over time. Live bacteria counts were between 8 to 30 times lower on silicon nitride than PEEK and up to 8 times lower on silicon nitride than titanium.

In the in vivo study, bacteria were applied to the biomaterials before implantation. Three months after implantation, no infection was observed with silicon nitride, whereas both PEEK and titanium showed infection. The data demonstrate that our silicon nitride inhibits biofilm formation and bacterial colonization around the biomaterial.

Imaging Compatibility

In 2007, we conducted a study to compare the imaging characteristics of test blanks made of PEEK, the metals titanium and tantalum, and silicon nitride using a cadaver human vertebral body. Images of the vertebral body and the blanks were obtained using X-ray, CT and MRI under identical conditions. We assessed the radiolucent characteristics of the blanks in X-ray images quantitatively, assessed the presence of scatter in CT qualitatively and assessed distortion in MRI quantitatively. In X-ray, the metal blanks did not permit visualization of the underlying bone of the vertebral body, while PEEK was transparent, rendering its location difficult to determine. The silicon nitride blank had an intermediate radiolucency that rendered it visible and allowed a visual assessment of the underlying bone of the vertebral body. CT and MRI of the metal blanks indicated the presence of distortion while silicon nitride and PEEK exhibited no scattering.

Sales and Marketing

We market and sell our products to surgeons and hospitals through our established network of more than 50 independent sales distributors who are managed by our experienced in-house sales and marketing management team. Our sales efforts to date have been in the United States and selected markets in Europe and South America. To supplement our independent sales distributors, in select international markets, such as Europe, Japan, Australia and Canada, we may also seek to establish collaborations with leading orthopedic companies where we believe that a large, well-established partner may provide better access to those markets. For example, in October 2013, we entered into a European sales agent agreement with K2M, Inc. In addition, we may establish collaborations in the United States under circumstances where access to a larger sales and marketing organization may help to expand the market or accelerate penetration for selected products.

In addition to leveraging the strong existing surgeon relationships of our distribution network, we market our products through a combination of initiatives that are designed to establish and increase awareness of our silicon nitride products and their benefits over alternative products. We attend and make presentations at major industry events, including society meetings sponsored by the North American Spine Society, the America Academy of Orthopaedic Surgeons and the Congress of Neurological Surgeons, to educate surgeons and distributors about our products and product candidates. We advertise in trade journals and publications, and offer unique pricing strategies, including product bundling and incentivizing our distribution network to create and maintain long-term relationships with surgeons and hospitals. We also use surgeon advisors to assist in product development and to help implement awareness campaigns aimed at educating surgeons about our products. As part of these campaigns, we provide educational materials for hospitals and surgeons. We also conduct regional training seminars where our product managers, trainers, engineers, sales and marketing staff members work together with our surgeon advisors to educate surgeons and our distribution network in the use of our products.

Original Equipment Manufacturing and Private Label

In addition to the markets into which we directly sell our products, we are utilizing our silicon nitride technology platform to expand our current penetration in the spinal fusion market through original equipment manufacturer ("OEM") and private label partnerships. To that effect, during 2014 we entered into both a private label agreement and a OEM agreement with Spinal Kinetics, a privately-held medical device company focused on developing innovative and practical motion preservation systems for treating degenerative diseases of the spine. Pursuant to the private label agreement Spinal Kinetics will sell our Valeo line of products under their own label. Pursuant to the OEM agreement we are working together with Spinal Kinetics to develop their own proprietary spinal implants to be manufactured with silicon nitride. We expect to enter into similar arrangements with other spine companies during 2015. We also expect to do the same in other markets such as total hip and knee joint replacements, dental and sports medicine. We believe our biomaterial expertise, strong intellectual property and formulaic manufacturing process will allow us to transition currently available medical device products made of inferior biomaterials and manufacture them using silicon nitride and our technology platform to improve their characteristics.

Manufacturing

Silicon Nitride Manufacturing

To control the quality, cost and availability of our silicon nitride products and product candidates, we operate our own manufacturing facility. Our 54,000 square foot corporate building includes a 30,000 square foot ISO 13485 certified medical device manufacturing space. It is equipped with state-of-the-art powder processing, spray drying, pressing and computerized machining equipment, sintering furnaces, and other testing equipment that enables us to control the entire manufacturing process for our silicon nitride products and product candidates. To our knowledge, we are the only vertically integrated silicon nitride orthopedic medical device manufacturer in the world. All operations with the exceptions of raw material production, cleaning, packaging and sterilization are performed in-house. We purchase raw materials, consisting of silicon nitride ceramic powder and dopant chemical compounds, from several vendors which are ISO registered and approved by us. These raw materials are characterized and tested in our facility in accordance with our specifications and then blended to formulate our silicon nitride. We believe that there are multiple vendors that can supply us these raw materials and we continually monitor the quality and pricing offered by our vendors to ensure high quality and cost-effective supply of these materials. A flowchart of the silicon nitride manufacturing process is shown below.

In June 2014, we also entered to a manufacturing, development and supply agreement with Kyocera Industrial Ceramics Corporation, or Kyocera, under which Kyocera will become a second qualified manufacturer of our silicon nitride-based spinal fusion products and product candidates..

Non-Silicon Nitride and Instruments Manufacturing

We obtain our non-silicon nitride spinal fusion products and instruments from third-party manufacturers. We also plan to rely on third-party manufacturers for the supply of the metal components of our silicon nitride hip and knee joint replacement product candidates. We only use manufacturers that operate under QSR and are ISO 13485 certified. Our in-house quality control group examines subcontracted components to ensure that they meet our required specifications. We believe that the use of third-party sources for non-silicon nitride spinal fusion products and instruments will reduce our capital investment requirements and allow us to strategically focus our resources on the manufacture of our silicon nitride products and product candidates.

Intellectual Property

We rely on a combination of patents, trademarks, trade secrets and other forms of intellectual property, nondisclosure agreements, proprietary information ownership agreements and other measures to protect our intellectual property rights. We believe that in order to have a competitive advantage, we must continue to develop and maintain the proprietary aspects of our technologies.

As of March 13, 2015, we had 44 issued U.S. patents, 22 pending U.S. patent applications, 12 granted foreign patents and 15 pending foreign patent applications. Our issued patents began to expire in 2014, with the last of these patents expiring in 2031. The first core patents do not expire until 2022; these include US 6,881,229 and US 6,790,233.

We have seven U.S patents, one European patent, and related pending applications, directed to articulating implants using our high-strength, high toughness doped silicon nitride MC^2 ceramic. The issued patents, which include US 6,881,229; US 7,666,229; US 8,123,812; US 7,780,738; US 7,695,521; US 7,776,085; US 8,133,284; and EP

1408874, begin to expire in 2022. We also have two U.S. patents, two European patents, and related pending applications, related to our C^SC technology that are directed to implants that have both a dense load-bearing, or cortical, component and a porous, or cancellous, component, together with a surface coating. The issued patents, which include US 6,790,233; US 6,846,327; EP 1389978; and EP 2055267, begin to expire in 2022.

We also have three U.S. patents that we acquired in July 2012 from Dytech Corporation Ltd., or Dytech, directed to manufacturing processes for the production of porous ceramics for use in our orthopedic implants. These patents, which include US 5,563,106, which has now expired; US 5,705,448; and US 6,617,270, expire between 2015 and 2019. Under our acquisition agreement with Dytech, Dytech granted to us a perpetual, irrevocable and exclusive license, including the right to grant sublicenses, to certain improvements

and know-how related to the acquired patents. In return, we are required to pay Dytech a low single-digit royalty on net sales of products sold by us, our affiliates, or our licensees that are covered by one or more valid claims of these patents, and a percentage of any non-royalty licensing income we may receive in the event we grant a license to others.

Our remaining issued patents and pending applications are directed to additional aspects of our products and technologies including, among other things:

- designs for pedicle screws;
- designs for intervertebral fusion devices;
- designs for hip implants; and
- designs for knee implants.

We also expect to rely on trade secrets, know-how, continuing technological innovation and in-licensing opportunities to develop and maintain our intellectual property position. However, trade secrets are difficult to protect. We seek to protect the trade secrets in our proprietary technology and processes, in part, by entering into confidentiality agreements with commercial partners, collaborators, employees, consultants, scientific advisors and other contractors and into invention assignment agreements with our employees and some of our commercial partners and consultants. These agreements are designed to protect our proprietary information and, in the case of the invention assignment agreements, to grant us ownership of the technologies that are developed.

Competition

The main alternatives to our silicon nitride biomaterial include: PEEK, which is predominantly manufactured by Invibio, BIOLOX® delta, which is a traditional ceramic manufactured by CeramTec, allograft bone, metals and coated metals.

We believe our main competitors in the orthopedic implant market, which utilize a variety of competitive biomaterials, include: Medtronic, Inc.; DePuy Synthes Companies, a group of Johnson & Johnson companies; Stryker Corporation; Biomet, Inc.; Zimmer Holdings, Inc.; Smith & Nephew plc; and Aesculap Inc. Presently, these companies buy ceramic components on an OEM basis from manufacturers such as CeramTec, Kyocera and CoorTek, Inc., among others. We anticipate that these and other orthopedic companies and OEMs will seek to introduce new biomaterials and products that compete with ours.

Competition within the industry is primarily based on technology, innovation, product quality, and product awareness and acceptance by surgeons. Our principal competitors have substantially greater financial, technical and marketing resources, as well as significantly greater manufacturing capabilities than we do, and they may succeed in developing products that render our implants and product candidates non-competitive. Our ability to compete successfully will depend upon our ability to develop innovative products with advanced performance features based on our silicon nitride technologies.

Government Regulation of Medical Devices

Governmental authorities in the United States, at the federal, state and local levels, and other countries extensively regulate, among other things, the research, development, testing, manufacture, labeling, promotion, advertising, distribution, marketing and export and import of products such as those we are commercializing and developing. Failure to obtain approval or clearance to market our products and products under development and to meet the ongoing requirements of these regulatory authorities could prevent us from continuing to market or develop our products and product candidates.

United States

Pre-Marketing Regulation

In the United States, medical devices are regulated by the FDA. Unless an exemption applies, a new medical device will require either prior 510(k) clearance or approval of a premarket approval application, or PMA, before it can be marketed in the United States. The information that must be submitted to the FDA in order to obtain clearance or approval to market a new medical device varies depending on how the medical device is classified by the FDA. Medical devices are classified into one of three classes on the basis of the controls deemed by the FDA to be necessary to reasonably ensure their safety and effectiveness. Class I devices, which are those that have the lowest level or risk associated with them, are subject to general controls, including labeling, premarket notification and adherence to the QSR. Class II devices are subject to general controls and special controls, including performance standards. Class III devices, which have the highest level of risk associated with them, are subject to most of the previously identified requirements as well as to premarket approval. Most Class I devices and some Class II devices are exempt from the 510(k) requirement, although manufacturers of these devices are still subject to registration, listing, labeling and QSR requirements.

A 510(k) premarket notification must demonstrate that the device in question is substantially equivalent to another legally marketed device, or predicate device, that did not require premarket approval. In evaluating the 510(k), the FDA will determine whether the device has the same intended use as the predicate device, and (a) has the same technological characteristics as the predicate device, or (b) has different technological characteristics, and (i) the data supporting the substantial equivalence contains information, including appropriate clinical or scientific data, if deemed necessary by the FDA, that demonstrates that the device is as safe and as effective as a legally marketed device, and (ii) does not raise different questions of safety and effectiveness than the predicate device. Most 510(k)s do not require clinical data for clearance, but the FDA may request such data. The FDA's goal is to review and act on each 510(k) within 90 days of submission, but it may take longer based on requests for additional information. In addition, requests for additional data, including clinical data, will increase the time necessary to review the notice. If the FDA does not agree that the new device is substantially equivalent to the predicate device, the new device will be classified in Class III, and the manufacturer must submit a PMA. Since July 2012, however, with the enactment of the Food and Drug Administration Safety and Innovation Act, or FDASIA, a de novo pathway is directly available for certain low to moderate risk devices that do not qualify for the 510(k) pathway due to lack of a predicate device. Modifications to a 510(k)-cleared medical device may require the submission of another 510(k) or a PMA if the changes could significantly affect the safety or effectiveness or constitute a major change in the intended use of the device.

Modifications to a 510(k)-cleared device frequently require the submission of a traditional 510(k), but modifications meeting certain conditions may be candidates for FDA review under a Special 510(k). If a device modification requires the submission of a 510(k), but the modification does not affect the intended use of the device or alter the fundamental scientific technology of the device, then summary information that results from the design control process associated with the cleared device can serve as the basis for clearing the application. A Special 510(k) allows a manufacturer to declare conformance to design controls without providing new data. When the modification involves a change in material, the nature of the "new" material will determine whether a traditional or Special 510(k) is necessary. For example, in its Device Advice on How to Prepare a Special 510(k), the FDA uses the example of a change in a material in a finger joint prosthesis from a known metal alloy to a ceramic that has not been used in a legally marketed predicate device as a type of change that should not be submitted as a Special 510(k). However, if the "new" material is a type that has been used in other legally marketed devices within the same classification for the same intended use, a Special 510(k) is appropriate. The FDA gives as an example a manufacturer of a hip implant who changes from one alloy to another that has been used in another legally marketed predicate. Special 510(k)s are typically processed within 30 days of receipt.

The PMA process is more complex, costly and time consuming than the 510(k) clearance procedure. A PMA must be supported by extensive data including, but not limited to, technical, preclinical, clinical, manufacturing, control and labeling information to demonstrate to the FDA's satisfaction the safety and effectiveness of the device for its intended use. After a PMA is submitted, the FDA has 45 days to determine whether it is sufficiently complete to permit a substantive review. If the PMA is complete, the FDA will file the PMA. The FDA is subject to performance goal review times for PMAs and may issue a decision letter as a first action on a PMA within 180 days of filing, but if it has questions, it will likely issue a first major deficiency letter within 150 days of filing. It may also refer the PMA to an FDA advisory panel for additional review, and will conduct a preapproval inspection of the manufacturing facility to ensure compliance with the QSR, either of which could extend the 180-day response target. While the FDA's ability to meet its performance goals has generally improved during the past few years, it may not meet these goals in the future. A PMA can take several years to complete and there is no assurance that any submitted PMA will ever be approved. Even when approved, the FDA may limit the indication for which the medical device may be marketed or to whom it may be sold. In addition, the FDA may request additional information or request the performance of additional clinical trials before it will reconsider the approval of the PMA or as a condition of approval, in which case the trials must be completed after the PMA is approved. Changes to the device, including changes to its manufacturing process, may require the approval of a supplemental PMA.

If a medical device is determined to present a "significant risk," the manufacturer may not begin a clinical trial until it submits an investigational device exemption, or IDE, to the FDA and obtains approval of the IDE from the FDA. The IDE must be supported by appropriate data, such as animal and laboratory testing results and include a proposed clinical protocol. These clinical trials are also subject to the review, approval and oversight of an institutional review board, or IRB, which is an independent and multi-disciplinary committee of volunteers who review and approve research proposals, and the reporting of adverse events and experiences, at each institution at which the clinical trial will be performed. The clinical trials must be conducted in accordance with applicable regulations, including but not limited to the FDA's IDE regulations and current good clinical practices. A clinical trial may be suspended by the FDA, the IRB or the sponsor at any time for various reasons, including a belief that the risks to the study participants outweigh the benefits of participation in the trial. Even if a clinical trial is completed, the results may not demonstrate the safety and efficacy of a device, or may be equivocal or otherwise not be sufficient to obtain approval.

Post-Marketing Regulation

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

- compliance with the QSR, which require manufacturers to follow stringent design, testing, control, documentation, record maintenance, including maintenance of complaint and related investigation files, and other quality assurance controls during the manufacturing process;
- labeling regulations, which prohibit the promotion of products for uncleared or unapproved or "off-label" uses and impose other restrictions on labeling; and
- medical device reporting obligations, which require that manufacturers investigate and report to the FDA adverse events, including deaths, or serious injuries that may have been or were caused by a medical device and malfunctions in the device that would likely cause or contribute to a death or serious injury if it were to recur.

Failure to comply with applicable regulatory requirements can result in enforcement action by the FDA, which may include any of the following sanctions:

- warning letters;
- fines, injunctions, and civil penalties;
- recall or seizure of our products;
- operating restrictions, partial suspension or total shutdown of production;
- refusal to grant 510(k) clearance or PMA approvals of new products;
- withdrawal of 510(k) clearance or PMA approvals; and
- criminal prosecution.

To ensure compliance with regulatory requirements, medical device manufacturers are subject to market surveillance and periodic, pre-scheduled and unannounced inspections by the FDA, and these inspections may include the manufacturing facilities of our subcontractors.

International Regulation

International sales of medical devices are subject to foreign government regulations, which vary substantially from country to country. The time required to obtain approval by a foreign country may be longer or shorter than that required for FDA approval, and the requirements may differ. For example, the primary regulatory authority with respect to medical devices in Europe is that of the European Union. The European Union consists of 28 countries and has a total population of over 500 million people. The unification of these countries into a common market has resulted in the unification of laws, standards and procedures across these countries, which may expedite the introduction of medical devices like those we are offering and developing. Norway, Iceland, Lichtenstein and Switzerland are not members of the European Union, but have transposed applicable European medical device laws into their national legislation. Thus, a device that is marketed in the European Union may also be recognized and accepted in those four non-member European countries as well.

The European Union has adopted numerous directives and standards regulating the design, manufacture, clinical trials, labeling and adverse event reporting for medical devices. Devices that comply with the requirements of relevant directives will be entitled to bear CE Conformity Marking, indicating that the device conforms to the essential requirements of the applicable directives and, accordingly, can be commercially distributed throughout the European Union. Actual implementation of these directives, however, may vary on a country-by-country basis. The CE Mark is a mandatory conformity mark on medical devices distributed and sold in the European Union and certifies that a medical device has met applicable requirements.

The method of assessing conformity varies, but normally involves a combination of self-assessment by the manufacturer and a third-party assessment by a "Notified Body." Notified Bodies are independent testing houses,

laboratories, or product certifiers authorized by the European Union member states to perform the required conformity assessment tasks, such as quality system audits and device compliance testing. An assessment by a Notified Body based within the European Union is required in order for a manufacturer to distribute the product commercially throughout the European Union. Medium and higher risk devices require the intervention of a Notified Body which will be responsible for auditing the manufacturer's quality system. The Notified Body will also determine whether or not the product conforms to the requirements of the applicable directives. Devices that meet the applicable requirements of E.U. law and have undergone the appropriate conformity assessment routes will be granted CE "certification."

The CE Mark is mandatory for medical devices sold not only within the countries of the European Union but more generally within most of Europe. As many of the European standards are converging with international standards, the CE Mark is often used on medical devices manufactured and sold outside of Europe (notably in Asia that exports many manufactured products to Europe). CE Marking gives companies easier access into not only the European market but also to Asian and Latin American markets, most of whom recognize the CE Mark on medical device as a mark of quality and adhering to international standards of consumer safety, health or environmental requirements.

Compliance with Healthcare Laws

We must comply with various U.S. federal and state laws, rules and regulations pertaining to healthcare fraud and abuse, including anti-kickback and false claims laws, rules, and regulations, as well as other healthcare laws in connection with the commercialization of our products. Fraud and abuse laws are interpreted broadly and enforced aggressively by various state and federal agencies, including the U.S. Department of Justice, the U.S. Office of Inspector General for the Department of Health and Human Services and various state agencies.

We have entered into agreements with certain surgeons for assistance with the design of our products, some of whom we anticipate may make referrals to us or order our products. A majority of these agreements contain provisions for the payments of royalties and/or stock options. In addition, some surgeons currently own shares of our stock. We have structured these transactions with the intention of complying with all applicable laws, including fraud and abuse, data privacy and security, and transparency laws. Despite this intention, there can be no assurance that a particular government agency or court would determine our practices to be in full compliance with such laws. We could be materially impacted if regulatory or enforcement agencies or courts interpret our financial arrangements with surgeons to be in violation of healthcare laws, including, without limitation, fraud and abuse, data privacy and security, or transparency laws.

The U.S. federal Anti-Kickback Statute prohibits persons, including a medical device manufacturer (or a party acting on its behalf), from knowingly or willfully soliciting, receiving, offering or paying remuneration, directly or indirectly, in exchange for or to induce either the referral of an individual for a service or product or the purchasing, ordering, arranging for, or recommending the ordering of, any service or product for which payment may be made by Medicare, Medicaid or any other federal healthcare program. This statute has been interpreted to apply to arrangements between medical device manufacturers on one hand and healthcare providers on the other. The term “remuneration” is not defined in the federal Anti-Kickback Statute and has been broadly interpreted to include anything of value, such as cash payments, gifts or gift certificates, discounts, waiver of payments, credit arrangements, ownership interests, the furnishing of services, supplies or equipment, and the provision of anything at less than its fair market value. Courts have broadly interpreted the scope of the law, holding that it may be violated if merely “one purpose” of an arrangement is to induce referrals, irrespective of the existence of other legitimate purposes. The Anti-Kickback Statute prohibits many arrangements and practices that are lawful in businesses outside of the healthcare industry. Although there are a number of statutory exemptions and regulatory safe harbors protecting certain business arrangements from prosecution, the exemptions and safe harbors are drawn narrowly, and practices that involve remuneration intended to induce prescribing, purchasing or recommending may be subject to scrutiny if they do not qualify for an exemption or safe harbor. Our practices may not in all cases meet all of the criteria for safe harbor protection from federal Anti-Kickback Statute liability. The reach of the Anti-Kickback Statute was broadened by the recently enacted Patient Protection and Affordable Care Act of 2010 and the Health Care and Education Affordability Reconciliation Act of 2010, collectively, the Affordable Care Act or ACA, which, among other things, amends the intent requirement of the federal Anti-Kickback Statute such that a person or entity no longer needs to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. In addition, the ACA provides that the government may assert that 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 False Claims Act (discussed below) or the civil monetary penalties statute, which imposes fines against any person who is determined to

have presented or caused to be presented claims to a federal healthcare program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent. In addition to the federal Anti-Kickback Statute, many states have their own anti-kickback laws. Often, these laws closely follow the language of the federal law, although they do not always have the same scope, exceptions, safe harbors or sanctions. In some states, these anti-kickback laws apply not only to payments made by government healthcare programs but also to payments made by other third-party payors, including commercial insurance companies.

Sales, marketing, consulting, and advisory arrangements between medical device manufacturers and sales agents and physicians are subject to the Anti-Kickback Statute and other fraud and abuse laws. Government officials have focused recent enforcement efforts on, among other things, the sales and marketing activities of healthcare companies, including medical device manufacturers, and have brought cases against individuals or entities whose personnel allegedly offered unlawful inducements to potential or existing customers in an attempt to procure their business. We expect these activities to continue to be a focus of government enforcement efforts. Settlements of these cases by healthcare companies have involved significant fines and penalties and in some instances criminal plea agreements. We are also aware of governmental investigations of some of the largest orthopedic device companies

reportedly focusing on consulting and service agreements between these companies and orthopedic surgeons. These developments are ongoing and we cannot predict the effects they will have on our business.

The federal False Claims Act imposes liability on any person that, among other things, knowingly presents, or causes to be presented, a false or fraudulent claim for payment by a federal healthcare program. The qui tam provisions of the False Claims Act allow a private individual to bring civil actions on behalf of the federal government alleging that the defendant has submitted a false claim, or has caused such a claim to be submitted, to the federal government, and to share in any monetary recovery. There are many potential bases for liability under the False Claims Act. Liability arises, primarily, when a person knowingly submits, or causes another to submit, a false claim for reimbursement to the federal government. The False Claims Act has been used to assert liability on the basis of inadequate care, kickbacks, and other improper referrals, and allegations as to misrepresentations with respect to the services rendered. Qui tam actions have increased significantly in recent years, causing greater numbers of healthcare companies, including medical device manufacturers, to defend false claim actions, pay damages and penalties, or be excluded from participation in Medicare, Medicaid or other federal or state healthcare programs as a result of investigations arising out of such actions. In addition, various states have enacted similar laws analogous to the False Claims Act. Many of these state laws apply where a claim is submitted to any third-party payor and not merely a federal healthcare program. We are unable to predict whether we would be subject to actions under the False Claims Act or a similar state law, or the impact of such actions. However, the cost of defending such claims, as well as any sanctions imposed, could adversely affect our financial performance. The Health Insurance Portability and Accountability Act of 1996, or HIPAA, also created several new federal crimes, including healthcare fraud and false statements relating to healthcare matters. The healthcare fraud statute prohibits knowingly and willfully executing a scheme to defraud any healthcare benefit program, including private third party payors. The false statements statute prohibits 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.

In addition, we may be subject to, or our marketing or research activities may be limited by, data privacy and security regulation by both the federal government and the states in which we conduct our business. For example, HIPAA and its implementing regulations established uniform federal standards for certain “covered entities” (healthcare providers, health plans and healthcare clearinghouses) governing the conduct of certain electronic healthcare transactions and protecting the security and privacy of protected health information. The American Recovery and Reinvestment Act of 2009, commonly referred to as the economic stimulus package, included expansion of HIPAA’s privacy and security standards called the Health Information Technology for Economic and Clinical Health Act, or HITECH, which became effective on February 17, 2010. Among other things, HITECH makes HIPAA’s privacy and security standards directly applicable to “business associates”—independent contractors or agents of covered entities that create, receive, maintain, or transmit protected health information in connection with providing a service for or on behalf of a covered entity. HITECH also increased the civil and criminal penalties that may be imposed against covered entities, business associates and possibly other persons, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorney’s fees and costs associated with pursuing federal civil actions. These laws also require the reporting of breaches of protected health information to affected individuals, regulators and in some cases, local or national media. HIPAA and HITECH impose strict limits on our physician collaborators’ ability to use and disclose patient information on our behalf.

There are also an increasing number of state “sunshine” laws that require manufacturers to provide reports to state governments on pricing and marketing information. Several states have enacted legislation requiring medical device companies to, among other things, establish marketing compliance programs, file periodic reports with the state, make periodic public disclosures on sales and marketing activities, and to prohibit or limit certain other sales and marketing practices. In addition, a federal law known as the Physician Payments Sunshine Act, now requires medical device manufacturers to track and report to the federal government certain payments and other transfers of value made to physicians and teaching hospitals and ownership or investment interests held by physicians and their immediate

family members. The first reporting period covered only payments or transfers of value made and ownership or investment interests held by physicians and their immediate family members from August 1, 2013 to December 31, 2013. The federal government disclosed the reported information on a publicly available website beginning in September 2014. For calendar year 2014, the Physician Payments Sunshine Act will require medical device manufacturers to report payments and transfers of values made and ownership or investment interests held by physicians and their immediate family members for the full calendar year. These laws may adversely affect our sales, marketing, and other activities by imposing administrative and compliance burdens on us. If we fail to track and report as required by these laws or to otherwise comply with these laws, we could be subject to the penalty provisions of the pertinent state and federal authorities.

Clinical research is heavily regulated by FDA regulations for the protection of human subjects (21 C.F.R. 50 and 56) and also the regulations of the U.S Department of Health and Human Services, or the Common Rule (45 C.F.R 46). Both FDA human subject regulations and the Common Rule impose restrictions on the involvement of human subjects in clinical research and require, among other things, the balancing of the risks and benefits of research, the documented informed consent of research participants, initial and ongoing review of research by an IRB. Similar regulations govern research conducted in foreign countries. Compliance with human subject protection regulations is costly and time consuming. Failure to comply could substantially and adversely impact our research program and the development of our products.

Because of the breadth of these laws and the narrowness of available statutory and regulatory exemptions, it is possible that some of our business activities could be subject to challenge under one or more of such laws. If our operations are found to be in violation of any of the federal and state laws described above or any other governmental regulations that apply to us, we may be subject to penalties, including criminal and significant civil monetary penalties, damages, fines, imprisonment, exclusion from participation in government healthcare programs, injunctions, recall or seizure of products, total or partial suspension of production, denial or withdrawal of pre-marketing product clearances and approvals, private "qui tam" actions brought by individual whistleblowers in the name of the government or refusal to allow us to enter into supply contracts, including government contracts, and the curtailment or restructuring of our operations. Public disclosure of privacy and data security violations could cause significant reputational harm. Any of these events could adversely affect our ability to operate our business and our results of operations. To the extent that any of our products are sold in a foreign country, we may be subject to similar foreign laws and regulations, which may include, for instance, applicable post-marketing requirements, including safety surveillance, anti-fraud and abuse laws, implementation of corporate compliance programs, as well as laws and regulations requiring transparency of pricing and marketing information and governing the privacy and security of health information, such as the E.U.'s Directive 95/46 on the Protection of Individuals with regard to the Processing of Personal Data, or the Data Directive, and the wide variety of national laws implementing the Data Directive.

Healthcare Reform

In the United States and foreign jurisdictions, there have been a number of legislative and regulatory changes to the healthcare system that could affect our future results of operations. In particular, there have been and continue to be a number of initiatives at the U.S. federal and state levels that seek to reduce healthcare costs.

In March 2010, President Obama signed into law the ACA, a sweeping law intended to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against healthcare fraud and abuse, add new transparency requirements for healthcare and health insurance industries, impose new taxes and fees on pharmaceutical and medical device manufacturers and impose additional health policy reforms. Among other things, the ACA imposes a 2.3% medical device excise tax on sales of many medical devices in the United States which became effective on January 1, 2013. Substantial new provisions affecting compliance have also been enacted, which may affect our business practices with healthcare practitioners and a significant number of provisions are not yet, or have only recently become, effective. Although it is too early to determine the full effect of the ACA, the new law appears likely to place downward pressure on pricing of medical devices, especially under the Medicare program, and may also increase our regulatory burdens and operating costs.

In addition, other legislative changes have been proposed and adopted since the ACA was enacted. For example, on August 2, 2011, the President signed into law the Budget Control Act of 2011, which, among other things, created the Joint Select Committee on Deficit Reduction to recommend to Congress proposals in spending reductions. The Joint Select Committee on Deficit Reduction did not achieve a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, starting in 2013. On January 2,

2013, President Obama signed into law the American Taxpayer Relief Act of 2012, or ATRA, which, among other things, reduced Medicare payments to several types of providers and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. On March 1, 2013, the President signed an executive order implementing the Budget Control Act's 2% Medicare payment reductions, and on April 1, 2013, these reductions went into effect. These new laws may result in additional reductions in Medicare and other healthcare funding, which could have a material adverse effect on our financial operations.

We expect that the ACA, as well as other healthcare reform measures that have been and may be adopted in the future, may result in more rigorous coverage criteria and in additional downward pressure on the price that we receive for our products. Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may affect our ability to generate revenue and profits or commercialize our product candidates.

Third-Party Reimbursement

Because we typically receive payment directly from hospitals and surgical centers, we do not anticipate relying directly on payment for any of our products from third-party payors, such as Medicare, Medicaid, private insurers, and managed care companies. However, our business will be affected by policies administered by federal and state healthcare programs, such as Medicare and Medicaid, as well as private third-party payors, which often follow the policies of the state and federal healthcare programs. For example, our business will be indirectly impacted by the ability of a hospital or medical facility to obtain coverage and third-party reimbursement for procedures performed using our products. Many hospitals and clinics in the United States belong to group purchasing organizations (that typically incentivize their hospital members to make a relatively large proportion of purchases from a limited number of vendors of similar products that have contracted to offer discounted prices). Such contracts often include exceptions for purchasing certain innovative new technologies, however. Accordingly, the commercial success of our products may also depend to some extent on our ability to either negotiate favorable purchase contracts with key group purchasing organizations or persuade hospitals and clinics to purchase our product "off contract." These third-party payors may deny reimbursement if they determine that a device used in a procedure was not medically necessary; was not used in accordance with cost-effective treatment methods, as determined by the third-party payor; or was used for an unapproved use. A national or local coverage decision denying Medicare coverage for one or more of our products could result in private insurers and other third party payors also denying coverage. Even if favorable coverage and reimbursement status is attained for our products, less favorable coverage policies and reimbursement rates may be implemented in the future. The cost containment measures that third-party payors and providers are instituting, both within the United States and abroad, could significantly reduce our potential revenues from the sale of our products and any product candidates. We cannot provide any assurances that we will be able to obtain and maintain third party coverage or adequate reimbursement for our products and product candidates in whole or in part.

For inpatient and outpatient procedures, including those that will involve use of our products, Medicare and many other third-party payors in the United States reimburse hospitals at a prospectively determined amount. This amount is generally based on one or more diagnosis related groups, or DRGs, associated with the patient's condition for inpatient treatment and generally based on ambulatory payment classifications, or APCs, associated with the procedures performed as an outpatient at an ambulation surgicenter. Each DRG or APC is associated with a level of payment and may be adjusted from time to time, usually annually. Prospective payments are intended to cover most of the non-physician hospital costs incurred in connection with the applicable diagnosis and related procedures. Implant products, such as those we plan to sell, represent part of the total procedure costs while labor, hospital room and board, and other supplies and services represent the balance of those costs. However, the prospective payment amounts are typically set independently of a particular hospital's actual costs associated with treating a particular patient and implanting a device. Therefore, the payment that a hospital would receive for a particular hospital visit would not typically take into account the cost of our products.

Medicare has established a number of DRGs for inpatient procedures that involve the use of products similar to ours. Although Medicare has authority to create special DRGs for hospital services that more properly reflect the actual costs of expensive or new-technology devices implanted as part of a procedure, it has declined to do so in the past, and we do not expect that it will do so with respect to our current products and product candidates. Medicare's DRG and APC classifications may have implications outside of Medicare, as many other U.S. third-party payors often use Medicare DRGs and APCs for purposes of determining reimbursement.

We believe that orthopedic implants generally have been well received by third-party payors because of the ability of these implants to greatly reduce long-term healthcare costs for patients with degenerative joint disease. However, coverage and reimbursement policies vary from payor to payor and are subject to change. As discussed above, hospitals that purchase medical devices for treatment of their patients generally rely on third-party payors to reimburse all or part of the costs and fees associated with the procedures performed with these devices. Both government and

private third-party coverage and reimbursement levels are critical to new product acceptance. Neither hospitals nor surgeons are likely to use our products if they do not receive reimbursement for the procedures adequate to cover the cost of our products.

While it is expected that hospitals will be able to obtain coverage for procedures using our products, the level of payment available to them for such procedures may change over time. State and federal healthcare programs, such as Medicare and Medicaid, closely regulate provider payment levels and have sought to contain, and sometimes reduce, payment levels. Commercial insurers and managed care plans frequently follow government payment policies, and are likewise interested in controlling increases in the cost of medical care. These third-party payors may deny payment if they determine that a procedure was not medically necessary, a device used in a procedure was not used in accordance with cost-effective treatment methods, as determined by the third-party payor, or was used for an unapproved use.

In addition, some payors are adopting pay-for-performance programs that differentiate payments to healthcare providers based on the achievement of documented quality-of-care metrics, cost efficiencies, or patient outcomes. These programs are intended to provide incentives to providers to find ways to deliver the same or better results while consuming fewer resources. As a result of these programs, and related payor efforts to reduce payment levels, hospitals and other providers are seeking ways to reduce their costs,

including the amounts they pay to medical device suppliers. Adverse changes in payment rates by payors to hospitals could adversely impact our ability to market and sell our products and negatively affect our financial performance.

In international markets, healthcare payment systems vary significantly by country and many countries have instituted price ceilings on specific product lines. There can be no assurance that our products will be considered cost-effective by third-party payors, that reimbursement will be available or, if available, that the third-party payors' reimbursement policies will not adversely affect our ability to sell our products profitably.

Member countries of the European Union offer various combinations of centrally financed healthcare systems and private health insurance systems. The relative importance of government and private systems varies from country to country. Governments may influence the price of medical devices through their pricing and reimbursement rules and control of national healthcare systems that fund a large part of the cost of those products to consumers. Some jurisdictions operate positive and negative list systems under which products may be marketed only once a reimbursement price has been agreed upon. Some of these countries may require, as condition of obtaining reimbursement or pricing approval, the completion of clinical trials that compare the cost-effectiveness of a particular product candidate to currently available therapies. Some E.U. member states allow companies to fix their own prices for devices, but monitor and control company profits. The choice of devices is subject to constraints imposed by the availability of funds within the purchasing institution. Medical devices are most commonly sold to hospitals or healthcare facilities at a price set by negotiation between the buyer and the seller. A contract to purchase products may result from an individual initiative or as a result of a competitive bidding process. In either case, the purchaser pays the supplier, and payment terms vary widely throughout the European Union. Failure to obtain favorable negotiated prices with hospitals or healthcare facilities could adversely affect sales of our products.

Employees

As of March 6, 2015, we had 66 employees. We believe that our success will depend, in part, on our ability to attract and retain qualified personnel. We have never experienced a work stoppage due to labor difficulties and believe that our relations with our employees are good. None of our employees are represented by labor unions.

Executive Officers

Our current executive officers and their respective ages and positions are as follows:

Name	Age	Position
B. Sonny Bal, M.D.	52	Chairman of the Board of Directors, President and Chief Executive Officer
Bryan J. McEntire	62	Chief Technology Officer
Christopher R. Whitfield (1)	47	Chief Commercial Officer
Ty A. Lombardi	42	Vice President Finance and Principal Accounting Officer

(1) Mr. Whitfield has submitted his notice of resignation, which will be effective March 31, 2015.

The following is a brief summary of the background of each of our current directors and executive officers.

B. Sonny Bal, M.D. has served on our board of directors since February 2012, as Chairman of our board of directors since August 2014 and as our President and Chief Executive Officer since October 2014. Dr. Bal is Professor & Chief of Adult Reconstruction at the University of Missouri, Columbia, and Adjunct Professor of Material Sciences at the University of Missouri at Rolla. Dr. Bal is a member of the American Academy of Orthopaedic Surgeons, the American Association of Hip and Knee Surgeons and the International Society of Technology in Arthroplasty. Dr. Bal received his M.D. degree from Cornell University and an M.B.A. from Northwestern University, and a J.D. from the

University of Missouri. Dr. Bal is a licensed attorney and co-founder of the Bal Brenner law firm in North Carolina.

Bryan J. McEntire has served as our Chief Technology Officer since May 2012. From June 2004 to May 2012 he served as our Vice President of Manufacturing and as our Vice President of Research from December 2006 to May 2012. Mr. McEntire has worked in various advanced ceramic product development, quality engineering and manufacturing roles at Applied Materials, Inc., Norton Advanced Ceramics, a division of Saint-Gobain Industrial Ceramics Corporation, Norton/TRW Ceramics and Ceramatec, Inc., a small producer of ionic-conducting and structural ceramic components located in Salt Lake City, Utah. Mr. McEntire holds a B.S. degree in Materials Science and Engineering and an M.B.A. from the University of Utah.

Christopher R. Whitfield has served as our Chief Commercial Officer since November 2013. From March 2012 to September 2012, Mr. Whitfield served as the Executive Vice President, Sales and Marketing of Pioneer Surgical Technologies and from October 2009 to March 2012 as its Vice President, Marketing. From October 2008 to September 2009, he served as the West Area Vice President, Sales for Zimmer Spine, a division of Zimmer, Inc. From September 2007 to October 2008, he served as the Senior Director, Marketing of Abbot Spine, Inc., from January 2007 to September 2007 as its Director, Product Management and from June 2005 to January 2007 he served as its Group Manager, Product Marketing. Mr. Whitfield received a B.S. degree in Business Administration, Marketing and Management from the University of Texas at Austin.

Ty A. Lombardi joined Amedica in March 2014 as our Director of Finance, and was appointed to serve as the Vice President Finance and Principal Accounting Officer in January 2015. Prior to joining Amedica, Mr. Lombardi was part owner of Cadence Consulting Corporation, where he served as principal consultant from January 2006 to March 2014 and provided a wide range of financial and accounting services. Mr. Lombardi is a Certified Public Accountant and has a M.S. in Accounting from Brigham Young University

ITEM 1A. RISK FACTORS

In addition to the other information contained in this Annual Report, the following risk factors should be considered carefully in evaluating our company. Our business, financial condition, liquidity or results of operations could be materially adversely affected by any of these risks.

Risks Related to Our Business and Strategy

We have incurred net losses since our inception and anticipate that we will continue to incur substantial net losses for the foreseeable future. We may never achieve or sustain profitability.

We have incurred substantial net losses since our inception. For the years ended December 31, 2014 and 2013 we incurred a net loss of $32.6 million and $8.3 million, respectively, and used cash in operations of $14.5 million and $9.9 million, respectively. We have an accumulated deficit of $172.5 million at December 31, 2014. Our losses have resulted principally from costs incurred in connection with our sales and marketing activities, research and development activities, manufacturing activities, general and administrative expenses associated with our operations, impairments on intangible assets, interest expense, loss on extinguishment of debt and offering costs. Even if we are successful in launching additional products into the market, we expect to continue to incur substantial losses for the foreseeable future as we continue to sell and market our current products and research and develop, and seek regulatory approvals for, our product candidates.

If sales revenue from any of our current products or product candidates that receive marketing clearance from the FDA or other regulatory body is insufficient, if we are unable to develop and commercialize any of our product candidates, or if our product development is delayed, we may never become profitable. Even if we do become profitable, we may be unable to sustain or increase our profitability on a quarterly or annual basis.

Our success depends on our ability to successfully commercialize silicon nitride-based medical devices, which to date have experienced only limited market acceptance.

We believe we are the first and only company to use silicon nitride in medical applications. To date, however, we have had limited acceptance of our silicon nitride-based products and our product revenue has been derived substantially from our non-silicon nitride products. In order to succeed in our goal of becoming a leading biomaterial technology company utilizing silicon nitride, we must increase market awareness of our silicon nitride interbody spinal fusion products, continue to implement our sales and marketing strategy, enhance our commercial infrastructure and commercialize our silicon nitride joint replacement components and other products. If we fail in any of these

endeavors or experience delays in pursuing them, we will not generate revenues as planned and will need to curtail operations or seek additional financing earlier than otherwise anticipated.

Our current products and our future products may not be accepted by hospitals and surgeons and may not become commercially successful.

Although we received 510(k) regulatory clearance from the FDA for our first silicon nitride spinal fusion products in 2008, we have not been able to obtain significant market share of the interbody spinal fusion market to date, and may not obtain such market share in the future. Even if we receive regulatory clearances or approvals for our product candidates in development, these product candidates may not gain market acceptance among orthopedic surgeons and the medical community. Orthopedic surgeons may elect not to use our products for a variety of reasons, including:

- lack or perceived lack of evidence supporting the beneficial characteristics of our silicon nitride technology;

- limited long-term data on the use of silicon nitride in medical devices;
- lower than expected clinical benefits in comparison with other products;
- the perception by surgeons that there are insufficient advantages of our products relative to currently available products;
- hospitals may choose not to purchase our products;
- group purchasing organizations may choose not to contract for our products, thus limiting availability of our products to hospital purchasers;
- the price of our products, which may be higher than products made of the other commonly used biomaterials in the interbody spinal fusion market and total joint market;
- lack of coverage or adequate payment from managed care plans and other third-party payors for the procedures that use our products;
- Medicare, Medicaid or other third-party payors may limit or not permit reimbursement for procedures using our products;
- ineffective marketing and distribution support;
- the time and resources that may be required for training, or the inadequate training, of surgeons in the proper use of our products;
- the development of alternative biomaterials and products that render our products less competitive or obsolete; and
- the development of or improvement of competitive products.

If surgeons do not perceive our silicon nitride products and product candidates as superior alternatives to competing products, we will not be able to generate significant revenues, if any.

Even if surgeons are convinced of the superior characteristics of our silicon nitride products and our product candidates that we successfully introduce compared to the limitations of the current commonly used biomaterials, surgeons may find other methods or turn to other biomaterials besides silicon nitride to overcome such limitations. For instance, with respect to interbody spinal fusion products, surgeons or device manufacturers may use more effective markers for enhancing the imaging compatibility of PEEK devices, more effective antibiotics to prevent or treat implant-related infections, and more effective osteoconductive and osteoinductive materials when implanting an interbody spinal fusion device. Device manufacturers may also coat metal with existing traditional ceramics to reduce the risk of metal wear particles and corrosion in total joint replacement implants. Additionally, surgeons may increase their use of metal interbody spinal fusion devices if there is an increasing perception that PEEK devices are limited by their strength and resistance to fracture.

If we are unable to increase the productivity of our sales and marketing infrastructure we will not be able to penetrate the spinal fusion market.

We market and sell our products to surgeons and hospitals in the United States and select markets in Europe and South America using a network of independent third-party distributors who have existing surgeon relationships. We manage this distribution network through our in-house sales and marketing management team. We may also establish distribution collaborations in the United States and abroad in instances where access to a large or well-established sales and marketing organization may help to expand the market or accelerate penetration for selected products.

We cannot assure you that we will succeed in entering into and maintaining productive arrangements with an adequate number of distributors that are sufficiently committed to selling our products. The establishment of a distribution network is expensive and time consuming. As we launch new products and increase our marketing effort with respect to existing products, we will need to continue to hire, train, retain and motivate skilled independent distributors with significant technical knowledge in various areas, such as spinal fusion and total hip and knee joint replacement. In addition, the commissions we pay our distributors have increased over time, which has resulted in higher sales and marketing expenses, and those commissions and expenses may increase in the future. Furthermore, current and potential distributors may market and sell the products of our competitors. Even if the distributors market and sell our

products, our competitors may be able, by offering higher commission payments or other incentives, to persuade these distributors to reduce or terminate their sales and marketing efforts related to our products. The distributors may also help competitors solicit business from our existing customers. Some of our independent distributors account for a significant portion of our sales volume, and, if we were to lose them, our sales could be adversely affected.

Even if we engage and maintain suitable relationships with an adequate number of distributors, they may not generate revenue as quickly as we expect them to, commit the necessary resources to effectively market and sell our products, or ultimately succeed in

selling our products. We have been unable to obtain meaningful market share in the interbody spinal fusion device market with our current silicon nitride products to date and we may not be successful in increasing the productivity of our sales and marketing team and distribution network to gain meaningful market share for our silicon nitride products, which could adversely affect our business and financial condition.

The orthopedic market is highly competitive and we may not be able to compete effectively against the larger, well-established companies that dominate this market or emerging and small innovative companies that may seek to obtain or increase their share of the market.

The markets for spinal fusions and total hip and knee implant products are intensely competitive, and many of our competitors are much larger and have substantially more financial and human resources than we do. Many have long histories and strong reputations within the industry, and a relatively small number of companies dominate these markets. Medtronic, Inc.; DePuy Synthes Companies, a group of Johnson & Johnson companies; Stryker Corporation; Biomet, Inc.; Zimmer Holdings, Inc.; and Smith & Nephew plc, account for a significant amount of orthopedic sales worldwide.

These companies enjoy significant competitive advantages over us, including:

- broad product offerings, which address the needs of orthopedic surgeons and hospitals in a wide range of procedures;
- products that are supported by long-term clinical data;
- greater experience in, and resources for, launching, marketing, distributing and selling products, including strong sales forces and established distribution networks;
- existing relationships with spine and joint reconstruction surgeons;
- extensive intellectual property portfolios and greater resources for patent protection;
- greater financial and other resources for product research and development;
- greater experience in obtaining and maintaining FDA and other regulatory clearances and approvals for products and product enhancements;
- established manufacturing operations and contract manufacturing relationships;
- significantly greater name recognition and widely recognized trademarks; and
- established relationships with healthcare providers and payors.

Our products and any product candidates that we may introduce into the market may not enable us to overcome the competitive advantages of these large and dominant orthopedic companies. In addition, even if we successfully introduce additional product candidates incorporating our silicon nitride biomaterial into the market, emerging and small innovative companies may seek to increase their market share and they may eventually possess competitive advantages, which could adversely impact our business. Our competitors may also employ pricing strategies that could adversely affect the pricing of our products and pricing in the spinal fusion and total joint replacement market generally.

Moreover, many other companies are seeking to develop new biomaterials and products which may compete effectively against our products in terms of performance and price. For example, Smith & Nephew has developed a ceramic-coated metal, known as Oxinium, which may overcome certain of the limitations of metal joint replacement products and could directly compete with our silicon nitride and silicon nitride-coated product candidates.

We have significant customer concentration, so that economic difficulties or changes in the purchasing policies or patterns of our key customers could have a significant impact on our business and operating results.

A small number of customers account for a substantial portion of our product revenues. Our customers are primarily hospitals and surgical centers. At December 31, 2014 and 2013, our largest customer, Bon Secours St. Mary's Hospital, or St. Mary's, had a receivable balance of approximately 9% and 15%, respectively, of our total trade accounts receivable. In addition, St. Mary's accounted for 18% and 14% of our product revenues for each of the years ended December 31, 2014 and 2013. Sales of our products to our customers, including St. Mary's, are not based on long-term, committed-volume purchase contracts, and we may not continue to receive significant revenues from St. Mary's or any customer. Because of our significant customer concentration, our revenue could fluctuate significantly due to changes in economic conditions, the use of competitive products, or the loss of, reduction of business with, or less favorable terms with St. Mary's or any of our other significant customers. A significant portion of St. Mary's' purchases have been of our non-silicon nitride products, so it may be able to purchase competitive similar products from others. A reduction or delay in orders from St. Mary's or any of our other significant customers, or a delay or default in payment by any significant customer, could materially harm our business and results of operations.

The manufacturing process for our silicon nitride products is complex and requires sophisticated state-of-the-art equipment, experienced manufacturing personnel and highly specialized knowledge. If we are unable to manufacture our silicon nitride products on a timely basis consistent with our quality standards, our results of operation will be adversely impacted.

In order to control the quality, cost and availability of our silicon nitride products, we developed our own manufacturing capabilities. We operate a 30,000 square foot manufacturing facility which is certified under the ISO 13485 medical device manufacturing standard for medical devices and operates under the FDA's quality systems regulations, or QSRs. All operations with the exceptions of raw material production, cleaning, packaging and sterilization are performed at this facility.

In order to mitigate the risk associated with us being the sole manufacturer of our silicon nitride medical device products, in June 2014, we entered into a manufacturing development and supply agreement with Kyocera Industrial Ceramics Corporation, or Kyocera. We have initiated the FDA required actions and processes in order to qualify Kyocera as a second source supplier of our silicon nitride products. We updated our material master file and submitted a 510(k) with the FDA in the third quarter of 2014 to qualify Kyocera as a second source supplier of our silicon nitride products. We expect to begin receiving production parts from Kyocera in the latter part of the fourth quarter of 2014 for distribution in the first quarter of 2015, assuming the FDA accepts and approves our 510(k) submission. Although we expect this arrangement with Kyocera will lead to Kyocera becoming a secondary qualified manufacturer, if Kyocera fails to become a qualified manufacturer of these products and product candidates, we will continue to be the sole manufacturer of these products and will need to seek other potential secondary manufacturers. Our reliance solely on our internal resources to manufacture our silicon nitride products entails risks to which we would not be subject if we had secondary suppliers for their manufacture, including:

- the inability to meet our product specifications and quality requirements consistently;
- a delay or inability to procure or expand sufficient manufacturing capacity to meet additional demand for our products;
- manufacturing and product quality issues related to the scale-up of manufacturing;
- the inability to produce a sufficient supply of our products to meet product demands;
- the disruption of our manufacturing facility due to equipment failure, natural disaster or failure to retain key personnel; and
- our inability to ensure our compliance with regulations and standards of the FDA including QSRs and corresponding state and international regulatory authorities.

Any of these events could lead to a reduction in our product sales, product launch delays, failure to obtain regulatory clearance or approval or impact our ability to successfully sell our products and commercialize our products candidates.

We depend on a limited number of third-party suppliers for key raw materials used in the manufacturing of our silicon nitride products, and the loss of these third-party suppliers or their inability to supply us with adequate raw materials could harm our business.

We rely on a limited number of third-party suppliers for the raw materials required for the production of our silicon nitride products and product candidates. Our dependence on a limited number of third-party suppliers involves several risks, including limited control over pricing, availability, quality, and delivery schedules for raw materials. We have no supply agreements in place with any of our suppliers and cannot be certain that our current suppliers will continue to provide us with the quantities of raw materials that we require or that satisfy our anticipated specifications and quality requirements. Any supply interruption in limited or single sourced raw

materials could materially harm our ability to manufacture our products until a new source of supply, if any, could be identified and qualified. We may be unable to find a sufficient alternative supply channel within a reasonable time or on commercially reasonable terms. Any performance failure on the part of our suppliers could delay the production of our silicon nitride products and product candidates and delay the development and commercialization of our product candidates, including limiting supplies necessary for commercial sale, clinical trials and regulatory approvals, which could have a material adverse effect on our business.

Use of third-party manufacturers increases the risk that we will not have adequate supplies of our non-silicon nitride products or instrumentation sets.

The majority of our product revenue is currently generated by sales of non-silicon nitride products. Our reliance on a limited number of third-party manufacturers to supply us with our non-silicon nitride products and instruments exposes us to risks that could delay our sales, or result in higher costs or lost product revenues. In particular, our manufacturers could:

- encounter difficulties in achieving volume production, quality control and quality assurance or suffer shortages of qualified personnel, which could result in their inability to manufacture sufficient quantities of our commercially available non-silicon nitride products to meet market demand for those products, or they could experience similar problems that result in the manufacture of insufficient quantities of our non-silicon nitride product candidates; and
- fail to follow and remain in compliance with the FDA-mandated QSRs, compliance which is required for all medical devices, or fail to document their compliance to QSRs, either of which could lead to significant delays in the availability of materials for our non-silicon nitride products or instrumentation sets.

If we are unable to obtain adequate supplies of our non-silicon nitride products and related instrumentation sets that meet our specifications and quality standards, it will be difficult for us to compete effectively. We have no supply agreements in place with our manufacturers and they may change the terms of our future orders or choose not to supply us with products or instrumentation sets in the future. Furthermore, if a third-party manufacturer from whom we purchase fails to perform its obligations, we may be forced to purchase products or related instrumentation from other third-party manufacturers, which we may not be able to do on reasonable terms, if at all. In addition, if we are required to change manufacturers for any reason, we will be required to verify that the new manufacturer maintains facilities and procedures that comply with quality standards and with all applicable regulations and guidelines. The delays associated with the verification of a new manufacturer or the re-verification of an existing manufacturer could negatively affect our ability to produce and distribute our non-silicon nitride products or instruments in a timely manner.

In order to be successful, we must expand our available product lines of silicon nitride-based medical devices by commercializing new product candidates, but we may not be able to do so in a timely fashion and at expected costs, or at all.

Although we are currently marketing our silicon nitride interbody spinal fusion implants, in order to be successful, we will need to expand our product lines to include other silicon nitride devices. Therefore, we are developing silicon nitride product candidates for total hip and knee replacement procedures and are exploring the application of our silicon nitride technology for other potential applications. However, we have yet to commercialize any silicon nitride products beyond our spinal fusion products. To succeed in our commercialization efforts, we must effectively continue product development and testing, obtain regulatory clearances and approvals, and enhance our sales and marketing capabilities. We may also have to write down significant inventory if existing products are replaced by new products. Because of these uncertainties, there is no assurance that we will succeed in bringing any of our current or future product candidates to market. If we fail in bringing our product candidates to market, or experience delays in doing so, we will not generate revenues as planned and will need to curtail operations or seek additional financing earlier than otherwise anticipated.

We will depend on one or more strategic partners to develop and commercialize our total joint replacement product candidates, and if our strategic partners are unable to execute effectively on our agreements with them, we may never become profitable.

Pursuant to a joint development and license agreement with Orthopaedic Synergy, Inc., or OSI, we are dependent on OSI's ability to execute product development plans, obtain regulatory approvals, and sell, distribute and market our jointly developed product candidate for total hip and total knee joint replacement implants that use our MC^2 silicon nitride technology. We would similarly be reliant on other strategic partners to develop and commercialize a total hip or knee joint replacement product candidate that utilizes silicon nitride-coated components, although we have not yet entered into an agreement with any strategic partner to develop products with these silicon nitride-coated components and may be unable to do so on agreeable terms. In order to succeed in our joint commercialization efforts, we and OSI, and any future partners must execute effectively on all elements of a combined business plan, including continuing to establish sales and marketing capabilities, manage certified, validated and effective commercial-scale manufacturing operations, conduct product development and testing, and obtain regulatory clearances and approvals for our product

candidate. If we or any of our strategic partners fail in any of these endeavors, or experience delays in pursuing them, we will not generate revenues as planned and will need to curtail operations or seek additional financing earlier than otherwise anticipated.

Part of our strategy is to establish and develop OEM partnerships and arrangements, which subjects us to various risks.

Because we believe silicon nitride is a superior platform and technology for application in the spine, total joint and other markets, we are seeking to establish OEM partnerships with other companies to replace their materials and products with silicon nitride. Sales of products to OEM customers would expose our business to a number of risks. Sales through OEM partners could be less profitable than direct sales. Sales of our products through multiple channels could also confuse customers and cause the sale of our products to decline. In addition, OEM customers will require that products meet strict standards. Our compliance with these requirements could result in increased development, manufacturing, warranty and administrative costs. A significant increase in these costs could adversely affect our operating results. If we fail to meet OEM specifications on a timely basis, our relationships with our OEM partners may be harmed. Furthermore, we would not control our OEM partners, and they could sell competing products, may not incorporate our technology into their products in a timely manner and may devote insufficient sales efforts to the OEM products.

The use 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 and the sale of our products through such distributorships may expose us to regulatory enforcement risk.

Physician-owned distributorships, or PODs, are medical device distributors that are owned, directly or indirectly, by physicians. These physicians derive a proportion of their revenue from selling or arranging for the sale of medical devices for use in procedures they perform on their own patients at hospitals that agree to purchase from or through the POD, or that otherwise furnish ordering physicians with income that is based directly or indirectly on those orders of medical devices.

We may sell and distribute our products through a limited number of PODs. The number of PODs in the orthopedic industry may continue to grow as physicians search for ways to increase their incomes. These companies and the physicians who own, or partially own, them have significant market knowledge and access to the surgeons and hospitals that may potentially purchase our products and the physicians who own these PODs will have financial incentives to purchase from these distributorships. As a result, growth in this area may reduce our ability to compete effectively for business.

On March 26, 2013, the Department of Health and Human Services Office of Inspector General issued a Special Fraud Alert on Physician-Owned Entities and identified PODs as “inherently suspect” under the federal Anti-Kickback Statute. While the PODs themselves may be the target of any government enforcement efforts in this area, it is possible that regulatory scrutiny may extend to other entities that have relationships with PODs, including us. We are not aware that we are currently subject to any such scrutiny. However, the cost of defending such enforcement actions, if brought (even without merit), as well as any sanctions, if imposed, could have a material adverse effect on our business.

If hospitals and other healthcare providers are unable to obtain coverage or adequate reimbursement for procedures performed with our products, it is unlikely our products will be widely used.

In the United States, the commercial success of our existing products and any future products will depend, in part, on the extent to which governmental payors at the federal and state levels, including Medicare and Medicaid, private

health insurers and other third-party payors provide coverage for and establish adequate reimbursement levels for procedures utilizing our products. Because we typically receive payment directly from hospitals and surgical centers, we do not anticipate relying directly on payment from third-party payors for our products. However, hospitals and other healthcare providers that purchase our orthopedic products for treatment of their patients generally rely on third-party payors to pay for all or part of the costs and fees associated with our products as part of a "bundled" rate for the associated procedures. The existence of coverage and adequate reimbursement for our products and the procedures performed with them by government and private payors is critical to market acceptance of our existing and future products. Neither hospitals nor surgeons are likely to use our products if they do not receive adequate reimbursement for the procedures utilizing our products.

Many private payors currently base their reimbursement policies on the coverage decisions and payment amounts determined by the Centers for Medicare and Medicaid Services, or CMS, which administers the Medicare program. Others may adopt different coverage or reimbursement policies for procedures performed with our products, while some governmental programs, such as Medicaid, have reimbursement policies that vary from state to state, some of which may not pay for the procedures performed with our products in an adequate amount, if at all. A Medicare national or local coverage decision denying coverage for one or more of our products could result in private and other third-party payors also denying coverage for our products. Third-party payors also may deny reimbursement for our products if they determine that a product used in a procedure was not medically necessary, was not used in accordance with cost-effective treatment methods, as determined by the third-party payor, or was used for an unapproved use. Unfavorable coverage or reimbursement decisions by government programs or private payors underscore the uncertainty that our products face in the market and could have a material adverse effect on our business.

Many hospitals and clinics in the United States belong to group purchasing organizations, which typically incentivize their hospital members to make a relatively large proportion of purchases from a limited number of vendors of similar products that have contracted to offer discounted prices. Such contracts often include exceptions for purchasing certain innovative new technologies, however. Accordingly, the commercial success of our products may also depend to some extent on our ability to either negotiate favorable purchase contracts with key group purchasing organizations and/or persuade hospitals and clinics to purchase our product “off contract.”

The healthcare industry in the United States has experienced a trend toward cost containment as government and private payors seek to control healthcare costs by paying service providers lower rates. While it is expected that hospitals will be able to obtain coverage for procedures using our products, the level of payment available to them for such procedures may change over time. State and federal healthcare programs, such as Medicare and Medicaid, closely regulate provider payment levels and have sought to contain, and sometimes reduce, payment levels. Private payors frequently follow government payment policies and are likewise interested in controlling increases in the cost of medical care. In addition, some payors are adopting pay-for-performance programs that differentiate payments to healthcare providers based on the achievement of documented quality-of-care metrics, cost efficiencies, or patient outcomes. These programs are intended to provide incentives to providers to deliver the same or better results while consuming fewer resources. As a result of these programs, and related payor efforts to reduce payment levels, hospitals and other providers are seeking ways to reduce their costs, including the amounts they pay to medical device manufacturers. We may not be able to sell our implants profitably if third-party payors deny or discontinue coverage or reduce their levels of payment below that which we project, or if our production costs increase at a greater rate than payment levels. Adverse changes in payment rates by payors to hospitals could adversely impact our ability to market and sell our products and negatively affect our financial performance.

In international markets, medical device regulatory requirements and healthcare payment systems vary significantly from country to country, and many countries have instituted price ceilings on specific product lines. We cannot assure you that our products will be considered cost-effective by international third-party payors, that reimbursement will be available or, if available, that the third-party payors’ reimbursement policies will not adversely affect our ability to sell our products profitably. Any failure to receive regulatory or reimbursement approvals would negatively impact market acceptance of our products in any international markets in which those approvals are sought.

Prolonged negative economic conditions in domestic and international markets may adversely affect us, our suppliers, partners and consumers, and the global orthopedic market which could harm our financial position.

Global credit and financial markets have been experiencing extreme disruptions over the past several years, 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 further. Our business may be adversely affected by the recent

economic downturn and volatile business environment and continued unpredictable and unstable market conditions. In addition, there is a risk that one or more of our current suppliers may not continue to operate. Any lender that is obligated to provide funding to us under any 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. These negative changes in domestic and international 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 business, results of operations, financial condition and liquidity.

In addition, we believe that various demographics and industry-specific trends will help drive growth in the orthopedics markets, but these demographics and trends are uncertain. Actual demand for orthopedic products generally, and our products in particular, could be significantly less than expected if our assumptions regarding these factors prove to be incorrect or do not materialize, or if alternative treatments gain widespread acceptance.

We have a new senior management team and are dependent on our senior management team, engineering team, sales and marketing team and surgeon advisors, and the loss of any of them could harm our business.

The members of our current senior management team have worked together in their new positions with us for a limited time and may not be able to successfully implement our strategy. In addition, we have not entered into employment agreements, other than severance and management retention agreements, with any of the members of our senior management team. There are no assurances that the services of any of these individuals will be available to us for any specified period of time. The successful integration of our new senior management team, the loss of members of our senior management team, sales and marketing team, engineering team and key surgeon advisors, or our inability to attract or retain other qualified personnel or advisors could have a material adverse effect on our business, financial condition and results of operations.

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 our sales and marketing, accounting and financial functions; manufacturing processes; inventory; engineering and product development functions; and our research and development functions. As such, our information technology systems are vulnerable to damage or interruption including 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, all of which could have a material adverse effect on our reputation, business, results of operations and financial condition.

Risks Related to Our Capital Resources and Impairments

We will require additional financing and our failure to obtain additional funding would force us to delay, reduce or eliminate our product development programs or commercialization efforts.

We currently have limited committed sources of capital and we have limited liquidity. Our cash and cash equivalents as of December 31, 2014 and 2013, were $18.2 million and $2.3 million, respectively. We require substantial future capital in order to continue to conduct the research and development and regulatory clearance and approval activities necessary to bring our products to market, to establish effective marketing and sales capabilities. Our existing capital resources, including the net proceeds from our initial public offering and secondary offering of shares of our common stock and financings through Hercules Technology, Magna and the Bridge Lender are not sufficient to enable us to fund the completion of the development and commercialization of all of our product candidates. We cannot determine with certainty the duration and completion costs of the current or future development and commercialization of our product candidates for spinal fusion procedures, joint replacement and coated metals or if, when, or to what extent we will generate revenues from the commercialization and sale of any of these product candidates for which we obtain regulatory approval. We may never succeed in achieving regulatory approval for certain or all of these product candidates. The duration, costs and timing of clinical trials and development of our spinal fusion, joint replacement and coated metal product candidates will depend on a variety of factors, including:

- the scope, rate of progress, and expense of our ongoing, as well as any additional, clinical trials and other research and development activities;
- future clinical trial results we may must or choose to conduct;
- potential changes in government regulation; and
- the timing and receipt of any regulatory approvals.

A change in the outcome of any of these variables with respect to the development of spinal fusion, joint replacement or coated metal product candidates could mean a significant change in the costs and timing associated with the development of these product candidates.

In addition, the repayment of the Loan and Security Agreement and the liquidity covenant limit our ability to use our cash and cash equivalents to fund our operations and may restrict our ability to continue development of our product candidates. Additionally, the Loan and Security Agreements with Hercules Technology restrict our ability to incur additional pari passu indebtedness, which may reduce our ability to seek additional financing. The Convertible Notes issued to Magna also contain other covenants and events of default customary for financings of that type, including, among other things, limitations on certain other indebtedness, dividends and distributions, sales and transfers of assets and transactions with affiliates. If adequate funds are not available on a timely basis, we may terminate or delay the development of one or more of our product candidates, or delay activities necessary to commercialize our product candidates. Additional funding may not be available to us on acceptable terms, or at all. Any additional equity financing, if

available, may not be available on favorable terms and will most likely be dilutive to our current stockholders, and debt financing, if available, may involve more restrictive covenants. Our ability to access capital when needed is not assured and, if not achieved on a timely basis, will materially harm our business, financial condition and results of operations.

As a result of our debt obligations, we will need additional funds to meet our operational needs and capital requirements for product development, clinical trials and commercialization. The timing and amount of our future capital requirements will depend on many factors, including:

- our ability to satisfy our obligation to pay principal and interest on the Loan and Security Agreement;
- our ability to comply with the minimum liquidity covenant related to the Loan and Security Agreement;
- the level of sales of our current products and the cost of revenue and sales and marketing;
- the extent of any clinical trials that we will be required to conduct in support of the regulatory clearance of our total hip and knee replacement product candidates;
- the scope, progress, results and cost of our product development efforts;
- the costs, timing and outcomes of regulatory reviews of our product candidates;
- the number and types of products we develop and commercialize;
- the costs of preparing, filing and prosecuting patent applications and maintaining, enforcing and defending intellectual property-related claims; and
- the extent and scope of our general and administrative expenses.

If we do not adhere to the financial covenants set forth in the Loan and Security Agreement with Hercules Technology, we will be in default of the Loan and Security Agreement.

In June 2014 we entered into a Loan and Security Agreement with Hercules Technology Growth Capital, Inc., or Hercules Technology, as administrative and collateral agent for the lenders thereunder and as lender, and Hercules Technology III, LP, as lender. The Loan and Security Agreement provides us with a $20 million term loan with a maturity date of January 1, 2018 and is secured by substantially all of our assets and is described in more detail in the “Management’s Discussion and Analysis of Financial Condition and Results of Operations” section of this Annual Report on Form 10-K. Proceeds of the loan were used to repay in full and terminate our prior credit facility with General Electric Capital Corporation, or GE Capital, and the remainder of the loan proceeds will be used for general corporate purposes.

The Loan and Security Agreement contains a minimum liquidity covenant that requires us to maintain cash and cash equivalents and availability under the Loan and Security Agreement of not less than $9.0 million. We anticipate we will need to obtain additional funding during the fourth quarter of 2015 to maintain compliance with this minimum liquidity covenant under the Loan and Security Agreement through the next twelve months. Furthermore, if we are unable to access additional funds prior to becoming non-compliant with the liquidity covenant, the entire remaining balance of the Loan and Security Agreement could become immediately due and payable at the option of Hercules Technology.

Hercules Technology could declare a default under the Loan and Security Agreement upon the occurrence of a material adverse effect, as defined under the credit facility, thereby requiring us to either repay the outstanding indebtedness immediately or attempt to reverse the declaration of default through negotiation or litigation. Any declaration of an event of default would significantly harm our business and prospectus and could cause the price of our common stock to decline.

Raising additional capital by issuing securities or through debt financings or licensing arrangements may cause dilution to existing stockholders, restrict our operations or require us to relinquish proprietary rights.

To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms may include liquidation or other preferences that adversely affect your rights as a stockholder. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions such as incurring additional debt, making capital expenditures or declaring dividends. If we raise additional funds through collaboration and licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies or products or grant licenses on terms that are not favorable to us. Any of these events could adversely affect our ability to achieve our product development and commercialization goals and have a material adverse effect on our business, financial condition and results of operations.

Our independent registered public accounting firm has included an explanatory paragraph relating to our ability to continue as a going concern in its report on our audited financial statements. We may be unable to continue to operate without the threat of liquidation for the foreseeable future.

Our report from our independent registered public accounting firm for the year ended December 31, 2014 includes an explanatory paragraph stating that our recurring losses from operations and our need to obtain additional financing in order to satisfy our debt obligations and to be compliant with covenants under our debt obligations through 2015 raise substantial doubt about our ability to continue as a going concern. If we are unable to obtain sufficient additional funding, our business, prospects, financial condition and results of operations will be materially and adversely affected and we may be unable to continue as a going concern. If we are unable to continue as a going concern, we may have to liquidate our assets and may receive less than the value at which those assets are carried on our consolidated financial statements, and it is likely that investors will lose all or a part of their investment. Future reports from our independent registered public accounting firm may also contain statements expressing doubt about our ability to continue as a going concern. If we seek additional financing to fund our business activities in the future and there remains doubt about our ability to continue as a going concern, investors or other financing sources may be unwilling to provide additional funding on commercially reasonable terms or at all.

An impairment charge could have a material adverse effect on our financial condition and results of operations.

We are required to test acquired goodwill for impairment on an annual basis. Goodwill represents the excess of the amount paid over the fair value of the net assets at the date of the acquisition. We have chosen to complete our annual impairment reviews of goodwill at the end of each calendar year. We also are required to test goodwill for impairment between annual tests if events occur or circumstances change that would more likely than not reduce our enterprise fair value below its book value. In addition, we are required to test our finite-lived intangible assets for impairment if events occur or circumstances change that would indicate the remaining net book value of the finite-lived intangible assets might not be recoverable. These events or circumstances could include a significant change in the business climate, including a significant sustained decline in our market value, legal factors, operating performance indicators, competition, sale or disposition of a significant portion of our business and other factors.

If the fair market value of our reporting unit is less than its book value, we could be required to record an impairment charge. The valuation of a reporting unit requires judgment in estimating future cash flows, discount rates and other factors. In making these judgments, we evaluate the financial health of our business, including such factors as industry performance, changes in technology and operating cash flows. Changes in our forecasts or decreases in the value of our common stock could cause book values of our reporting unit to exceed its fair value, which may result in goodwill impairment charges. The amount of any impairment could be significant and could have a material adverse effect on our reported financial results for the period in which the charge is taken.

Risks Related to Regulatory Approval of Our Products and Other Government Regulations

Our long-term success depends substantially on our ability to obtain regulatory clearance or approval and thereafter commercialize our product candidates; we cannot be certain that we will be able to do so in a timely manner or at all.

The process of obtaining regulatory clearances or approvals to market a medical device from the FDA or similar regulatory authorities outside of the United States can be costly and time consuming, and there can be no assurance that such clearances or approvals will be granted on a timely basis, or at all. The FDA’s 510(k) clearance process generally takes one to six months from the date of submission, depending on whether a special or traditional 510(k) premarket notification has been submitted, but can take significantly longer. An application for premarket approval, or PMA, must be submitted to the FDA if the device cannot be cleared through the 510(k) clearance process or is not exempt from premarket review by the FDA. The PMA process almost always requires one or more clinical trials and

can take two to three years from the date of filing, or even longer. In some cases, including in the case of our interbody spinal fusion devices which incorporate our C^SC technology and our MC^2 silicon nitride femoral head component, the FDA requires clinical data as part of the 510(k) clearance process.

It is possible that the FDA could raise questions about our spinal fusion products, our spinal fusion product candidates and our total hip and knee joint replacement product candidates and could require us to perform additional studies on our products and product candidates. Even if the FDA permits us to use the 510(k) clearance process, we cannot assure you that the FDA will not require either supporting data from laboratory tests or studies that we have not conducted, or substantial supporting clinical data. If we are unable to use the 510(k) clearance process for any of our product candidates, are required to provide clinical data or laboratory data that we do not possess to support our 510(k) premarket notifications for any of these product candidates, or otherwise experience delays in obtaining or fail to obtain regulatory clearances, the commercialization of our product candidates in the United States will be delayed or prevented, which will adversely affect our ability to generate additional revenues. It also may result in the loss of potential competitive advantages that we might otherwise attain by bringing our products to market earlier than our competitors. Additionally, although the FDA allows modifications to be made to devices that have received 510(k) clearance with supporting documentation, the FDA may disagree with our decision to modify our cleared devices without submission of a new 510(k) premarket notification, subjecting us to potential product recall, field alerts and corrective actions. Any of these contingencies could adversely affect our business.

Similar to our compliance with U.S. regulatory requirements, we must obtain and comply with international requirements in order to market and sell our products outside of the United States and we may only promote and market our products, if approved, as permitted by applicable regulatory authorities.

The safety of our products is not yet supported by long-term clinical data, and they may prove to be less safe and effective than our laboratory data indicate.

We obtained FDA clearance for each of our products that we currently market, and we have sought and intend to seek FDA clearance or approval through the FDA's 510(k) or PMA process and, where applicable, CE marking for our product candidates. The 510(k) clearance process is based on the FDA's agreement that a new product candidate is substantially equivalent to an already marketed product for which a PMA was not required. While most 510(k) premarket notifications do not require clinical data for clearance, the FDA may request that such data be provided. Long-term clinical data or marketing experience obtained after clearance may indicate that our products cause unexpected complications or other unforeseen negative effects. If this happens, we could be subject to the withdrawal of our marketing clearance and other enforcement sanctions by the FDA or other regulatory authority, product recalls, significant legal liability, significant negative publicity, damage to our reputation and a dramatic reduction in our ability to sell our products, any one of which would have a material adverse effect on our business, financial condition and results of operations.

We expect to be required to conduct clinical trials to support regulatory approval of some of our product candidates. We have little experience conducting clinical trials, they may proceed more slowly than anticipated, and we cannot be certain that our product candidates will be shown to be safe and effective for human use.

In order to commercialize our product candidates in the United States, we must submit a PMA for some of these product candidates, which will require us to conduct clinical trials. We also plan to provide the FDA with clinical trial data to support some of our 510(k) premarket notifications. We will receive approval or clearance from the FDA to commercialize products requiring a clinical trial only if we can demonstrate to the satisfaction of the FDA, through well-designed and properly conducted clinical trials, that our product candidates are safe and effective and otherwise meet the appropriate standards required for approval or clearance for specified indications. Clinical trials are complex, expensive, time consuming, uncertain and subject to substantial and unanticipated delays. Before we may begin clinical trials, we must submit and obtain approval for an investigational device exemption, or IDE, that describes, among other things, the manufacture of, and controls for, the device and a complete investigational plan. Clinical trials generally involve a substantial number of patients in a multi-year study. Because we do not have the experience or the infrastructure necessary to conduct clinical trials, we will have to hire one or more contract research organizations, or

CROs, to conduct trials on our behalf. CRO contract negotiations may be costly and time consuming and we will rely heavily on the CRO to ensure that our trials are conducted in accordance with regulatory and industry standards. We may encounter problems with our clinical trials and any of those problems could cause us or the FDA to suspend those trials, or delay the analysis of the data derived from them.

A number of events or factors, including any of the following, could delay the completion of our clinical trials in the future and negatively impact our ability to obtain FDA approval for, and to introduce our product candidates:

- failure to obtain financing necessary to bear the cost of designing and conducting clinical trials;
- failure to obtain approval from the FDA or foreign regulatory authorities to commence investigational studies;
- conditions imposed on us by the FDA or foreign regulatory authorities regarding the scope or design of our clinical trials;
- failure to find a qualified CRO to conduct our clinical trials or to negotiate a CRO services agreement on favorable terms;

- delays in obtaining or in our maintaining required approvals from institutional review boards or other reviewing entities at clinical sites selected for participation in our clinical trials;
- insufficient supply of our product candidates or other materials necessary to conduct our clinical trials;
- difficulties in enrolling patients in our clinical trials;
- negative or inconclusive results from clinical trials, or results that are inconsistent with earlier results, that necessitate additional clinical studies;
- failure on the part of the CRO to conduct the clinical trial in accordance with regulatory requirements;
- our failure to maintain a successful relationship with the CRO or termination of our contractual relationship with the CRO before completion of the clinical trials;
- serious or unexpected side effects experienced by patients in whom our product candidates are implanted; or
- failure by any of our third-party contractors or investigators to comply with regulatory requirements or meet other contractual obligations in a timely manner.

Our clinical trials may need to be redesigned or may not be completed on schedule, if at all. Delays in our clinical trials may result in increased development costs for our product candidates, which could cause our stock price to decline and limit our ability to obtain additional financing. In addition, if one or more of our clinical trials are delayed, competitors may be able to bring products to market before we do, and the commercial viability of our product candidates could be significantly reduced.

Our current and future relationships with third-party payors and current and potential customers in the United States and elsewhere may be subject, directly or indirectly, to applicable anti-kickback, fraud and abuse, false claims, transparency, health information privacy and security and other healthcare laws and regulations, which could expose us to criminal sanctions, civil penalties, contractual damages, reputational harm administrative burdens and diminished profits and future earnings.

Our current and future arrangements with third-party payors and current and potential customers, including providers and physicians, as well as PODs, as discussed above, may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations, including, without limitation, the federal Anti-Kickback Statute and the federal False Claims Act, which may constrain the business or financial arrangements and relationships through which we sell, market and distribute our products. In addition, we may be subject to transparency laws and patient privacy regulations by U.S. federal and state governments and by governments in foreign jurisdictions in which we conduct our business. The applicable federal, state and foreign healthcare laws and regulations that may affect our ability to operate include:

- the federal Anti-Kickback Statute, which prohibits, among other things, persons from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, to induce or reward, or in return for, either the referral of an individual for, or the purchase, order or recommendation of, any good or service, for which payment may be made under federal healthcare programs, such as Medicare and Medicaid;
- federal civil and criminal false claims laws and civil monetary penalty laws, including the federal False Claims Act, which impose criminal and civil penalties, including civil whistleblower or qui tam actions, against individuals or entities for knowingly presenting, or causing to be presented, to the federal government, including the Medicare and Medicaid programs, claims for payment that are false or fraudulent or making a false statement to avoid, decrease or conceal an obligation to pay money to the federal government;
- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which imposes criminal and civil liability for executing a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, and their respective implementing regulations, which impose obligations on covered healthcare providers, health plans, and healthcare clearinghouses, as well as their business associates that create, receive, maintain or transmit individually identifiable health information for or on behalf of a covered entity, with

respect to safeguarding the privacy, security and transmission of individually identifiable health information;

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- the Physician Payments Sunshine Act, which requires (i) manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program, with specific exceptions, to report annually to CMS information related to certain "payments or other transfers of value" made to physicians, which is defined to include doctors, dentists, optometrists, podiatrists and chiropractors, and teaching hospitals, with data collection beginning on August 1, 2013, (ii) applicable manufacturers and applicable group purchasing organizations to report annually to CMS ownership and investment interests held in such entities by physicians and their immediate family members, with data collection beginning on August 1, 2013, (iii) manufacturers to submit reports to CMS by March 31, 2014 and the 90th day of each subsequent calendar year, and (iv) disclosure of such information by CMS on a publicly available website beginning in September 2014; and
- analogous state and foreign laws and regulations, such as state anti-kickback and false claims laws, which may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers; state and foreign laws that require medical device companies to comply with the medical device industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government or otherwise restrict payments that may be made to healthcare providers; state and foreign laws that require medical device manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures; and state and foreign laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Efforts to ensure that our business arrangements with third parties will comply with applicable healthcare laws and regulations may involve substantial costs. It is possible that governmental authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law involving applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant civil, criminal and administrative penalties, including, without limitation, damages, fines, imprisonment, exclusion from participation in government healthcare programs, such as Medicare and Medicaid, and the curtailment or restructuring of our operations, which could have a material adverse effect on our business. If any of the physicians or other healthcare providers or entities with whom we expect to do business, including our collaborators, are found not to be in compliance with applicable laws, they may be subject to criminal, civil or administrative sanctions, including exclusions from participation in government healthcare programs, which could also materially affect our business. In July 2012, we received a subpoena from the Department of Justice seeking the production of documents, including documents related to our relationship with a particular customer and various entities, including a company distributor, and individuals associated with that distributor. In April 2013, we received a second subpoena requesting similar records. We cooperated with the Department of Justice's requests and provided the records requested by the two subpoenas. We have had no further communications with the Department of Justice since responding to its second request in June 2013. While we do not believe that we are the target of the government's investigation, if we are found to have violated one or more applicable laws, we could be subject to the risks and consequences discussed above. In addition, responding to any additional requests or actions of the Department of Justice in connection with this investigation may be expensive and time-consuming.

Recently enacted and future legislation may increase the difficulty and cost for us to obtain regulatory approval or clearance of our product candidates and affect the prices we may obtain for our products.

In the United States and some foreign jurisdictions, there have been a number of legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay clearance and/or approval of our product candidates, restrict or regulate post-clearance and post-approval activities and affect our ability to profitably sell our products and any product candidates for which we obtain marketing approval or clearance.

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 our products. Delays in receipt of or failure to receive regulatory clearances or approvals for our new products would have a material adverse effect on our business, results of operations and financial condition. In addition, the FDA is currently evaluating the 510(k) process and may make substantial changes to industry requirements, including which devices are eligible for 510(k) clearance, the ability to rescind previously granted 510(k) clearances and additional requirements that may significantly impact the process.

Among policy makers and payors in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and expanding access. In the United States, the medical device industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives. In

March 2010, President Obama signed into law the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Affordability Reconciliation Act, or collectively the ACA, a sweeping law intended, among other things, to broaden access to health insurance, reduce or constrain the growth of healthcare spending, enhance remedies against fraud and abuse, add new transparency requirements for the healthcare and health insurance industries, impose new taxes and fees on the health industry and impose additional health policy reforms.

Among the provisions of the ACA of importance to our products and product candidates are:

- a 2.3% medical device excise tax on the U.S. sales of most medical devices, which currently includes and we expect will continue to include U.S. sales of our current products and products candidates that receive clearance or approval;
- expansion of healthcare fraud and abuse laws, including the False Claims Act and the Anti-Kickback Statute, and new government investigative powers and enhanced penalties for non-compliance;
- new requirements under the federal Open Payments program and its implementing regulations;
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research; and
- creation of an independent payment advisory board that will submit recommendations to reduce Medicare spending if projected Medicare spending exceeds a specified growth rate.

In addition, other legislative changes have been proposed and adopted since the ACA was enacted. For example, on August 2, 2011, the President signed into law the Budget Control Act of 2011, which, among other things, created the Joint Select Committee on Deficit Reduction to recommend to Congress proposals in spending reductions. The Joint Select Committee on Deficit Reduction did not achieve a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions to Medicare payments to providers of up to 2% per fiscal year, starting in 2013. On January 2, 2013, President Obama signed into law the American Taxpayer Relief Act of 2012, or ATRA, which, among other things, reduced Medicare payments to several types of providers and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. On March 1, 2013, the President signed an executive order implementing the Budget Control Act's 2% Medicare payment reductions, and on April 1, 2013, these reductions went into effect. These new laws may result in additional reductions in Medicare and other healthcare funding, which could have a material adverse effect on our financial operations.

We expect that the ACA, as well as other healthcare reform measures that have been and may be adopted in the future, may result in more rigorous coverage criteria and in additional downward pressure on the price that we receive for our products. Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may affect our ability to generate revenue and profits or commercialize our product candidates.

In the European Union and some other international markets, the government provides health care at a low cost to consumers and regulates prices of healthcare products, patient eligibility or reimbursement levels to control costs for the government-sponsored health care system. Many countries are reducing their public expenditures and we expect to see strong efforts to reduce healthcare costs in international markets, including patient access restrictions, suspensions on price increases, prospective and possibly retroactive price reductions and other recoupments and increased mandatory discounts or rebates and recoveries of past price increases. These cost control measures could reduce our revenues. In addition, certain countries set prices by reference to the prices in other countries where our products are marketed. Thus, our inability to secure adequate prices in a particular country may not only limit the marketing of our products within that country, but may also adversely affect our ability to obtain acceptable prices in other markets. This may create the opportunity for third-party cross border trade or influence our decision to sell or not to sell a product, thus adversely affecting our geographic expansion plans and revenues.

Risks Related to Our Intellectual Property and Litigation

If the combination of patents, trade secrets and contractual provisions that we rely on to protect our intellectual property is inadequate, our ability to commercialize our orthopedic products successfully will be harmed, and we may not be able to operate our business profitably.

Our success depends significantly on our ability to protect our proprietary rights to the technologies incorporated in our products. We currently have 44 issued U.S. patents, 22 pending U.S. patent applications, 12 granted foreign patents and 15 pending foreign patent applications. Our issued patents began to expire in 2014, with the last of these patents expiring in 2031. We rely on a combination of patent protection, trade secret laws and nondisclosure, confidentiality and other contractual restrictions to protect our proprietary technology. However, these may not adequately protect our rights or permit us to gain or keep any competitive advantage.

The issuance of a patent is not conclusive as to its scope, validity or enforceability. The scope, validity or enforceability of our issued patents can be challenged in litigation or proceedings before the U.S. Patent and Trademark Office, or the USPTO, or foreign patent offices. In addition, our pending patent applications include claims to numerous important aspects of our products under development that are not currently protected by any of our issued patents. We cannot assure you that any of our pending patent applications will result in the issuance of patents to us. The USPTO or foreign patent offices may deny or require significant narrowing of claims in our pending patent applications. Patents issued as a result of the pending patent applications, if any, may not provide us with significant commercial protection or be issued in a form that is advantageous to us. Proceedings before the USPTO or foreign patent offices could result in adverse decisions as to the priority of our inventions and the narrowing or invalidation of claims in issued patents. The laws of some foreign countries may not protect our intellectual property rights to the same extent as the laws of the United States, if at all.

Our competitors may successfully challenge and invalidate or render unenforceable our issued patents, including any patents that may issue in the future, which could prevent or limit our ability to market our products and could limit our ability to stop competitors from marketing products that are substantially equivalent to ours. In addition, competitors may be able to design around our patents or develop products that provide outcomes that are comparable to our products but that are not covered by our patents.

We have also entered into confidentiality and assignment of intellectual property agreements with all of our employees, consultants and advisors as one of the ways we seek to protect our intellectual property and other proprietary technology. However, these agreements may not be enforceable or may not provide meaningful protection for our trade secrets or other proprietary information in the event of unauthorized use or disclosure or other breaches of the agreements.

In the event a competitor infringes upon any of our patents or other intellectual property rights, enforcing our rights may be difficult, time consuming and expensive, and would divert management's attention from managing our business. There can be no assurance that we will be successful on the merits in any enforcement effort. In addition, we may not have sufficient resources to litigate, enforce or defend our intellectual property rights.

We have no patent protection covering the composition of matter for our solid MC^2 silicon nitride or the process we use for manufacturing our MC^2 silicon nitride, and competitors may create silicon nitride formulations substantially similar to ours.

Although we have a number of U.S. and foreign patents and pending applications relating to our MC^2 silicon nitride products or product candidates, we have no patent protection either for the composition of matter for our silicon nitride or for the processes of manufacturing MC^2 silicon nitride. As a result, competitors may create silicon nitride formulations substantially similar to ours, and use their formulations in products that may compete with our silicon nitride products, provided they do not violate our issued product patents. Although we have, and will continue to develop, significant know-how related to these processes, there can be no assurance that we will be able to maintain this know-how as trade secrets, and competitors may develop or acquire equally valuable or more valuable know-how related to the manufacture of silicon nitride.

We could become subject to intellectual property litigation that could be costly, result in the diversion of management's time and efforts, require us to pay damages, prevent us from marketing our commercially available products or product candidates and/or reduce the margins we may realize from our products that we may commercialize.

The medical devices industry is characterized by extensive litigation and administrative proceedings over patent and other intellectual property rights. Whether a product infringes a patent involves complex legal and factual issues, and

the determination is often uncertain. There may be existing patents of which we are unaware that our products under development may inadvertently infringe. The likelihood that patent infringement claims may be brought against us increases as the number of participants in the orthopedic market increases and as we achieve more visibility in the market place and introduce products to market.

Any infringement claim against us, even if without merit, may cause us to incur substantial costs, and would place a significant strain on our financial resources, divert the attention of management from our core business, and harm our reputation. In some cases, litigation may be threatened or brought by a patent holding company or other adverse patent owner who has no relevant product revenues and against whom our patents may provide little or no deterrence. If we were found to infringe any patents, we could be required to pay substantial damages, including triple damages if an infringement is found to be willful, and royalties and could be prevented from selling our products unless we obtain a license or are able to redesign our products to avoid infringement. We may not be able to obtain a license enabling us to sell our products on reasonable terms, or at all, and there can be no assurance that we would be able to redesign our products in a way that would not infringe those patents. If we fail to obtain any required licenses or make any necessary changes to our technologies or the products that incorporate them, we may be unable to commercialize one or more of our products or may have to withdraw products from the market, all of which would have a material adverse effect on our business, financial condition and results of operations.

In addition, in order to further our product development efforts, we have entered into agreements with orthopedic surgeons to help us design and develop new products, and we expect to enter into similar agreements in the future. In certain instances, we have agreed to pay such surgeons royalties on sales of products which incorporate their product development contributions. There can be no assurance that surgeons with whom we have entered into such arrangements will not claim to be entitled to a royalty even if we do not believe that such products were developed by cooperative involvement between us and such surgeons. In addition, some of our surgeon advisors are employed by academic or medical institutions or have agreements with other orthopedic companies pursuant to which they have agreed to assign or are under an obligation to assign to those other companies or institutions their rights in inventions which they conceive or develop, or help conceive or develop.

There can be no assurance that one or more of these orthopedic companies or institutions will not claim ownership rights to an invention we develop in collaboration with our surgeon advisors or consultants on the basis that an agreement with such orthopedic company or institution gives it ownership rights in the invention or that our surgeon advisors on consultants otherwise have an obligation to assign such inventions to such company or institution. Any such claim against us, even without merit, may cause us to incur substantial costs, and would place a significant strain on our financial resources, divert the attention of management from our core business and harm our reputation.

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

Many of our employees were previously employed at other orthopedic companies, including our competitors and potential competitors. Many of our distributors and potential distributors sell, or in the past have sold, products of our competitors. We may be subject to claims that either we, or these employees or distributors, have inadvertently or otherwise used or disclosed the trade secrets or other proprietary information of our competitors. In addition, we have been and may in the future be subject to claims that we caused an employee or sales agent to break the terms of his or her non-competition agreement or non-solicitation agreement. Litigation may be necessary to defend against these claims. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management. If we fail in defending such claims, in addition to paying money damages, we may lose valuable intellectual property rights or personnel. A loss of key personnel or their work product could hamper or prevent our ability to commercialize products, which could have an adverse effect on our business, financial condition and results of operations.

If our silicon nitride products or our product candidates conflict with the rights of others, we may not be able to manufacture or market our products or product candidates, which could have a material and adverse effect on us.

Our commercial success will depend in part on not infringing the patents or violating the other proprietary rights of third parties. Issued patents held by others may limit our ability to develop commercial products. All issued patents are entitled to a presumption of validity under the laws of the United States. If we need suitable licenses to such patents to permit us to develop or market our product candidates, we may be required to pay significant fees or royalties and we cannot be certain that we would even be able to obtain such licenses. Competitors or third parties may obtain patents that may cover subject matter we use in developing the technology required to bring our products to market, that we use in producing our products, or that we use in treating patients with our products. We know that others have filed patent applications in various jurisdictions that relate to several areas in which we are developing products. Some of these patent applications have already resulted in patents and some are still pending. If we were found to infringe any of these issued patents or any of the pending patent applications, when and if issued, we may be required to alter our processes or product candidates, pay licensing fees or cease activities. If use of technology incorporated into or used to produce our product candidates is challenged, or if our processes or product candidates conflict with patent rights of others, third parties could bring legal actions against us, in Europe, the United States and

elsewhere, claiming damages and seeking to enjoin manufacturing and marketing of the affected products. Additionally, it is not possible to predict with certainty what patent claims may issue from pending applications. In the United States, for example, patent prosecution can proceed in secret prior to issuance of a patent, provided such application is not filed in foreign jurisdiction. For U.S. patent applications that are also filed in foreign jurisdictions, such patent applications will not publish until 18 months from the filing date of the application. As a result, third parties may be able to obtain patents with claims relating to our product candidates which they could attempt to assert against us. Further, as we develop our products, third parties may assert that we infringe the patents currently held or licensed by them, and we cannot predict the outcome of any such action.

There has been extensive litigation in the medical devices industry over patents and other proprietary rights. If we become involved in any litigation, it could consume a substantial portion of our resources, regardless of the outcome of the litigation. If these legal actions are successful, in addition to any potential liability for damages, we could be required to obtain a license, grant cross-licenses and pay substantial royalties in order to continue to manufacture or market the affected products.

We cannot assure you that we would prevail in any legal action or that any license required under a third party patent would be made available on acceptable terms, or at all. Ultimately, we could be prevented from commercializing a product, or forced to cease some aspect of our business operations, as a result of claims of patent infringement or violation of other intellectual property rights, which could have a material and adverse effect on our business, financial condition and results of operations.

Risks Related to Potential Litigation from Operating Our Business

We may become subject to potential product liability claims, and we may be required to pay damages that exceed our insurance coverage.

Our business exposes us to potential product liability claims that are inherent in the design, testing, manufacture, sale and distribution of our currently marketed products and each of our product candidates that we are seeking to introduce to the market. The use of orthopedic medical devices can involve significant risks of serious complications, including bleeding, nerve injury, paralysis, infection, and even death. Any product liability claim brought against us, with or without merit, could result in the increase of our product liability insurance rates or in our inability to secure coverage in the future on commercially reasonable terms, if at all. In addition, if our product liability insurance proves to be inadequate to pay a damage award, we may have to pay the excess of this award out of our cash reserves, which could significantly harm our financial condition. If longer-term patient results and experience indicate that our products or any component of a product causes tissue damage, motor impairment or other adverse effects, we could be subject to significant liability. A product liability claim, even one without merit, could harm our reputation in the industry, lead to significant legal fees, and result in the diversion of management’s attention from managing our business.

Any claims relating to our improper handling, storage or disposal of biological or hazardous materials could be time consuming and costly.

Although we do not believe that the manufacture of our silicon nitride or non-silicon nitride products will involve the use of hazardous materials, it is possible that regulatory authorities may disagree or that changes to our manufacturing processes may result in such use. Our business and facilities and those of our suppliers and future suppliers may therefore be subject to foreign, federal, state and local laws and regulations governing the use, manufacture, storage, handling and disposal of hazardous materials and waste products. We may incur significant expenses in the future relating to any failure to comply with environmental laws. Any such future expenses or liability could have a significant negative impact on our business, financial condition and results of operations.

Risks Related to Our Common Stock

The price of our common stock is volatile and is likely to continue to fluctuate due to reasons beyond our control.

The volatility of orthopedic company stocks, including shares of our common stock, often do not correlate to the operating performance of the companies represented by such stocks or our operating performance. Some of the factors that may cause the market price of our common stock to fluctuate include:

- our ability to sell our current products and the cost of revenue;
- our ability to develop, obtain regulatory clearances or approvals for, and market new and enhanced product candidates on a timely basis;
- the amount of Convertible Notes converted into shares, which are then subsequently sold;
-

our obligation to issue Additional Bridge Warrants if the Bridge Loan is not repaid in full on or before its maturity date;

- changes in governmental regulations or in the status of our regulatory approvals, clearances or future applications;
- our announcements or our competitors' announcements regarding new products, product enhancements, significant contracts, number and productivity of distributors, number of hospitals and surgeons using products, acquisitions or strategic investments;
- announcements of technological or medical innovations for the treatment of orthopedic pathology;
- delays or other problems with the manufacturing of our products, product candidates and related instrumentation;
- volume and timing of orders for our products and our product candidates, if and when commercialized;
- changes in the availability of third-party reimbursement in the United States and other countries;
- quarterly variations in our or our competitors' results of operations;
- changes in earnings estimates or recommendations by securities analysts, if any, who cover our common stock;

- failure to meet estimates or recommendations by securities analysts, if any, who cover our stock;
- changes in the fair value of our derivative liabilities resulting from changes in the market price of our common stock, which may result in significant fluctuations in our quarterly and annual operating results;
- changes in healthcare policy in the United States and internationally;
- product liability claims or other litigation involving us;
- sales of a substantial aggregate number of shares of our common stock;
- sales of large blocks of our common stock, including sales by our executive officers, directors and significant stockholders;
- disputes or other developments with respect to intellectual property rights;
- changes in accounting principles;
- changes to tax policy; and
- general market conditions and other factors, including factors unrelated to our operating performance or the operating performance of our competitors.

These and other external factors may cause the market price and demand for our common stock to fluctuate substantially, which may limit or prevent our stockholders from readily selling their shares of common stock and may otherwise negatively affect the liquidity of our common stock. In addition, in the past, when the market price of a stock has been volatile, holders of that stock have sometimes instituted securities class action litigation against the company that issued the stock. If our stockholders brought a lawsuit against us, we could incur substantial costs defending the lawsuit regardless of the merits of the case or the eventual outcome. Such a lawsuit also would divert the time and attention of our management from running our company.

Securities analysts may not continue to provide coverage of our common stock or may issue negative reports, which may have a negative impact on the market price of our common stock.

Since completing our initial public offering of shares of our common stock in February 2014, a limited number of securities analysts have begun providing research coverage of our common stock. If securities analysts do not continue to cover our common stock, the lack of research coverage may cause the market price of our common stock to decline. The trading market for our common stock may be affected in part by the research and reports that industry or financial analysts publish about our business. If one or more of the analysts who elect to cover us downgrade our stock, our stock price would likely decline rapidly. If one or more of these analysts cease coverage of us, we could lose visibility in the market, which in turn could cause our stock price to decline. In addition, under the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, and a global settlement among the Securities and Exchange Commission, or the SEC, other regulatory agencies and a number of investment banks, which was reached in 2003, many investment banking firms are required to contract with independent financial analysts for their stock research. It may be difficult for a company such as ours, with a smaller market capitalization, to attract independent financial analysts that will cover our common stock. This could have a negative effect on the market price of our stock.

The low trading volume of our common stock may adversely affect the price of our shares.

Although our common stock is listed on The NASDAQ Capital Market, our common stock has typically experienced low trading volume. The average daily trading volume of our common stock over the last three months as of March 12, 2015, was approximately 419,000 shares, as reported by NASDAQ. Limited trading volume may subject our common stock to greater price volatility and may make it difficult for investors to sell shares of our common stock at a price that is attractive to them.

Future sales of our common stock in the public market may cause our stock price to decline and impair our ability to raise future capital through the sale of our equity securities.

There are a substantial number of shares of our common stock held by stockholders who owned shares of our capital stock prior to our initial public offering that they may be able to sell in the public market. Additionally, in March 2015, 411,067 outstanding RSUs were converted into common stock. The shares of common stock issued for the RSUs are subject to a Lock-up Agreement executed in connection with our public offering of units in November 2014 that will expire on May 19, 2015. At that time, all shares of common stock issued on conversion of the RSUs will be eligible to be sold in the public market. Sales by such stockholders of a substantial number of shares could significantly reduce the market price of our common stock.

On November 21, 2014, we announced the pricing of a firm commitment underwritten public offering of 11,441,646 units. Each unit consists of one share of Amedica common stock and one warrant to purchase one share of common stock. In addition, we granted the underwriters a 45-day option to purchase up to 1,716,246 additional shares of common stock, and/or 1,716,246 additional warrants, or any combination thereof, solely to cover over-allotments, if any. The underwriter exercised the overallotment option and acquired 1,716,246 additional warrants. As a result, there are a total of 13,157,892 of such warrants outstanding as of March 24, 2015. Beginning March 26, 2015, the warrants may be exercised on a cashless basis. Due to the terms of the cashless exercise feature of the warrants, the lower the stock price is for a share of our common stock at the time of exercise the more common shares that may be issued on such exercise. Based on a share price of $.60 we estimated that the total number of shares that would be issued should all the warrants be exercised through a cashless exercise to be 17,543,856 shares, resulting in significant dilution to our stockholders.

We have also registered 2,981,972 shares of our common stock that we may issue pursuant to our 2003 Stock Option Plan and our Amended and Restated 2012 Equity Incentive Plan, or the 2012 Plan. Shares issued by us upon exercise of options and restricted stock units and other awards ranted under these equity plans are eligible for sale in the public market. If any of these holders cause a large number of securities to be sold in the public market, the sales could reduce the trading price of our common stock. These sales also could impede our ability to raise capital in the future.

Moreover, warrants to acquire approximately 633,669 shares of our common stock and 8,627,454 shares of our outstanding common stock which are deemed to be “restricted securities” pursuant to Rule 144 under the Securities Act, are eligible for sale in reliance on Rule 144. A holder of warrants to acquire shares of our common stock will be able to net exercise such warrants by surrendering a portion of that holder’s warrants as payment of the exercise price rather than paying the exercise price in cash.

Anti-takeover provisions in our organizational documents and Delaware law may discourage or prevent a change in control, even if an acquisition would be beneficial to our stockholders, which could affect our stock price adversely and prevent attempts by our stockholders to replace or remove our current management.

Our restated certificate of incorporation and restated bylaws contain provisions that could discourage, delay or prevent a merger, acquisition or other change in control of our company or changes in our board of directors that our stockholders might consider favorable, including transactions in which you might receive a premium for your shares. These provisions also could limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock. Stockholders who wish to participate in these transactions may not have the opportunity to do so. Furthermore, these provisions could prevent or frustrate attempts by our stockholders to replace or remove management. These provisions:

- allow the authorized number of directors to be changed only by resolution of our board of directors;
- provide for a classified board of directors, such that not all members of our board will be elected at one time;
- prohibit our stockholders from filling board vacancies, limit who may call stockholder meetings, and prohibit the taking of stockholder action by written consent;
- prohibit our stockholders from making certain changes to our restated certificate of incorporation or restated bylaws except with the approval of holders of 75% of the outstanding shares of our capital stock entitled to vote;
- require advance written notice of stockholder proposals that can be acted upon at stockholders meetings and of director nominations to our board of directors; and
- authorize our board of directors to create and issue, without prior stockholder approval, preferred stock that may have rights senior to those of our common stock and that, if issued, could operate as a “poison pill” to dilute the stock ownership of a potential hostile acquirer to prevent an acquisition that is not approved by our board of directors.

In addition, we are subject to the provisions of Section 203 of the Delaware General Corporation Law, which may prohibit certain business combinations with stockholders owning 15% or more of our outstanding voting stock. Any

delay or prevention of a change in control transaction or changes in our board of directors could cause the market price of our common stock to decline.

If our stock price continues to be below $1.00, our common stock may be subject to delisting from The NASDAQ Stock Market.

Since the bid price of our common stock closed below the required minimum $1.00 per share for 30 consecutive business days, NASDAQ notified us that our common stock may be subject to delisting. We were provided a grace period of 180-calendar days, or until August 18, 2015, to regain compliance with the minimum bid price requirement. If at any time during the 180-day grace period, the minimum closing bid price per share of our common stock closes at or above $1.00 for a minimum of ten consecutive business days, we will regain compliance and the matter will be closed. If our common stock is delisted, it would adversely impact liquidity of our common stock and potentially result in lower bid prices for our common stock.

We do not intend to pay cash dividends.

We have never declared or paid cash dividends on our capital stock and we do not anticipate paying any cash dividends in the foreseeable future. We currently intend to retain all available funds and any future earnings for debt service and use in the operation and expansion of our business. Each of the Hercules Secured Credit Facility and the Convertible Notes issued contain a negative covenant which prohibits us from paying dividends to our stockholders without the prior written consent of Hercules Technology and Magna, respectively. In addition, the terms of any future debt or credit facility may preclude us from paying any dividends.

Risks Related to our Senior Convertible Notes

Adjustments to the conversion price for our Convertible Notes issued to Magna will dilute the ownership interests of our existing stockholders.

The Convertible Notes are convertible at any time after issuance, in whole or in part, at Magna's option, into shares of common stock at the lesser of (i) the initial fixed conversion price of $3.75 per share and (ii) a price equal to 80% of the lowest daily volume weighted average price per share during the five trading days prior to conversion. Accordingly, if the market value of shares of our common stock decreases, the number of shares issuable upon conversion of the Convertible Notes will increase, and may result in the issuance of a significant number of additional shares of our common stock upon conversion if our stock price decreases.

Risks Related to Public Companies

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012 and a "smaller reporting company" and the reduced disclosure requirements applicable to emerging growth companies and smaller reporting companies may make our common stock less attractive to investors.

We are an "emerging growth company," as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. For as long as we continue to be an emerging growth company, we may take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including (1) not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, (2) reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements and (3) exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved. Additionally, under the JOBS Act, emerging growth companies can also delay adopting new or revised accounting standards until such time as those standards apply to private companies. We are electing to delay such adoption of new or revised accounting standards on the relevant dates on which adoption of such standards is required for non-emerging growth companies. As a result of this election, our financial statements may not be comparable to the financial statements of other public companies.

We may take advantage of these exemptions until we are no longer an emerging growth company. Under the JOBS Act, we may be able to maintain emerging growth company status for up to five years, although circumstances could cause us to lose that status earlier, including if the market value of our common stock held by non-affiliates exceeds $700 million as of any June 30 before the end of such five-year period or if we have total annual gross revenue of $1.0 billion or more during any fiscal year before that time, in which cases we would no longer be an emerging growth company as of the following December 31. Additionally, if we issue more than $1.0 billion in non-convertible debt during any three-year period before that time, we would cease to be an emerging growth company immediately.

We are also currently a “smaller reporting company” as defined in the Securities Exchange Act of 1934, and in the event that we are still considered a smaller reporting company at such time as we cease being an emerging growth company, we will be required to provide additional disclosure in our SEC filings. However, similar to emerging growth companies, smaller reporting companies are able to provide simplified executive compensation disclosures in their filings, are exempt from the provisions of Section 404(b) of the Sarbanes-Oxley Act requiring that independent registered public accounting firms provide an attestation report on the effectiveness of internal control over financial reporting, and have certain other decreased disclosure obligations in their SEC filings, including, among other things, only being required to provide two years of audited financial statements in annual reports. We cannot predict whether investors will find our common stock less attractive because of our reliance on any of 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 incur substantial costs as a result of being a public company and our management expects to devote substantial time to public company compliance programs.

As a public company, we incur significant legal, insurance, accounting and other expenses, including costs associated with public company reporting. We intend to invest resources to comply with evolving laws, regulations and standards, and this investment will

result in increased general and administrative expenses and may divert management's time and attention from product development and commercialization activities. If our efforts to comply with new laws, regulations and standards differ from the activities intended by regulatory or governing bodies due to ambiguities related to practice, regulatory authorities may initiate legal proceedings against us, and our business may be harmed. These laws and regulations could make it more difficult and costly for us to obtain director and officer liability insurance for our directors and officers, 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 executive officers and qualified members of our board of directors, particularly to serve on our audit and compensation committees. In addition, if we are unable to continue to meet the legal, regulatory and other requirements related to being a public company, we may not be able to maintain the listing of our common stock on The NASDAQ Capital Market, which would likely have a material adverse effect on the trading price of our common stock.

ITEM 1B. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 2. PROPERTIES

Our 54,000 square foot corporate office and manufacturing facilities are located in Salt Lake City, Utah. We occupy these facilities pursuant to a lease that expires in January 2020. Pursuant to the terms of the lease agreement, we may extend the lease for two additional periods of five years each. We believe that our existing facilities are adequate for our current and projected needs for the foreseeable future.

ITEM 3. LEGAL PROCEEDINGS

We are currently not a party to any material legal proceedings. However, our industry is characterized by frequent claims and litigation, including claims regarding intellectual property and product liability. As a result, we may be subject to various legal proceedings in the future.

ITEM 4. MINE SAFETY DISCLOSURES

This item does not apply to our business.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS, AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information

Our shares of common stock are currently quoted on The NASDAQ Capital Market under the symbol "AMDA".

The following table sets forth the high and low closing bid prices of our common stock, as reported by NASDAQ Capital Markets since our initial public offering, for the periods indicated:

	2014	
	High	Low
First Quarter (February 13 to March 31)	$9.37	$5.30
Second Quarter	$6.25	$4.40
Third Quarter	$4.74	$1.58
Fourth Quarter	$2.60	$0.58

Holders of Record

As of March 6, 2015, we had approximately 482 holders of record of our common stock. Because many of our shares of common stock are held by brokers and other institutions on behalf of stockholders, this number is not indicative of the total number of stockholders represented by these stockholders of record.

Dividends

We have not paid dividends to stockholders since inception and do not plan to pay cash dividends in the foreseeable future. We currently intend to retain earnings, if any, to finance our growth.

Unregistered Sales of Securities

On October 31, 2014, we issued a warrant to purchase 25,000 shares of our common stock to a service provider to serve as a non-exclusive financial advisor. The exercise price for the warrant is $1.14 per share and the warrant is exercisable, in whole or in part, at any time beginning April 30, 2015 and expires October 31, 2019. On November 12, 2014, we issued a warrant to purchase 150,000 shares of our common stock to a service provider to serve as a non-exclusive financial advisor. The exercise price for the warrant is $1.25 per share and the warrant is exercisable, in whole or in part, at any time beginning May 12, 2015 and expires November 12, 2019. The sale and issuance of these securities was exempt from registration under the Securities Act in reliance upon Section 4(2) of the Securities Act, as transactions by an issuer not involving any public offering. Each recipient represented its intentions to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and an appropriate legend was placed upon the warrant agreement issued in each transaction. No underwriter was involved in either transaction.

Use of Proceeds from Sale of Registered Securities

On February 12, 2014, our registration statement on Form S-1 (File No. 333-192232) was declared effective for our initial public offering of shares of our common stock, or the IPO, pursuant to which we registered the sale of 3,500,000 shares of our common stock at $5.75 per share, plus up to an additional 525,000 additional shares to cover

the underwriters' overallotment option. The IPO generated net proceeds to us of approximately $15.4 million, after deducting underwriting discounts and expenses of approximately $5.8 million. The IPO commenced as of February 12, 2014, and terminated before all of the securities registered under the registration statements were sold because the underwriters elected to partially exercise their overallotment option by purchasing 182,900 additional shares of our common stock. JMP Securities LLC acted as the sole book-running manager for the offering. Needham & Company, LLC acted as co-manager for the IPO. None of the underwriting discounts or other offering expenses were incurred or paid to any of our directors or officers or their associates or to persons owning 10% or more of our equity securities or to any of our affiliates.

As of December 31, 2014, we have used all of the $15.4 million, of the net proceeds of the IPO as follows: (i) approximately $4.2 million to fund our debt servicing costs under the existing GE Capital agreement, including principal and interest payments and debt modification fees; (ii) approximately $4.0 million in working capital to increase our product inventories related primarily to the launch of our second generation Valeo products and approximately $1.7 million to purchase surgical instruments, both of which expand our sales, marketing and distribution capabilities for our silicon nitride technology platform; and (iii) approximately $5.5 million in

general operating expenditures to fund research and development and commercialization activities, as well as general and administrative activities. There was no material change in the planned use of proceeds from the IPO as described in our final prospectus filed with the SEC on February 12, 2014 pursuant to Rule 424(b).

Issuer Purchases of Equity Securities

None

ITEM 6. SELECTED FINANCIAL DATA
Not applicable.

ITEM 7. 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 our consolidated financial statements and related notes appearing elsewhere in this Annual Report. This discussion and analysis contains forward-looking statements based upon current beliefs, plans, expectations, intentions and projections that involve risks, uncertainties and assumptions, such as statements regarding our plans, objectives, expectations, intentions and projections. Our actual results and the timing of selected events could differ materially from those anticipated in these forward-looking statements as a result of several factors, including those set forth under "Risk Factors" and elsewhere in this Annual Report.

Overview

We are a commercial biomaterial company focused on using our silicon nitride technology platform to develop, manufacture and sell a broad range of medical devices. We currently market spinal fusion products and are developing products for use in total hip and knee joint replacements. We believe our silicon nitride technology platform enables us to offer new and transformative products in the orthopedic and other medical device markets. We believe we are the first and only company to use silicon nitride in medical applications. Over 20,000 of our silicon nitride spine products have been implanted in patients.

Biomaterials come in a variety of synthetic or natural materials available in a variety of forms that are used in virtually every medical specialty. We believe our silicon nitride biomaterial has superior characteristics compared to commonly used biomaterials in the markets we are targeting, including polyetheretherketone, or PEEK, which is the most common biomaterial used for interbody spinal fusion products. Specifically, we believe our silicon nitride has the following key attributes: promotion of bone growth; hardness, strength and resistance to fracture; resistance to wear; non-corrosive; anti-infective properties; biocompatibility; and superior diagnostic imaging compatibility.

We currently market our Valeo® family of silicon nitride interbody spinal fusion devices in the United States and Europe for use in the cervical and thoracolumbar areas of the spine. We believe our Valeo devices have a number of advantages over existing products due to silicon nitride's key characteristics, resulting in faster and more effective fusion and reduced risk of infection.

In addition to the markets into which we directly sell our products, we are utilizing our silicon nitride technology platform to expand our current penetration in the spinal fusion market through original equipment manufacturer ("OEM") and private label partnerships. We also expect to do the same in other markets such as total hip and knee joint

replacements, dental and sports medicine. Although our non-silicon nitride products have accounted for approximately 52% and 66% of our product revenues for the years ended December 31, 2014 and 2013, respectively, we believe the continued promotion and potential for adoption of our silicon nitride products and product candidates, if approved, provides us the greatest opportunity to grow our business in new and existing markets and achieve our goal to become a leading biomaterial company.

In addition to the markets into which we directly sell our products, we plan to take our technology platform into other medical markets through original equipment manufacturer ("OEM") and private label partnerships. We believe our biomaterial expertise, strong intellectual property and formulaic manufacturing process will allow us to transition currently available medical device products made of inferior biomaterials and manufacture them using silicon nitride and our technology platform to improve their characteristics.

We are also incorporating our silicon nitride technology into components for use in total hip and knee replacement product candidates that we plan on developing in collaboration with a strategic partner. We believe that our silicon nitride total hip and knee product candidates will provide competitive advantages over current products made with traditional biomaterials. We also believe our silicon nitride technology platform can be used for developing products in other markets and have developed prototypes for use in the dental,

sports medicine and trauma markets. As a result of some of the key characteristics of our silicon nitride, we also believe our coating technology may be used to enhance our metal products as well as commercially available metal spinal fusion, joint replacement and other medical products.

We operate a 30,000 square foot manufacturing facility located at our corporate headquarters in Salt Lake City, Utah, and we are the only vertically integrated silicon nitride orthopedic medical device manufacturer in the world. We market and sell our products to surgeons and hospitals in the United States and select markets in Europe and South America through our established network of more than 50 independent sales distributors who are managed by our experienced in-house sales and marketing management team. We have also started entering into OEM and private label relationships with third parties to further the commercialization of our silicon nitride technology platform beyond our own direct marketing and selling efforts.

Recent Developments

Bridge Loan

On November 6, 2014, we entered into a Loan and Security Agreement with Hampshire MedTech Partners II, LP, as lender, or the Bridge Lender, in connection with a $1.0 million loan to us, or the Bridge Loan, which matured on the earlier of (a) the third business day following our closing of a qualified secondary offering and (b) December 17, 2014, or the Maturity Date. A “qualified secondary offering” means a registered public offering of shares of our common stock with gross proceeds to us of at least $10.0 million.

Our obligations under the Bridge Loan were secured by substantially all of our assets, and this security was subordinate to the security previously granted to our senior secured lender, Hercules Technology. The Bridge Loan was able to be paid, in whole or in part, before the Maturity Date without any premium payments or penalty charges. Proceeds of the Bridge Loan were used for general corporate purposes.

The Bridge Loan bore interest at the rate of 15% per annum. Interest on the Bridge Loan accrued from the date of issuance, but interest was not payable until the Maturity Date. The entire principal amount, and all accrued and then unpaid interest, were due and payable on the Maturity Date. We were obligated to pay the Bridge Lender a $75,000 commitment fee by no later than the Maturity Date. We also agreed to reimburse the Bridge Lender up to $30,000 of reasonable attorneys’ fees and expenses incurred by the Bridge Lender in connection with the transaction. The Bridge Loan contained representations and warranties, affirmative and negative covenants, and events of default customary for a bridge financings of this nature, including, among other things, limitations on certain other indebtedness, loans and investments, liens, mergers, asset sales and transactions with affiliates, including the application of a default rate of interest equal to the lower of 18% per annum and the maximum rate of interest permitted by applicable law.

In addition, we issued a warrant to the Bridge Lender, or Closing Bridge Warrant, to purchase up to 267,380 shares of our common stock, with an exercise price of $1.87 per share. Since we closed a public offering on or before May 6, 2015, at a price per share of common stock sold to the public less than the exercise price of the Closing Bridge Warrant, the Closing Bridge Warrant exercise price was reduced to $1.14, the price per share of common stock sold to the public in the offering. The Closing Bridge Warrant is exercisable upon issuance and expires on November 5, 2019.

In connection with the closing of the Bridge Loan, Hercules Technology provided us a waiver which allowed us to enter into the Bridge Loan and to perform our obligations under the Bridge Loan without triggering an event of default under the existing obligations to Hercules Technology. In addition, we entered into an amendment and waiver with Magna that amended the terms of the unsecured senior convertible notes held by Magna and accordingly allowed us to enter into the Bridge Loan, grant a security interest to secure the Bridge Loan and to perform our obligations under the Bridge Loan without triggering an event of default under our existing obligations to Magna. Magna also waived all

rights it had to participate in the Bridge Loan as a lender.

Secondary Offering

On November 26, 2014, we completed a secondary offering, in which we sold and issued 11,441,646 units. Each unit was issued at a price of $1.14 and consisted of one share of common stock and one common stock warrant ("Secondary Offering Warrant"). We received proceeds of approximately $11.3 million, net of approximately $1.7 million in cash underwriting and other offering costs from the secondary offering. We issued an additional 1,716,246 Secondary Offering Warrants pursuant to the underwriters' over-allotment option.

The Secondary Offering Warrants were immediately exercisable after issuance into common shares at an exercise price of $1.48 and terminate on November 26, 2019. The Secondary Offering Warrants contain a cashless exercise provision whereby the holders may exercise warrants by paying the exercise price in cash or, in lieu of payment of the exercise price in cash, at any time 120 days after issuance, by electing to receive a cash payment from the Company equal to the Black Scholes Value (as defined below) of the number

of shares the holder elects to exercise (the "Black Scholes Payment"); provided that we have discretion as to whether to deliver the Black Scholes Payment or, subject to meeting certain conditions, to deliver a number of shares of our common stock determined according to the following formula (the "Cashless Exercise"):

Total Shares = (A x B) / C

Where:

- Total Shares is the number of shares of common stock to be issued upon a Cashless Exercise
- A is the total number of shares with respect to which the warrant is then being exercised.
- B is the Black Scholes Value (as defined below).
- C is the closing bid price of our common stock as of two trading days prior to the time of such exercise.

As defined in the Secondary Offering Warrants, "Black Scholes Value" means the Black Scholes value of an option for one share of our common stock at the date of the applicable Black Scholes Payment or Cashless Exercise, which is calculated using the Black Scholes Option Pricing Model obtained from the "OV" function on Bloomberg utilizing (i) an underlying price per share equal to the closing bid price of the Common Stock as of trading day immediately preceding the date of issuance of the warrant, (ii) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the remaining term of the warrant as of the applicable Black Scholes Payment or Cashless Exercise, (iii) a strike price equal to the exercise price in effect at the time of the applicable Black Scholes Payment or Cashless Exercise, (iv) an expected volatility equal to 135% and (v) a remaining term of such option equal to five years (regardless of the actual remaining term of the warrant).

The Secondary Offering Warrants also have a mandatory exercise provision, whereby, in the event that our common stock trades at a price that is 25% or more above the exercise price of the warrants, or $1.85, for a period of at least 20 consecutive trading days at any time 120 days after issuance, we may, subject to certain limitations in the warrants, require the holder of the warrants to exercise the warrants for cash payment of the exercise price.

Restructuring

On January 7, 2015, our Board of Directors authorized the implementation of certain cost saving measures which included a reduction in staff of 25 employees, or approximately 28% of our workforce as the result of a comprehensive business review to improve financial performance, increase operational efficiencies and strengthen the Company's value proposition. The staff reduction was implemented and completed on January 8, 2015.

We recorded one-time severance and related costs related to the restructuring of approximately $585,000 in January 2015. We do not anticipate that there will be any further material future cash expenditure associated with the workforce reduction.

Components of our Results of Operations

We manage our business within one reportable segment, which is consistent with how our management reviews our business, makes investment and resource allocation decisions and assesses operating performance.

Product Revenue

We derive our product revenue primarily from the sale of spinal fusion devices and related products used in the treatment of spine disorders. Our product revenue is generated from sales to two types of customers: (1) surgeons and hospitals; and (2) stocking distributors. Most of our products are sold on a consignment basis through a network of independent sales distributors; however, we also sell our products to independent stocking distributors. Product

revenue is recognized when all four of the following criteria are met: (1) persuasive evidence that an arrangement exists; (2) delivery of the products has occurred; (3) the selling price of the product is fixed or determinable; and (4) collectability is reasonably assured. We generate the majority of our revenue from the sale of inventory that is consigned to independent sales distributors that sell our products to surgeons and hospitals. For these products, we recognize revenue at the time we are notified the product has been used or implanted and all other revenue recognition criteria have been met. For all other transactions, we recognize revenue when title and risk of loss transfer to the stocking distributor, and all other revenue recognition criteria have been met. We generally recognize revenue from sales to stocking distributors at the time the product is shipped to the distributor. Stocking distributors, who sell the products to their customers, take title to the products and assume all risks of ownership at time of shipment. Our stocking distributors are obligated to pay within specified terms regardless of when, if ever, they sell the products. Our policy is to classify shipping and handling costs billed to customers as an offset to total shipping expense in the statement of operations, primarily within sales and marketing. In general, our customers do not have any rights of return or exchange.

We believe our product revenue from the sale of our silicon nitride based products will increase due to our sales and marketing efforts and as we introduce new silicon nitride based products into the market and product revenue from the sale of our and our non-silicon nitride products to decrease. We expect that our product revenue will continue to be primarily attributable to sales of our products in the United States.

Cost of Revenue

The expenses that are included in cost of revenue include all direct product costs if we obtained the product from third-party manufacturers and our in-house manufacturing costs for the products we manufacture. We obtain our non-silicon nitride products, including our metal and orthobiologic products, from third-party manufacturers, while we currently manufacture our silicon-nitride products in-house.

Specific provisions for excess or obsolete inventory and, beginning in 2013, the excise tax on the sale of medical devices in the United States, are also included in cost of revenue. In addition, we pay royalties attributable to the sale of specific products to some of our surgeon advisors that assisted us in the design, regulatory clearance or commercialization of a particular product, and these payments are recorded as cost of revenue.

Gross Profit

Our gross profit measures our product revenue relative to our cost of revenue. While we expect our cost of revenue to increase in absolute terms as sales volume increase, we believe our gross profit will be higher as we realize manufacturing efficiencies associated with our silicon nitride-based products.

Research and Development Expenses

Our net research and development costs are expensed as incurred. Research and development costs consist of engineering, product development, clinical trials, test-part manufacturing, testing, developing and validating the manufacturing process, manufacturing, facility and regulatory-related costs. Research and development expenses also include employee compensation, employee and non-employee stock-based compensation, supplies and materials, consultant services, and travel and facilities expenses related to research activities. To the extent that certain research and development expenses are directly related to our manufactured products, such expenses and related overhead costs are allocated to inventory.

We expect to incur additional research and development costs as we continue to develop new spinal fusion products, our product candidates for total joint replacements, such as our total hip replacement product candidate, and our silicon nitride-coated metals, but we believe that research and development expenses will decline moderately in 2015.

Sales and Marketing Expenses

Sales and marketing expenses consist of salaries, benefits and other related costs, including stock-based compensation, for personnel employed in sales, marketing, medical education and training. In addition, our sales and marketing expenses include commissions and bonuses, generally based on a percentage of sales, to our sales managers and independent sales distributors. We provide our products in kits or banks that consist of a range of device sizes and separate instruments necessary to complete the surgical procedure. We generally consign our instruments to our distributors or our hospital customers that purchase the device used in spinal fusion surgery. Our sales and marketing expenses include depreciation of the surgical instruments.

We expect our sales and marketing expenses will remain flat or slightly decline due to the recently implemented cost saving measures. Additionally, we expect our commissions to continue to increase in absolute terms over time but

remain approximately the same or decrease as a percentage of product revenue.

General and Administrative Expenses

General and administrative expenses primarily consist of salaries, benefits and other related costs, including stock-based compensation, for certain members of our executive team and other personnel employed in finance, legal, compliance, administrative, information technology, customer service, executive and human resource departments. General and administrative expenses include allocated facility expenses, related travel expenses and professional fees for accounting and legal services.

We expect our general and administrative expenses to decrease as a result of the restructuring and cost saving measures implemented in January 2015.

Results of Operations

Year Ended December 31, 2014 Compared to the Year Ended December 31, 2013

The following table sets forth, for the periods indicated, our results of operations for the years ended December 31, 2014 and 2013 (in thousands):

	Year Ended December 31,			
	2014	2013	$ Change	% Change
Product revenue	$22,765	$22,314	$451	2 %
Costs of revenue	7,910	7,045	865	12 %
Gross profit	14,855	15,269	(414)	(3 %)
Operating expenses:				
Research and development	6,742	3,461	3,281	95 %
General and administrative	13,588	5,759	7,829	136 %
Sales and marketing	18,692	16,384	2,308	14 %
Total operating expenses	39,022	25,604	13,418	52 %
Loss from operations	(24,167)	(10,335)	(13,832)	134 %
Other income (expense), net	(8,415)	2,049	(10,464)	511 %
Net loss before income taxes	(32,582)	(8,286)	(24,296)	(293 %)
Provision for income taxes	-	-	-	N/A
Net loss	$(32,582)	$(8,286)	$(24,296)	(293 %)

Product Revenue

The following table sets forth our product revenue from sales of the indicated product category for the years ended December 31, 2014 and 2013 (in thousands):

	Year Ended December 31,			
	2014	2013	$ Change	% Change
Silicon Nitride	$10,824	$7,667	$3,157	41 %
Non-Silicon Nitride	11,941	14,647	(2,706)	(18 %)
Total product revenue	$22,765	$22,314	$451	2 %

Total product revenue was $22.8 million in 2014 as compared to $22.3 million in 2013, an increase of $0.5 million or 2%. This increase was primarily driven by increased sales of our silicon nitride products, which increased by $3.2 million or 41%, for 2014 as compared to 2013 primarily due to our continued focus and investment in sales and marketing efforts of our silicon nitride products. The increase in sales of silicon nitride products was partially offset by a decrease in non-silicon nitride sales of $2.7 million, or 18%, during 2014 as compared to 2013, as sales and marketing was primarily focused on silicon nitride product sales.

The following table sets forth, for the periods indicated, our product revenue by geographic area (in thousands):

	Year Ended December 31,			
	2014	2013	$ Change	% Change
Domestic	$22,696	$22,203	$ 493	2 %
International	69	111	(42)	(38 %)
Total product revenue	$22,765	$22,314	$ 451	2 %

International revenue decreased in 2014 as compared to 2013 as we have primarily focused on increasing sales domestically.

Cost of Revenue

Our cost of revenue increased $0.9 million, or 12%, in 2014 as compared to the same period in 2013. The increase is primarily due to a $1.3 million increase in excess and obsolete inventory as we launched several second generation Valeo products in 2014 which resulted in us needing to reserve a significant amount of our first generation Valeo products. The increase in excess and obsolete inventory was partially offset by a decrease in our product costs, as a percentage of product revenue, in 2014 due to production efficiencies. Excluding the impact of excess and obsolete inventory, our product costs, as a percentage of product revenue, decreased from 26% in 2013 to 23% in 2014 due to production efficiencies.

Gross Profit

Gross profit as a percentage of product revenue decreased by 3% to 65% in 2014 from 68% for the same period in 2013, primarily driven by an increase in excess and obsolete inventory costs of $1.3 million related to our first generation Valeo products.

Research and Development Expenses

Research and development expenses were $6.7 million in 2014 as compared to $3.4 million in 2013, an increase of $3.3 million, or 95%. The increase was primarily due to a $1.3 million increase in stock-based compensation due to the RSUs granted in 2013 and the beginning of 2014. Additionally, there was an increase in personnel costs, clinical study costs and general research and development expenses as we increased our investment in seeking to develop new products and improve existing products.

General and Administrative Expenses

General and administrative expenses were $13.6 million in 2014 as compared to $5.8 million in 2013, an increase of $7.8 million, or 136%. The increase was primarily due to an increase in stock-based compensation of $6.0 million. Additionally, there was an increase in personnel related expenses, insurance expense and other administrative expenses due primarily to increased costs associated with becoming a public company in 2014.

Sales and Marketing Expenses

Sales and marketing expenses were $18.7 million in 2014 as compared to $16.4 million in 2013, an increase of $2.3 million, or 14%. This increase was primarily due to an increase in stock-based compensation of $2.1 million due to RSUs granted in 2013 and the beginning of 2014. Additionally, personnel and other selling related expenses increased as a result of increased headcount to enhance our commercial infrastructure and expand our sales and marketing efforts. In addition, there was an increase in instrument sets depreciation and amortization in 2014 due to the purchase of new instrument sets for the second generation Valeo products in the latter half of 2013 and into 2014.

Other Income (Expense), Net

Other expense was $8.4 million in 2014 as compared to other income of $2.0 million in 2013, an increase of $10.4 million, or 511%. This increase was primarily due to a $1.6 million loss on extinguishment of the GE Capital debt primarily due to unamortized deferred financing costs and the termination fee associated with the debt and a $0.6 million loss on extinguishment of the convertible notes converted during 2014. In addition, because the warrants issued in the Company’s November 2014 secondary offering were considered liabilities, $2.0 million of the secondary offering costs were expensed. Furthermore, there was increased interest expense of $1.8 million from the additional debt incurred during the second quarter of 2014. Lastly, in 2014 there was an increase in the change in fair value of derivative liabilities of $0.3 million as compared to a decrease in the change in fair value of derivative liabilities of $4.0 million in 2013 as a result of significant decrease in the value of our common stock in 2013 as compared to the previous period.

Liquidity and Capital Resources

For the years ended December 31, 2014 and 2013, we incurred a net loss of $32.6 million and $8.3 million, respectively, and used cash in operations of $14.5 million and $9.9 million, respectively. We have an accumulated deficit of $172.5 million as of December 31, 2014. To date, our operations have been principally financed from proceeds from the issuance of convertible preferred stock and common stock, convertible debt and bank debt and, to a

lesser extent, cash generated from product sales. As of December 31, 2014, we had approximately $18.2 million in cash and cash equivalents.

In order to finance the continued growth in product sales, to invest in further product development and to otherwise satisfy obligations as they mature, we completed an initial public offering of our common stock (“IPO”), in which we sold and issued 3,682,900 shares, including 182,900 shares sold pursuant to the exercise by the underwriters of their over-allotment option, in February 2014, at an issuance price of $5.75 per share, less underwriting discounts and commissions. As a result of the IPO, we received proceeds of approximately $15.4 million, net of approximately $5.8 million in IPO related costs.

Furthermore, in order to help finance our operations and maintain compliance with our debt covenant, we completed a secondary offering in November 2014, in which we sold and issued 11,441,646 units. Each unit was issued at a price of $1.14 and consisted of one share of common stock and one Secondary Offering Warrant. We received proceeds of approximately $11.3 million, net of approximately $1.7 million in cash underwriting and other offering costs from the secondary offering. We issued an additional 1,716,246 Secondary Offering Warrants pursuant to the underwriters’ over-allotment option.

The Secondary Offering Warrants were immediately exercisable after issuance into common shares at an exercise price of $1.48 and terminate on November 26, 2019. The Secondary Offering Warrants contain a cashless exercise provision whereby the holders may exercise warrants by paying the exercise price in cash or, in lieu of payment of the exercise price in cash, at any time 120 days after issuance, by electing to receive a cash payment from the Company equal to the Black Scholes Value (as defined below) of the number of shares the holder elects to exercise the Black Scholes Payment; provided that we have discretion as to whether to deliver the Black Scholes Payment or, subject to meeting certain conditions, to deliver a number of shares of our common stock determined according to the following formula:

Total Shares = (A x B) / C

Where:

- Total Shares is the number of shares of common stock to be issued upon a Cashless Exercise
- A is the total number of shares with respect to which the warrant is then being exercised.
- B is the Black Scholes Value (as defined below).
- C is the closing bid price of our common stock as of two trading days prior to the time of such exercise.

As defined in the Secondary Offering Warrants, "Black Scholes Value" means the Black Scholes value of an option for one share of our common stock at the date of the applicable Black Scholes Payment or Cashless Exercise, which is calculated using the Black Scholes Option Pricing Model obtained from the "OV" function on Bloomberg utilizing (i) an underlying price per share equal to the closing bid price of the Common Stock as of trading day immediately preceding the date of issuance of the warrant, (ii) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the remaining term of the warrant as of the applicable Black Scholes Payment or Cashless Exercise, (iii) a strike price equal to the exercise price in effect at the time of the applicable Black Scholes Payment or Cashless Exercise, (iv) an expected volatility equal to 135% and (v) a remaining term of such option equal to five years (regardless of the actual remaining term of the warrant).

The Secondary Offering Warrants also have a mandatory exercise provision, whereby, in the event that our common stock trades at a price that is 25% or more above the exercise price of the warrants, or $1.85, for a period of at least 20 consecutive trading days at any time 120 days after issuance, we may, subject to certain limitations in the warrants, require the holder of the warrants to exercise the warrants for cash payment of the exercise price.

In June 2014, we entered into the Hercules Term Loan with Hercules Technology. The Hercules Term Loan provides for a $20 million term loan that matures on January 1, 2018 and is secured by substantially all of our assets. Proceeds of the loan were used to repay in full and terminate our prior credit facility with GE Capital and the remainder of the proceeds of this loan is being used for general corporate purposes.

The Hercules Term Loan bears interest at the rate of the greater of either (i) the prime rate plus 7.7%, and (ii) 10.95%. Interest accrues from the date of the Hercules Term Loan with interest payments due monthly commencing on July 1, 2014. Principal payments are required commencing August 1, 2015 and are to be made in thirty equal installments, with the remainder due at maturity; provided, however, in the event that we meet certain conditions set forth in the Hercules Term Loan, the interest only period may be extended through February 1, 2016, reducing the number of required principal payments to twenty-four. Additionally, under certain circumstances we may, or Hercules Technology may, require that we repay a portion of the principal in the form of shares of our common stock. The conversion price used for the calculation of the amount of shares to be delivered in such instance is $5.72 per share.

The Hercules Term Loan contains certain covenants related to restrictions on payments to certain company affiliates, financial reporting requirements and a minimum liquidity covenant that requires us to maintain cash and cash

equivalents of no less than $9.0 million.

We anticipate we will need to obtain additional funding in the fourth quarter of 2015 to maintain compliance with the financial and liquidity covenants related to the Loan and Security Agreement through the next twelve months. Furthermore, if we are unable to access additional funds prior to becoming non-compliant with the financial or liquidity covenants, the entire remaining balance of the Loan and Security Agreement could become immediately due and payable at the option of Hercules Technology. As such, we have classified the entire debt obligation as a current liability.

The repayment of our obligations under the Hercules Term Loan and the liquidity covenant limit our ability to use our cash and cash equivalents to fund our operations and may restrict our ability to continue development of our product candidates. Additionally, the Hercules Term Loan restricts our ability to incur additional pari passu indebtedness, which may reduce our ability to seek additional

financing. If adequate funds are not available on a timely basis, we may terminate or delay the development of one or more of our product candidates, or delay activities necessary to commercialize our product candidates. Additional funding may not be available to us on acceptable terms, or at all. Any additional equity financing, if available, may not be available on favorable terms and will most likely be dilutive to our current stockholders, and debt financing, if available, may involve more restrictive covenants. Our ability to access capital when needed is not assured and, if not achieved on a timely basis, will materially harm our business, financial condition and results of operations. As a result of our debt obligations, we will need additional funds to meet our operational needs and capital requirements for product development, clinical trials and commercialization.

On June 30, 2014, we entered into a Securities Purchase Agreement with MG Partners II Ltd., or Magna. Pursuant to the terms of the Securities Purchase Agreement, we sold to Magna an initial unsecured senior convertible note with an original principal amount of $2.9 million, or the Initial Convertible Note, for a purchase price of $2.5 million. Additionally, on August 11, 2014, Magna purchased an additional unsecured senior convertible note with an original principal amount of $3.5 million, or the Additional Convertible Note, for a fixed purchase price of $3.5 million. The Initial Convertible Note and Additional Convertible Note are collectively referred to as the Convertible Notes.

With respect to the Initial Convertible Note, a total of $400,000 of the outstanding principal amount (together with any accrued and unpaid interest with respect to such portion of the principal amount) was automatically extinguished when we filed a registration statement registering the underlying shares and that registration statement was declared effective by the SEC on August 6, 2014. The Securities Purchase Agreement and the Convertible Notes also contain representations and warranties, covenants and events of default customary for financings of this type, including, among other things, limitations on certain other indebtedness, dividends and distributions, sales and transfers of assets and transactions with affiliates and rights to participate in our future financings.

The Initial Convertible Note and Additional Convertible Note mature on June 30, 2016 and August 11, 2016, respectively, (subject to extension as provided in the Convertible Notes) and accrue interest at an annual rate of 6.0%. On October 1, 2014, the Convertible Notes became convertible at any time, in whole or in part, at Magna's option, into shares of our common stock at a conversion price equal to the lesser of (i) $3.75 per share and (ii) a price equal to 80% of the lowest daily volume weighted average price, or VWAP, of our common stock during the five trading days prior to conversion.

As of February 28, 2015, Magna had converted a total of $1.7 million of the principal amount of the Convertible Notes into 2,419,982 shares of common stock.

In addition, we issued to Magna a warrant, or the Magna Warrant, to purchase up to 568,889 shares of our common stock at an exercise price of $4.65 per share.

At no time will Magna be entitled to convert any portion of the Convertible Notes or exercise any portion of the Magna Warrant to the extent that after such conversion or exercise, Magna (together with its affiliates) would beneficially own more than 4.99% of the outstanding shares of our common stock as of such date, or the Maximum Percentage. The Maximum Percentage may be raised to any other percentage not in excess of 9.99% at the option of Magna upon at least 61 days' prior notice to us, or lowered to any other percentage, at the option of Magna, at any time. Pursuant to the terms of the Securities Purchase Agreement and as required by the rules of The NASDAQ Stock Market, until stockholder approval is obtained, we may not issue any shares of common stock upon conversion of the Convertible Notes or upon exercise of the Magna Warrant in an aggregate amount that exceeds 19.99% of the issued and outstanding shares of our common Stock on June 30, 2014, or 2,481,000 shares in total. Accordingly, we are required to take all action necessary to obtain stockholder approval at each meeting of stockholders until such approval is obtained.

We also issued 50,853 shares of our common stock to Magna which represents 4% of the total purchase price for the Convertible Notes under the Securities Purchase Agreement calculated using a per share price of $4.7195, the VWAP of the Common Stock per share on June 27, 2014, in connection with our execution of the Securities Purchase Agreement.

We may from time-to-time seek additional financing through the issuance of common stock and/or debt, to satisfy our debt obligations, meet our working capital requirements, make continued investment in research and development and make capital expenditures needed for us to maintain and expand our business. We may not be able to obtain additional financing on terms favorable to us, if at all. It is also possible that we may allocate significant amounts of capital toward solutions or technologies for which market demand is lower than anticipated and, as a result, abandon such efforts. If we are unable to obtain adequate financing or financing on terms satisfactory to us when we require it, or if we expend capital on projects that are not successful, our ability to continue to support our business growth and to respond to business challenges could be significantly limited, or we may even have to scale back our operations. If we raise additional funds through further issuances of equity or convertible debt securities, our existing stockholders could suffer significant dilution, and any new equity securities we issue could have rights, preferences and privileges superior to those of holders of our common stock.

Going Concern

Our ability to access capital when needed is not assured and, if not achieved on a timely basis, will materially harm our business, financial condition and results of operations. These uncertainties create substantial doubt about our ability to continue as a going concern. Our independent registered public accounting firm included an explanatory paragraph regarding substantial doubt about our ability to continue as a going concern in their report on our annual financial statements for the fiscal year ended December 31, 2014. The financial information throughout this Annual Report have been prepared on a basis which assumes that we will continue as a going concern, which contemplates the realization of assets and the satisfaction of liabilities and commitments in the normal course of business. This financial information and statements do not include any adjustments that may result from the outcome of this uncertainty.

Cash Flows

The following table summarizes, for the periods indicated, cash flows from operating, investing and financing activities (in thousands):

	Year Ended December 31,	
	2014	2013
Net cash used in operating activities	$(14,522)	$(9,949)
Net cash (used in) provided by investing activities	(1,738)	253
Net cash provided by financing activities	32,227	9,234
Net cash provided	$15,967	$(462)

Net Cash Used in Operating Activities

Net cash used in operating activities was $14.5 million in 2014, compared to $9.9 million used in 2013, an increase of $4.6 million, or 46%. The increase in cash used in operating activities during 2014 was primarily attributable to a $1.7 million increase in the change in inventory as we built up our inventory, $3.4 million reduction in accounts payable and accrued liabilities and an overall increase in operational expenditures for sales and marketing and general and administrative activities as we continue to focus our efforts on growth. These amounts were partially offset by a $2.8 million decrease in other current assets primarily due to a reduction of deferred offering costs.

Net Cash Provided by Investing Activities

Net cash used in investing activities was $1.7 million in 2014, compared to $0.3 million provided by investing activities during the same period in 2013, a decrease of $2.0 million. The decrease in net cash from investing activities during 2014 was primarily attributable to purchases of property and equipment of $2.2 million and a decrease in restricted cash of $0.4 million as a result of our cash restrictions being released. No proceeds were received from maturities of marketable securities during 2014 as compared to the same period in 2013 when we received proceeds of $2.7 million.

Net Cash Provided by Financing Activities

Net cash provided by financing activities was $32.2 million in 2014, compared to $9.2 million provided in 2013, an increase of $23.0 million, or 249%. This increase in net cash provided by financing activities in 2014 was primarily attributable to receiving $15.4 million in net proceeds from the issuance of common stock in our IPO, receiving $11.3

million in net proceeds from the issuance of units in our secondary offering, and receiving net proceeds from the issuance of long-term debt of $25.3 million, which were offset by long-term debt payments and debt extinguishment costs of $19.8 million. In 2013, we received $8.9 million proceeds from the issuance of convertible preferred stock and a $2.9 million in proceeds from the issuance of common stock in connection with the exercise of common stock warrants and options, which were partially offset by net payments of $2.6 million on our GE Secured Lending Facility.

Indebtedness

In December 2012, we entered into a senior secured credit facility with GE Capital, which consisted of an $18.0 million term loan and up to $3.5 million revolving credit facility. We pledged all of our assets as collateral for the loans. The revolving line of credit was secured by our accounts receivable, based on certain defined criteria. This credit facility provided by GE Capital was paid in full on June 30, 2014 and there is no longer any outstanding obligation on this indebtedness.

On June 30, 2014, we entered into the Hercules Term Loan, which provides for a $20 million term loan with a maturity date of January 1, 2018 and is secured by substantially all of our assets. The proceeds of the loan were used to repay in full and terminate our prior credit facility with GE Capital and the remainder of the proceeds is being used for general corporate purposes.

Also, on June 30, 2014, we entered into a Securities Purchase Agreement with MG Partners II Ltd., or Magna. Pursuant to the terms of the Securities Purchase Agreement, we sold to Magna an initial unsecured senior convertible note with an original principal amount of $2.9 million, or the Initial Convertible Note, for a purchase price of $2.5 million. Additionally, on August 11, 2014, Magna purchased an additional unsecured senior convertible note with an original principal amount of $3.5 million, or the Additional Convertible Note, for a fixed purchase price of $3.5 million. The Initial Convertible Note and Additional Convertible Note are collectively referred to as the Convertible Notes.

With respect to the Initial Convertible Note, a total of $400,000 of the outstanding principal amount (together with any accrued and unpaid interest with respect to such portion of the principal amount) was automatically extinguished when we filed a registration statement registering the underlying shares and that registration statement was declared effective by the SEC on August 6, 2014. The Securities Purchase Agreement and the Convertible Notes also contain representations and warranties, covenants and events of default customary for financings of this type, including, among other things, limitations on certain other indebtedness, dividends and distributions, sales and transfers of assets and transactions with affiliates and rights to participate in our future financings. Pursuant to the terms of the Securities Purchase Agreement and as required by the rules of The NASDAQ Stock Market, until stockholder approval is obtained, we may not issue any shares of common stock upon conversion of the Convertible Notes or upon exercise of the Magna Warrant in an aggregate amount that exceeds 19.99% of the issued and outstanding shares of our common Stock on June 30, 2014, or 2,481,000 shares in total. Accordingly, we are required to take all action necessary to obtain stockholder approval at each meeting of stockholders until such approval is obtained.

The Initial Convertible Note and Additional Convertible Note mature on June 30, 2016 and August 11, 2016, respectively, (subject to extension as provided in the Convertible Notes) and accrue interest at an annual rate of 6.0%. On October 1, 2014, the Convertible Notes became convertible at any time, in whole or in part, at Magna's option, into shares of common stock at a conversion price equal to the lesser of (i) $3.75 per share and (ii) a price equal to 80% of the lowest daily volume weighted average price, or VWAP, of our common stock during the five trading days prior to conversion.

As of February 28, 2015, Magna had converted a total of $1.7 million of the principal amount of the Convertible Notes into 2,419,982 shares of common stock.

See above in "Liquidity and Capital Resources" for additional information about the Hercules Term Loan and the Convertible Notes.

Contractual Obligations and Commitments

The following table summarizes our outstanding contractual obligations as of December 31, 2014 (in thousands):

	Total	Less Than 1 Year	1-3 Years	4-5 Years	After 5 Years

Long-term debt (1)	$24,500	$2,949	$21,551	$ -	$-
Operating leases	4,673	883	2,810	980	-
Total contractual obligations	$ 29,173	$3,832	$24,361	$ 980	$ -

(1) Does not include the $1.2 million final payment fee we must pay upon prepayment in full or scheduled maturity of the term loan or monthly interest payments.

The information above reflects only payment obligations that are fixed and determinable. Our commitments for long-term debt relate to our term loan with Hercules and convertible notes with Magna and our commitments for operating leases relate to our operating lease for our corporate headquarters and manufacturing facility in Salt Lake City, Utah and other equipment leases. The above table does not include any of the contractual obligations with respect to royalties payable upon sales of certain of our products as none of our arrangements contain minimum royalty payments. We also do not have contractually minimum purchase commitments for the supply of any of our raw materials, products or instruments.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements, as defined in Item 303(a)(4) of Regulation S-K.

Related-Party Transactions

For a description of our related-party transactions, see “Certain Relationships and Related Party Transactions.”

Seasonality and Backlog

Our business is generally not seasonal in nature. Our sales generally consist of products that are in stock with us or maintained at hospitals or with our sales distributors. Accordingly, we do not have a backlog of sales orders.

Critical Accounting Policies and Estimates

The preparation of the consolidated financial statements requires us to make assumptions, estimates and judgments that affect the reported amounts of assets and liabilities, the disclosures of contingent assets and liabilities as of the date of the consolidated financial statements, and the reported amounts of product revenues and expenses during the reporting periods. Certain of our more critical accounting policies require the application of significant judgment by management in selecting the appropriate assumptions for calculating financial estimates. By their nature, these judgments are subject to an inherent degree of uncertainty. On an ongoing basis, we evaluate our judgments, including those related to inventories, recoverability of long-lived assets and the fair value of our common stock. We use historical experience and other assumptions as the basis for our judgments and making these estimates. Because future events and their effects cannot be determined with precision, actual results could differ significantly from these estimates. Any changes in those estimates will be reflected in our consolidated financial statements as they occur. As an “emerging growth company,” we have elected to delay the adoption of new or revised accounting standards until those standards would otherwise apply to private companies. As a result, our financial statements may not be comparable to those of other public companies. While our significant accounting policies are more fully described in the footnotes to our consolidated financial statements included elsewhere in this Annual Report, we believe that the following accounting policies and estimates are most critical to a full understanding and evaluation of our reported financial results. The critical accounting policies addressed below reflect our most significant judgments and estimates used in the preparation of our consolidated financial statements.

Revenue Recognition

We derive our product revenue primarily from the sale of spinal fusion devices and related products used in the treatment of spine disorders. Our product revenue is generated from sales to two types of customers: (1) surgeons and hospitals; and (2) stocking distributors. Most of our products are sold on a consignment basis through a network of independent sales distributors; however, we also sell our products to independent stocking distributors. Product revenue is recognized when all four of the following criteria are met: (1) persuasive evidence that an arrangement exists; (2) delivery of the products has occurred; (3) the selling price of the product is fixed or determinable; and (4) collectability is reasonably assured. We generate the majority of our revenue from the sale of inventory that is consigned to independent sales distributors that sell our products to surgeons and hospitals. For these products, we recognize revenue at the time we are notified the product has been used or implanted and all other revenue recognition criteria have been met. For all other transactions, we recognize revenue when title and risk of loss transfer to the stocking distributor, and all other revenue recognition criteria have been met. We generally recognize revenue from sales to stocking distributors at the time the product is shipped to the distributor. Stocking distributors, who sell the products to their customers, take title to the products and assume all risks of ownership at time of shipment. Our stocking distributors are obligated to pay within specified terms regardless of when, if ever, they sell the products. Our policy is to classify shipping and handling costs billed to customers as an offset to total shipping expense in the statement of operations, primarily within sales and marketing. In general, our customers do not have any rights of return or exchange.

Accounts Receivable and Allowance for Doubtful Accounts

The majority of our accounts receivable is composed of amounts due from hospitals or surgical centers. Accounts receivable are carried at cost less an allowance for doubtful accounts. On a regular basis, we evaluate accounts receivable and estimate an allowance for doubtful accounts, as needed, based on various factors such as customers' current credit conditions, length of time past due, and the general economy as a whole. Receivables are written off against the allowance when they are deemed uncollectible.

Inventories

Inventories are stated at the lower of cost or market, with cost for manufactured inventory determined under the standard cost method which approximates the first-in first-out method. Manufactured inventory consists of raw material, direct labor and manufacturing overhead cost components. Inventories purchased from third-party manufacturers are stated at the lower of cost or market using the first-in, first out method. We review the carrying value of inventory on a periodic basis for excess or obsolete items and record an expense for the identified items as necessary. We have made adjustments to, and it is reasonably possible that we may be required to

make further adjustments to, the carrying value of inventory in future periods. We hold some consigned inventory at distributors and other customer locations where revenue recognition criteria have not yet been met.

Long-Lived Assets, Indefinite-Lived Intangibles and Goodwill

Periodically we assess potential impairment of our long-lived assets, which include property, equipment, and acquired intangible assets. We perform an impairment review whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Factors we consider important which could trigger an impairment review include, but are not limited to, significant under-performance relative to historical or projected future operating results, significant changes in the manner of use of the acquired assets or our overall business strategy, and significant industry or economic trends. When we determine that the carrying value of a long-lived asset may not be recoverable based upon the existence of one or more of the above indicators, we determine the recoverability by comparing the carrying amount of the asset to net future undiscounted cash flows that the asset is expected to generate and recognize an impairment charge equal to the amount by which the carrying amount exceeds the fair market value of the asset. We amortize intangible assets on a straight-line basis over their estimated useful lives.

For indefinite lived intangible assets that are not subject to amortization, the impairment test consists of a comparison of the fair value of an intangible asset with its carrying amount. If the carrying amount of an intangible asset exceeds its fair value, an impairment loss is recognized in an amount equal to that excess.

Our long-lived assets include surgical instruments used by spine surgeons during surgical procedures to facilitate the implantation of our products. There are no contractual terms with respect to the usage of our instruments by our customers. Surgeons are under no contractual commitment to use our instruments. We maintain ownership of these instruments and, when requested, we allow the surgeons to use the instruments to facilitate implantation of our related products. We do not currently charge for the use of our instruments and there are no minimum purchase commitments of our products. As our surgical instrumentation is used numerous times over several years, often by many different customers, instruments are capitalized as property and equipment once they have been placed in service. Once placed in service, instruments are carried at cost, less accumulated depreciation. Depreciation is computed using the straight-line method based on average estimated useful lives. Estimated useful lives of surgical instruments are three years and are determined based on a variety of factors including reference to associated product life cycles. As instruments are used as tools to assist surgeons, depreciation of instruments is recognized as a sales and marketing expense.

We review our long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying value of the assets may not be recoverable. An impairment loss would be recognized when estimated future undiscounted cash flows relating to the assets are less than the assets' carrying amount. An impairment loss is measured as the amount by which the carrying amount of an asset exceeds its fair value.

We test goodwill for impairment annually as of December 31, or whenever events or changes in circumstances indicate that goodwill may be impaired. For goodwill impairment testing purposes, we consider the value of our equity, including the value of our convertible preferred stock, in the total carrying value of our single reporting unit. We perform a first step analysis by comparing the carrying amount of net assets to the fair value of our single reporting unit. If the fair value is determined to be less than the carrying amount, a second step analysis is performed to compute the amount of impairment as the difference between the implied estimated fair value of goodwill and the carrying amount.

Income Taxes

We recognize deferred tax assets and liabilities for the future tax consequences attributable to the differences between the financial statement carrying value of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates in effect for the fiscal year in which those temporary differences are expected to be recovered or settled. Valuation allowances are established when necessary to reduce deferred tax assets to the amount expected to be realized.

We operate in various tax jurisdictions and are subject to audit by various tax authorities. We provide for tax contingencies whenever it is deemed probable that a tax asset has been impaired or a tax liability has been incurred for events such as tax claims or changes in tax laws. Tax contingencies are based upon their technical merits relative tax law and the specific facts and circumstances as of each reporting period. Changes in facts and circumstances could result in material changes to the amounts recorded for such tax contingencies.

We recognize uncertain income tax positions taken on income tax returns at the largest amount that is more-likely than-not to be sustained upon audit by the relevant taxing authority. An uncertain income tax position will not be recognized if it has less than a 50% likelihood of being sustained.

Our policy for recording interest and penalties associated with uncertain tax positions is to record such items as a component of our income tax provision. For the years ended December 31, 2014 and 2013, we did not record any material interest income, interest expense or penalties related to uncertain tax positions or the settlement of audits for prior periods.

Stock-Based Compensation Expense

Common Stock Valuation

Prior to our IPO in February 2014, our board of directors had determined the fair value of the common stock with assistance from management and based upon information available at the time of grant. The valuation of our common stock required us to make complex and subjective judgments. We considered a combination of valuation methodologies, including income, market and transaction approaches. The most significant factors considered by our board of directors when determining the fair value of our common stock were as follows:

- external market and economic conditions affecting the medical device industry;
- prices at which we sold shares of our convertible preferred stock to third-party investors;
- the superior rights and preferences of securities senior to our common stock, such as our preferred stock, at the time of each grant;
- our need for future financing to fund commercial operations;
- the lack of marketability of our common stock;
- third-party valuations of our common stock;
- our historical operating and financial performance;
- the status of our research and development efforts;
- the status of our new product releases to the spine market;
- the likelihood of achieving a liquidity event, such as an initial public offering or sale of our company; and
- estimates and analysis provided by management.

Prior to our IPO, we had regularly obtained third-party valuations to assist our board of directors in determining the fair value of our common stock for each stock option grant and other stock-based awards, on an annual basis since 2007. Since our IPO, we have used the price of our common stock as quoted on NASDAQ.

Significant Factors and Assumptions Used in Determining Fair Value of Common Stock

The $5.75 issuance price of the common stock sold in our IPO in February 2014 was used as the estimated fair value of the shares of our common stock as of and for the quarter ended December 31, 2013 due to the close proximity to the valuation dates and there were no significant changes that would indicate a decrease or increase in the stock price. The price of $17.53 was used as the estimated fair value of our common shares for estimated fair value calculations done as of and prior to September 30, 2013. The price of $17.53 was based on a third party valuation performed in September 2012. The valuation technique used in the third party valuation was a hybrid of the discounted cash flow method and the guideline public company method. The significant assumptions used in determining the $17.53 estimated fair value of our common shares using a hybrid of the discounted cash flow method and the guideline public company methodology were as follows:

Weighted-average cost of capital (WACC)	17%
Revenue growth rate (range)	32.5% to 5%
Compounded average revenue growth rate	17.7%
EBITDA margin (range)	(23.8)% to 32.7%

Stock-Based Compensation

We apply the fair value recognition provisions of Financial Accounting Standards Board, or FASB, Accounting Standards Codification, or ASC, Topic 718, Compensation-Stock Compensation, or ASC 718. Determining the amount of stock-based compensation to be recorded requires us to develop estimates of the fair value of stock options and other equity awards as of their grant date. Stock-based compensation expense is recognized ratably over the requisite service period, which in most cases is the vesting period of the award. Calculating the fair value of stock-based awards requires that we make highly subjective assumptions. Use of this valuation methodology requires that we make assumptions as to the volatility of our common stock, the expected term of

our stock options, the risk free rate of return for a period that approximates the expected term of our stock options and our expected dividend yield. Because we were a privately-held company with no trading history prior to February 2014 and have limited stock history since February 2014, we utilize the historical stock price volatility from a representative group of public companies to estimate expected stock price volatility. We selected companies from the medical device industry, specifically those who are focused on the design, development and commercialization of products for the treatment of spine disorders, and who have similar characteristics to us, such as stage of life cycle and size. We intend to continue to utilize the historical volatility of the same or similar public companies to estimate expected volatility until a sufficient amount of historical information regarding the price of our publically traded stock becomes available. We use the simplified method as prescribed by the Securities and Exchange Commission Staff Accounting Bulletin No. 107, Share-based Payment, to calculate the expected term of stock option grants to employees as we do not have sufficient historical exercise data to provide a reasonable basis upon which to estimate the expected term of stock options granted to employees. We utilize a dividend yield of zero because we have never paid cash dividends and have no current intention to pay cash dividends. The risk-free rate of return used for each grant is based on the U.S. Treasury yield curve in effect at the time of grant for instruments with a similar expected life. No options were granted to employees during the year ended December 31, 2013. The following assumptions were used in the calculation to estimate the fair value of options granted to employees using the Black-Scholes-Merton valuation model during the year ended December 31, 2014:

Weighted-average risk-free interest rate	1.85%
Weighted-average expected life (in years)	6.30
Expected dividend yield	0 %
Weighted-average expected volatility	47 %

The following assumptions were used in the Black-Scholes-Merton valuation model related to non-employee stock options granted during the years ended December 31, 2014 and 2013:

	December 31, 2014		December 31, 2013	
Weighted-average risk-free interest rate	2.52	%	2.74	%
Weighted-average expected life (in years)	9.7		10.0	
Expected dividend yield	0	%	0	%
Weighted-average expected volatility	44	%	52	%

The estimated fair value of stock-based awards for employee and non-employee director services are expensed over the requisite service period. Option awards issued to non-employees, excluding non-employee directors, are recorded at their fair value as determined in accordance with authoritative guidance, are periodically revalued as the options vest and are recognized as expense over the related service period. As a result, the charge to operations for non-employee awards with vesting conditions is affected each reporting period by changes in the fair value of our common stock.

We are required to estimate the level of forfeitures expected to occur and record stock-based compensation expense only for those awards that we ultimately expect will vest. We estimate our forfeiture rate based on the type of award, employee class and historical experience.

Derivative Liabilities

Derivative liabilities includes the fair value of instruments such as common stock warrants, preferred stock warrants and convertible features of notes, that are initially recorded at fair value and are required to be re-measured to fair value at each reporting period under provisions of ASC 480, Distinguishing Liabilities from Equity, or ASC 815, Derivatives and Hedging. The change in fair value of the instruments is recognized as a component of other income (expense), net in our statement of comprehensive loss until the instruments settle or expire. We estimate the fair value of these instruments using the Black-Scholes-Merton valuation model. The significant assumptions used in estimating the fair value include the exercise price, volatility of the stock underlying the instrument, risk-free interest rate, estimated fair value of the stock underlying the instrument and the estimated life of the instrument.

The effect of changes to these significant assumptions on the estimated liability for these instruments is as follows:

Fair value of underlying stock increases	Warrant liability increases
Risk free interest increases	Warrant liability decreases
Expected average life increases	Warrant liability increases
Expected dividend yield increases	Warrant liability decreases
Expected volatility increases	Warrant liability increases

Upon consummation of our IPO in February 2014, all classes of our convertible preferred stock were converted into common stock. Upon conversion of the underlying classes of convertible preferred stock, pursuant to the terms of the preferred stock warrants, the remaining warrants to purchase our convertible preferred stock were converted into common stock warrants and classified as a component of equity and are no longer subject to re-measurement.

Recently Issued Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2014-09, Revenue from Contracts with Customers. The core principle behind ASU 2014-09 is that an entity should recognize revenue to depict the transfer of promised goods and services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for delivering those goods and services. This model involves a five-step process that includes identifying the contract with the customer, identifying the performance obligations in the contract, determining the transaction price, allocating the transaction prices to the performance obligations in the contract and recognizing revenue when (or as) the entity satisfies the performance obligations. The guidance in the ASU supersedes existing revenue recognition guidance and is effective for annual reporting periods beginning after December 15, 2016 with early application not permitted. The ASU allows two methods of adoption; a full retrospective approach where three years of financial information are presented in accordance with the new standard, and a modified retrospective approach where the ASU is applied to the most current period presented in the Consolidated Financial Statements. We are currently evaluating the impact of adopting the new revenue standard on our Consolidated Financial Statements.

In August 2014, the FASB issued ASU No. 2014-15, Disclosure of Uncertainties About an Entity's Ability to Continue as a Going Concern, which provides guidance on determining when and how to disclose going concern uncertainties in the financial statements. The new standard requires management to perform interim and annual assessments of an entity's ability to continue as a going concern. The update is effective for annual periods ending after December 15, 2016, and interim periods thereafter. Early adoption is permitted. The impact on our financial statements of adopting ASU 2014-15 is currently being assessed by management.

Jumpstart Our Business Startups Act of 2012

On April 5, 2012, the Jumpstart Our Business Startups Act of 2012, or JOBS Act, was enacted. Section 107 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 of 1933, as amended, for complying with new or revised accounting standards. In other words, an "emerging growth company" can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We are electing to delay such adoption of new or revised accounting standards, and as a result, we may not comply with new or revised accounting standards on the relevant dates on which adoption of such standards is required for non-emerging growth companies. As a result of this election, our financial statements may not be comparable to the financial statements of other public companies. We may take advantage of these reporting exemptions until we are no longer an "emerging growth company.

We are in the process of evaluating the benefits of relying on other exemptions and reduced reporting requirements provided by the JOBS Act. Subject to certain conditions set forth in the JOBS Act, as an "emerging growth company," we intend to rely on certain of these exemptions, including without limitation, (1) providing 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 (2) complying with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the consolidated financial statements, known as the auditor discussion and analysis. We may be able to remain an "emerging growth company" until the earliest of (a) the last day of the fiscal year in which we have total annual gross revenues of $1 billion or more, (b) the last day of our fiscal year following the fifth anniversary of

the date of our IPO, (c) the date on which we have issued more than $1 billion in non-convertible debt during the previous three years or (d) the date on which we are deemed to be a large accelerated filer under the rules of the SEC. Additionally, we are also currently a “smaller reporting company” as defined in the Securities Exchange Act of 1934, and in the event that we are still considered a smaller reporting company at such time as we cease being an emerging growth company, we will be exempt from the provisions of Section 404(b) of the Sarbanes-Oxley Act requiring that independent registered public accounting firms provide an attestation report on the effectiveness of internal control over financial reporting.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not applicable.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA
Financial Statements

The consolidated financial statements of Amedica appear at the end of this Annual Report beginning with the index to Financial Statements on page F-1 (see Part IV, Item 15 “Financial Statements”), and are incorporated herein.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE
Not applicable.

ITEM 9A. CONTROLS AND PROCEDURES
(a) Disclosure Controls and Procedures

We maintain disclosure controls and procedures, as such term is defined in Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934 (the “Exchange Act”), that are designed to ensure that information required to be disclosed in the reports filed or submitted under the Exchange Act, is recorded, processed, summarized, and reported within the time periods specified by the Commission’s rules and forms. Disclosure controls and procedures include controls and procedures designed to ensure that information required to be disclosed in our reports filed or submitted under the Exchange Act are properly recorded, processed, summarized and reported within the time periods required by the Commission’s rules and forms.

We carried out an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer (principal executive officer) and Vice President Finance (principal accounting officer), of the effectiveness of the design and operation of these disclosure controls and procedures, as such term is defined in Exchange Act Rule 13a-15(e), as of December 31, 2014. Based on this evaluation, the Chief Executive Officer (principal executive officer) and Vice President Finance (principal accounting officer) concluded that our disclosure controls and procedures were effective as of December 31, 2014, the end of the period covered by this Annual Report on Form 10-K.

(b) Management’s Report on Internal Control over Financial Reporting

Management of the Company is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act.

Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness of internal control over financial reporting to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management has assessed the effectiveness of our internal control over financial reporting as of December 31, 2014. In making our assessment of the effectiveness of internal control over financial reporting, management used the criteria set forth in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”). Based on this assessment, management has concluded that, as of December 31, 2014, our internal control over financial reporting was effective.

Our internal control over financial reporting is designed to provide reasonable assurance of achieving its objectives as specified above. Management does not expect, however, that our internal control over financial reporting will prevent

or detect all error and fraud. Any control system, no matter how well designed and operated, is based upon certain assumptions and can provide only reasonable, not absolute, assurance that its objectives will be met. Further, 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, if any, within the Company have been detected.

(c) Changes in Internal Control Over Financial Reporting

During the quarter ended December 31, 2014, we implemented the following controls that management believes are reasonably likely to materially affect our internal control over financial reporting and that are intended to help address the material weaknesses identified by our previous auditors:

- We implemented a formal process to account for income taxes and the effect on the income tax provision whereby an experienced tax consultant prepares the tax provision after a detailed review of the trial balance with management and the tax provision is then reviewed by management to help ensure the tax treatment of transactions are recorded correctly.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information regarding Section 16(a) compliance, the Audit Committee, our code of ethics and background of our directors will be presented in our Proxy Statement for the 2015 annual meeting of Shareholders and is incorporated herein by reference. The information required pursuant to General Instructions G(3) of Form 10-K on our executive officers is presented under Item 1 of this report on Form 10-K.

ITEM 11. EXECUTIVE COMPENSATION

Information required by this Item 11 on executive compensation will be presented in our 2015 Proxy Statement and is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Information required by this Item 12 on security ownership of certain beneficial owners and managements will be presented in our 2015 Proxy Statement and is incorporated herein by reference.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Information required by this Item 13 regarding certain related transactions and director independence will be presented in our 2015 Proxy Statement and is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Information required by this Item 14 will be presented in our 2015 Proxy Statement and is incorporated herein by reference.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

Reference is made to the Index to Consolidated Financial Statements beginning on Page F-1 hereof.

(1) Financial Statements. The following consolidated financial statements and the notes thereto, and the Report of Independent Registered Public Accounting Firms are incorporated by reference as provided in Item 8 of this report:

(2) Consolidated Financial Statement Schedules

Consolidated Financial Statement Schedules have been omitted because they are either not required or not applicable, or because the information required to be presented is included in the consolidated financial statements or the notes thereto included in this Annual Report.

(3) Exhibits

The exhibits listed on the accompanying Exhibit Index are filed or incorporated by reference as part of this Annual Report and such Exhibit Index is incorporated by reference.

			Incorporated by Reference herein from		
Exhibit Number	Exhibit Description	Filed with this Report	Form or Schedule	Filing Date	SEC File/Reg. Number
3.1	Restated Certificate of Incorporation of the Registrant		Form 8-K (Exhibit 3.1)	2/20/14	001-33624

3.2	Restated Bylaws of the Registrant	Form 8-K (Exhibit 3.1)	2/20/14	001-33624
4.1	Form of Common Stock Certificate of the Registrant	Amendment No. 3 to Form S-1 (Exhibit 4.1)	1/29/14	333-192232
4.2	Warrant Agreement by and between the Registrant and Creation Capital LLC, dated as of February 24, 2006	Form S-1 (Exhibit 4.5)	11/8/13	333-192232
4.3	Series D Warrant Agreement by and between the Registrant and Creation Capital LLC, dated as of April 27, 2007	Form S-1 (Exhibit 4.6)	11/8/13	333-192232
4.4	Common Stock Warrant Agreement by and between the Registrant and Creation Capital LLC, dated as of April 30, 2008	Form S-1 (Exhibit 4.7)	11/8/13	333-192232
4.5	Series E Warrant Agreement by and between the Registrant and Creation Capital LLC, dated as of September 14, 2010	Form S-1 (Exhibit 4.8)	11/8/13	333-192232
4.6	Form of Warrant to Purchase Shares of Common Stock of the Registrant, issued on May 9, 2011	Amendment No. 3 to Form S-1 (Exhibit 4.9)	1/29/14	333-192232

Exhibit Number	Exhibit Description	Filed with this Report	Incorporated by Reference herein from Form or Schedule	Filing Date	SEC File/Reg. Number
4.7	Warrant to Purchase 156,978 Shares of Series F Convertible Preferred Stock by and between the Registrant and GE Capital Equity Investments, Inc., dated as of December 17, 2012		Form S-1 (Exhibit 4.10)	11/8/13	333-192232
4.8	Warrant to Purchase 113,022 Shares of Series F Convertible Preferred Stock by and between the Registrant and Zions First National Bank, dated as of December 17, 2012		Form S-1 (Exhibit 4.11)	11/8/13	333-192232
4.9	Form of Warrant to Purchase Shares of Common Stock of the Registrant, issued on March 4, 2011 and May 9, 2011		Form S-1 (Exhibit 4.12)	11/8/13	333-192232
4.10	Form of Amendment to Warrant to Purchase Shares of Common Stock of the Registrant, dated as of December 18, 2012		Form S-1 (Exhibit 4.13)	11/8/13	333-192232
4.11	Form of Amendment No. 2 to Warrant to Purchase Shares of Common Stock of the Registrant, dated as of February 1, 2013		Form S-1 (Exhibit 4.14)	11/8/13	333-192232
4.12	Warrant to Purchase Shares of Common Stock of the Registrant by and between the Registrant and the University of Utah Research Foundation, dated as of February 17, 2010		Form S-1 (Exhibit 4.15)	11/8/13	333-192232
4.13	Form of Warrant to Purchase Shares of Common Stock of the Registrant, issued on April 18, 2011, November 15, 2011, November 16, 2011, February 22, 2012, February 29, 2012 and March 7, 2012		Form S-1 (Exhibit 4.16)	11/8/13	333-192232
4.14	Form of Warrant to Purchase Shares of Common Stock of the Registrant, issued on August 30, 2013 and September 20, 2013, as amended		Amendment No. 2 to Form S-1 (Exhibit 4.17)	12/20/13	333-192232
4.15	Form of Amendment to Warrant to Purchase Common Stock of the Registrant,		Amendment No. 3	1/29/14	333-192232

	dated as of December 23, 2013	to Form S-1 (Exhibit 4.17.1)		
4.16	Warrant to Purchase Shares of Common Stock of the Registrant by and between the Registrant and Zions First National Bank, dated as of March 17, 2011	Form S-1 (Exhibit 4.18)	11/8/13	333-192232
4.17	Series E Warrant Agreement by and between the Registrant and Zions First National Bank, dated as of April 7, 2010	Amendment No. 2 to Form S-1 (Exhibit 4.19)	12/20/13	333-192232
4.18	Form of Warrant to Purchase Shares of Common Stock of the Registrant, issued to TGP Securities, Inc. on August 30, 2013 and September 20, 2013, as amended	Amendment No. 2 to Form S-1 (Exhibit 4.20)	12/20/13	333-192232
4.19	Form of Amendment to Warrant to Purchase Shares of Common Stock of the Registrant, issued to TGP Securities, Inc., dated as of December 23, 2013	Amendment No. 3 to Form S-1 (Exhibit 4.21)	1/29/14	333-192232
4.20	Form of Magna Senior Convertible Note	Form 8-K (Exhibit 4.1)	7/1/2014	001-33624
4.21	Magna Warrant to Purchase Common Stock	Form 8-K (Exhibit 4.2)	7/1/2014	001-33624

Exhibit Number	Exhibit Description	Filed with this Report	Incorporated by Reference herein from Form or Schedule	Filing Date	SEC File/Reg. Number
4.22	Hercules Warrant to Purchase Common Stock		Form 8-K (Exhibit 4.3)	7/1/2014	001-33624
4.23	Form of Warrant to be Issued to Investors in the Offering		Amendment No. 3 to Form S-1 (Exhibit 4.24)	11/19/14	333-199753
4.24	Form of Unit Purchase Option to be Issued to the Underwriters in the Offering		Amendment No. 3 to Form S-1 (Exhibit 4.25)	11/19/14	333-199753
4.25	Form of Warrant Agent Agreement by and between the Registrant and American Stock Transfer and Trust Company		Amendment No. 3 to Form S-1 (Exhibit 4.26)	11/19/14	333-199753
4.26	Warrant to purchase shares of common stock of the Registrant by and between the Registrant and Hampshire MedTech Partner II, L.P., dated as of November 6, 2014		Form 8-K (Exhibit 4.1)	11/7/14	001-33624
4.27	Form of Warrant to Purchase Shares of Common Stock of the Registrant issued on September 17, 2014.	X			
4.28	Form of Warrant to Purchase Shares of Common Stock of the Registrant issued on November 12, 2014.	X			
10.1	Securities Purchase Agreement by and between the Registrant and MG Partners II Ltd, dated as of June 30, 2014		Form 8-K (Exhibit 10.1)	7/1/2014	001-33624
10.2	Registration Rights Agreement by and between the Registrant and MG Partners II Ltd., dated as of June 30, 2014		Form 8-K (Exhibit 10.2)	7/1/2014	001-33624
10.3			Form 8-K	7/1/2014	001-33624

	Loan and Security Agreement by and among the Registrant, its subsidiary, Hercules Technology Growth Capital, Inc., and Hercules Technology III, L.P., dated as of June 30, 2014	(Exhibit 10.3)		
10.4	Joint Development and License Agreement by and between the Registrant and Orthopaedic Synergy, Inc., dated as of February 8, 2010**	Amendment No. 3 to Form S-1 (Exhibit 10.7)	1/29/14	333-192232
10.5	Distribution Agreement by and between the Registrant and Orthopaedic Synergy, Inc., dated as of February 22, 2010, and First Amendment and Addendum thereto, dated as of November 1, 2012**	Amendment No. 3 to Form S-1 (Exhibit 10.8)	1/29/14	333-192232
10.6	Centrepointe Business Park Lease Agreement Net by and between the Registrant and Centrepointe Properties, LLC, dated as of April 21, 2009	Form S-1 (Exhibit 10.10)	11/8/13	333-192232
10.7	First Addendum to Centrepointe Business Park Lease Agreement Net by and between the Registrant and Centrepointe Properties, LLC, dated as of January 31, 2012	Form S-1 (Exhibit 10.11)	11/8/13	333-192232
10.8	Form of Severance and Change of Control Agreement*	Amendment No. 2 to Form S-1 (Exhibit 10.12)	12/20/13	333-192232

Exhibit Number	Exhibit Description	Filed with this Report	Incorporated by Reference herein from Form or Schedule	Filing Date	SEC File/Reg. Number
10.9	Form of Indemnification Agreement by and between the Registrant and its officers and directors 8		Amendment No. 2 to Form S-1 (Exhibit 10.14)	12/20/13	333-192232
10.10	Amedica Corporation Amended and Restated 2012 Equity Incentive Plan*		Amendment No. 4 to Form S-1 (Exhibit 10.15)	2/12/14	333-192232
10.11	Form of 2012 Stock Option Grant Notice and Stock Option Agreement*		Amendment No. 4 to Form S-1 (Exhibit 10.16)	2/12/14	333-192232
10.12	Form of 2012 Restricted Stock Award and Restricted Stock Unit Agreement*		Amendment No. 4 to Form S-1 (Exhibit 10.17)	2/12/14	333-192232
10.13	Amedica Corporation 2003 Stock Option Plan*		Form S-1 (Exhibit 10.18)	11/8/13	333-192232
10.14	Form of 2003 Non-Qualified Stock Option Agreement and Notice of Exercise of Non-Qualified Stock Option thereunder*		Form S-1 (Exhibit 10.19)	11/8/13	333-192232
10.15	Form of 2003 Incentive Stock Option Agreement and Notice of Exercise of Incentive Stock Option thereunder*		Form S-1 (Exhibit 10.20)	11/8/13	333-192232
10.16	Form of Executive Retention Program Agreement*		Form 8-K (Exhibit 10.1)	8/14/14	001-33624
21.1	List of Subsidiaries of the Registrant		Form S-1 (Exhibit 21.1)	11/8/13	333-192232

23.1	Consent of Independent Registered Public Accounting Firm	X
23.2	Consent of Independent Registered Public Accounting Firm	X
31.1	Certification of Chief Executive Officer	X
31.2	Certification of Chief Financial Officer	X
32	Certification pursuant to Section 906 of the Sarbanes Oxley Act of 2002	X

* Management contract or compensatory plan or arrangement.

** Portions of this exhibit (indicated by asterisks) have been omitted pursuant to a request for confidential treatment and then filed separately with the SEC.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

AMEDICA CORPORATION

Date: March 24, 2015 /S/ B. Sonny Bal
B. Sonny Bal
Chief Executive Officer
(Principal Executive Officer)

Date: March 24, 2015 /S/ Ty A. Lombardi
Ty A. Lombardi
Vice President Finance
(Principal Accounting Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Date: March 24, 2015 /S/ B. Sonny Bal
B. Sonny Bal, M.D., Director

Date: March 24, 2015 /S/ David W. Truetzel
David W. Truetzel, Director

Date: March 24, 2015 /S/ Jeffrey S. White
Jeffrey S. White, Director

Date: March 24, 2015 /S/ Eric A. Stookey
Eric A. Stookey, Director

AMEDICA CORPORATION

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Years ended December 31, 2014 and 2013

Report of Independent Registered Public Accounting Firm

Board of Directors and Stockholders

Amedica Corporation

Salt Lake City, Utah

We have audited the accompanying consolidated balance sheet of Amedica Corporation as of December 31, 2014 and the related consolidated statements of operations and comprehensive loss, convertible preferred stock and stockholders' equity (deficit), and cash flows for the year ended December 31, 2014. 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 audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company has determined that it is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. 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, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Amedica Corporation at December 31, 2014, and the results of its operations and its cash flows for the year ended December 31, 2014, in conformity with accounting principles generally accepted in the United States of America.

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company has recurring losses from operations and negative operating cash flows and needs to obtain additional financing to be compliant with debt covenants through 2015. These issues 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 1. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ Mantyla McReynolds, LLC

Mantyla McReynolds, LLC

Salt Lake City, Utah

March 24, 2015

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Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders

Amedica Corporation

We have audited the accompanying consolidated balance sheets of Amedica Corporation as of December 31, 2013, and the related consolidated statements of operations and comprehensive loss, statements of convertible preferred stock and stockholders' deficit, and cash flows for the year then ended. 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 audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. We were not engaged to perform an audit of the Company's internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also 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 audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Amedica Corporation at December 31, 2013, and the consolidated results of its operations and its cash flows for the year then ended, in conformity with U.S. generally accepted accounting principles.

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company has recurring losses from operations and needs to obtain additional financing which raises substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ Ernst & Young LLP

Salt Lake City, Utah

March 31, 2014

Amedica Corporation

Consolidated Balance Sheets

(in thousands, except share and per share data)

	December 31, 2014	December 31, 2013
Assets		
Current assets:		
Cash and cash equivalents	$18,247	$2,279
Restricted cash	-	392
Trade accounts receivable, net of allowance of $54 and $49, respectively	2,513	2,817
Prepaid expenses and other current assets	1,247	1,575
Deferred offering costs	-	2,763
Inventories, net	11,675	10,084
Total current assets	33,682	19,910
Property and equipment, net	3,515	3,531
Intangible assets, net	4,188	4,688
Goodwill	6,163	6,163
Other long-term assets	35	35
Total assets	$47,583	$34,327
Liabilities and stockholders' equity (deficit)		
Current liabilities:		
Accounts payable	$778	$3,377
Accrued liabilities	3,146	3,711
Current portion of long-term debt	19,070	17,925
Total current liabilities	22,994	25,013
Deferred rent	517	575
Long-term debt	3,061	-
Other long-term liabilities	134	134
Derivative liabilities	13,970	210
Commitments and contingencies		
Convertible preferred stock, $0.01 par value, 130,000,000 shares authorized; 0 and 80,910,394 shares issued and outstanding at December 31, 2014 and December 31, 2013, respectively; aggregate liquidation value of $0 and $149,692 at December 31, 2014 and December 31, 2013, respectively	-	161,456
Stockholders' equity (deficit):		

Common stock, $0.01 par value; 250,000,000 shares authorized; 26,353,666 and 597,675 shares issued and outstanding at December 31, 2014 and December 31, 2013, respectively	264	6
Additional paid-in capital / (capital deficiency)	179,148	(13,144)
Accumulated deficit	(172,505)	(139,923)
Total stockholders' equity (deficit)	6,907	(153,061)
Total liabilities, convertible preferred stock and stockholders' equity (deficit)	$47,583	$34,327

See accompanying notes.

Amedica Corporation

Consolidated Statements of Operations and Comprehensive Loss

(in thousands, except share and per share data)

	Year Ended December 31,	
	2014	2013
Product revenue	$22,765	$22,314
Costs of revenue	7,910	7,045
Gross profit	14,855	15,269
Operating expenses:		
Research and development	6,742	3,461
General and administrative	13,588	5,759
Sales and marketing	18,692	16,384
Total operating expenses	39,022	25,604
Loss from operations	(24,167)	(10,335)
Other income (expense):		
Interest income	12	16
Interest expense	(3,650)	(1,851)
Loss on extinguishment of debt	(2,194)	-
Change in fair value of derivative liabilities	(251)	3,970
Offering costs	(2,026)	-
Other expense	(306)	(86)
Total other income (expense)	(8,415)	2,049
Net loss before income taxes	(32,582)	(8,286)
Provision for income taxes	-	-
Net Loss	(32,582)	(8,286)
Other comprehensive loss, net of tax:		
Unrealized loss on marketable securities	-	(2)
Total comprehensive loss	$(32,582)	$(8,288)
Net loss per share attributable to common stockholders:		
Basic and diluted	$(2.66)	$(15.52)
Weighted average common shares outstanding:		
Basic and diluted	12,239,953	534,073

See accompanying notes.

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Amedica Corporation

Consolidated Statements of Convertible Preferred Stock and Stockholders' Equity (Deficit)

(in thousands, except share data)

	Convertible Preferred Stock		Common Stock		Additional Paid-In Capital/ (Capital	Accumulated Other Comprehensive		Total Stockholders'
	Shares	Amount	Shares	Amount	Deficiency)	Income (Loss)	Accumulated Deficit	Equity (Deficit)
Balance at December 31, 2012	76,170,394	$153,474	348,734	$ 3	$(16,651)	$ 2	$(131,637)	$(148,283)
Issuance of Series F preferred stock for $2.00 per share net of issuance costs	4,740,000	7,982	–	–	–	–	–	–
Issuance of common stock in connection with exercise of warrants	–	–	178,516	2	2,876	–	–	2,878
Issuance of common stock upon cashless exercise of stock options	–	–	27,624	–	–	–	–	–
Issuance of common stock upon exercise of stock options	–	–	29,680	1	76	–	–	77
Stock-based compensation	–	–	13,121	–	555	–	–	555
Unrealized loss on marketable securities	–	–	–	–	–	(2)	–	(2)
Net loss	–	–	–	–	–	–	(8,286)	(8,286)
Balance at December 31,	80,910,394	$161,456	597,675	$ 6	$(13,144)	$ -	$(139,923)	$(153,061)

2013								
Issuance of common stock in connection with IPO, net of issuance costs	–	–	3,682,900	37	14,361	–	–	14,398
Preferred stock converted to common upon IPO	(80,910,394)	(161,456)	8,029,779	80	162,352	–	–	162,432
Issuance of units in connection with secondary offering, net of issuance costs	–	–	11,441,646	115	1,932	–	–	2,047
Issuance of common stock upon exercise of warrants	–	–	9,328	–	24	–	–	24
Issuance of common stock with notes payable	–	–	50,853	1	219	–	–	220
Issuance of common stock upon conversion of notes payable	–	–	2,047,082	20	2,408	–	–	2,428
Stock-based compensation	–	–	494,403	5	10,996	–	–	11,001
Net loss	–	–	–	–	–	–	(32,582)	(32,582)
Balance at December 31, 2014	–	$-	26,353,666	$ 264	$ 179,148	$ -	$ (172,505)	$ 6,907

See accompanying notes.

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Amedica Corporation

Consolidated Statements of Cash Flows

(in thousands)

	Year Ended December, 2014	2013
Cash flow from operating activities		
Net loss	$(32,582)	$(8,286)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation expense	1,839	1,706
Amortization of intangible assets	501	501
Amortization of lease incentive for tenant improvements	20	20
Non cash interest expense	1,849	431
Loss on extinguishment of debt	2,194	-
Stock based compensation	10,217	555
Change in fair value of derivative liabilities	251	(3,970)
Loss on disposal of equipment	305	81
Provision for inventory reserve	2,630	1,293
Bad debt expense	65	5
Offering costs	2,026	-
Changes in operating assets and liabilities:		
Trade accounts receivable	239	1,194
Prepaid expenses and other current assets	2,775	(4,220)
Inventories	(3,438)	(2,551)
Other long-term assets	-	3
Accounts payable and accrued liabilities	(3,413)	3,289
Net cash used in operating activities	(14,522)	(9,949)
Cash flows from investing activities		
Purchase of property and equipment	(2,172)	(2,332)
Proceeds from sale of property and equipment	43	37
Decrease (increase) in restricted cash	392	(132)
Purchases of marketable securities	-	-
Proceeds from maturities of marketable securities	-	2,680
Net cash provided by (used in) investing activities	(1,737)	253
Cash flows from financing activities		
Proceeds from issuance of common stock, net of issuance costs	15,369	-
Proceeds from issuance of units, net of issuance costs	11,320	-
Proceeds from issuance of stock in connection with exercise of warrants	-	2,878
Proceeds from exercise of stock options	-	77
Proceeds from issuance of preferred stock	-	8,852
Proceeds from line of credit	-	10,940
Payments on line of credit	-	(13,513)
Payments on long-term debt	(19,000)	-
Debt extinguishment payments	(810)	-

Proceeds from issuance of long-term debt	26,800	-
Payment of deferred financing costs	(1,452)	-
Net cash provided by financing activities	32,227	9,234
Net increase (decrease) in cash and cash equivalents	15,968	(462)
Cash and cash equivalents at beginning of period	2,279	2,741
Cash and cash equivalents at end of period	$18,247	$2,279
Noncash investing and financing activities		
Preferred stock converted into common stock	$161,456	$-
Reclassification of warrant liability	$5	$-
Stock and derivative liabilities issued with long-term debt	$3,477	$-
Debt converted to common stock	$1,500	$-
Derivative liabilities issued with preferred stock	$-	$871
Supplemental cash flow information		
Cash paid for interest	$1,731	$1,403

See accompanying notes.

AMEDICA CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Years ended December 31, 2014 and 2013

1. Organization and Summary of Significant Accounting Policies

Amedica Corporation ("Amedica" or "the Company") was incorporated in the state of Delaware on December 10, 1996. Amedica is a commercial-stage biomaterial company focused on using its silicon nitride technology platform to develop, manufacture, and commercialize a broad range of medical devices. The Company believes it is the first and only manufacturer to use silicon nitride in medical applications. The Company acquired US Spine, Inc. ("US Spine"), a Delaware spinal products corporation with operations in Florida, on September 20, 2010. The Company's products are primarily sold in the U.S.

Basis of Presentation and Principles of Consolidation

These consolidated financial statements have been prepared by management in accordance with accounting principles generally accepted in the United States ("U.S. GAAP"), and include all assets and liabilities of the Company and its wholly-owned subsidiary, US Spine. All material intercompany transactions and balances have been eliminated.

Liquidity and Capital Resources

For the years ended December 31, 2014 and 2013, the Company incurred a net loss of $32.6 million and $8.3 million, respectively and used cash in operations of $14.5 million and $9.9 million, respectively. The Company had an accumulated deficit of $172.5 million and $139.9 million at December 31, 2014 and 2013, respectively. To date, the Company's operations have been principally financed from proceeds from the issuance of preferred and common stock, convertible debt and bank debt and, to a lesser extent, cash generated from product sales. It is anticipated that the Company will continue to generate operating losses and use cash in operations through 2015.

As discussed further in Note 7, the Company refinanced its long-term debt and entered into a term loan with Hercules Technology Growth Capital, Inc. ("Hercules Technology"), as administrative and collateral agent for the lenders thereunder and as lender, and Hercules Technology III, LP, as lender (the "Hercules Term Loan"). The Hercules Term Loan has a liquidity covenant that requires the Company to maintain a cash balance in excess of $9.0 million. At December 31, 2014, the Company's cash balance was approximately $18.2 million. The Company anticipates that it will need to obtain additional funding during the fourth quarter of 2015 to maintain compliance with the liquidity covenants related to the Hercules Term Loan through 2015. Furthermore, if the Company is unable to access additional funds prior to becoming non-compliant with the liquidity covenant, the entire remaining balance of the debt could become immediately due and payable at the option of the lender. Although the Company will seek additional financing, additional funding may not be available to the Company on acceptable terms, or at all. Any additional equity financing, if available to the Company, may not be available on favorable terms and will most likely be dilutive to its current stockholders, and debt financing, if available, may involve more restrictive covenants. The Company's ability to access capital when needed is not assured and, if not achieved on a timely basis, will materially harm its business, financial condition and results of operations. These uncertainties create substantial doubt about the Company's ability to continue as a going concern. No adjustment has been made to the Company's financial statements as a result of this uncertainty.

Reverse Stock Split

On February 11, 2014, the Company effected a 1 for 25.7746 reverse stock split of the Company's common stock. The par value and the authorized shares of the common and convertible preferred stock were not adjusted as a result of the reverse stock split. All common stock share and per-share amounts for all periods presented in these financial statements prior to February 11, 2014 have been adjusted retroactively to reflect the reverse stock split.

Public Offerings

On February 12, 2014, the Company completed an initial public offering ("IPO") of its common stock, in which the Company sold and issued 3,682,900 shares, including 182,900 shares sold pursuant to the exercise by the underwriters of their over-allotment option, at an issuance price of $5.75 per share, less underwriting discounts and commissions. As a result of the IPO, the Company received proceeds of approximately $15.4 million, net of approximately $5.8 million in underwriting and other offering costs.

On November 26, 2014, the Company completed a secondary offering, in which the Company sold and issued 11,441,646 units. Each unit was issued at a price of $1.14 and consisted of one share of common stock and one common stock warrant. As a result of the secondary offering, the Company received proceeds of approximately $11.3 million, net of approximately $1.7 million in cash underwriting and other offering costs.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the period. Actual results could differ from those estimates. Some of the more significant estimates relate to inventory, stock-based compensation, long-lived and intangible assets, and derivative liabilities.

Concentrations of Credit Risk and Significant Customers

Financial instruments which potentially subject the Company to concentrations of credit risk consist primarily of cash and cash equivalents, marketable securities, accounts receivable and restricted cash. The Company limits its exposure to credit loss by placing its cash and cash equivalents with high credit-quality financial institutions in bank deposits, money market funds, U.S. government securities and other investment grade debt securities that have strong credit ratings. The Company has established guidelines relative to diversification of its cash and marketable securities and their maturities that are intended to secure safety and liquidity. These guidelines are periodically reviewed and modified to take advantage of trends in yields and interest rates and changes in the Company’s operations and financial position. Although the Company may deposit its cash and cash equivalents with multiple financial institutions, its deposits, at times, may exceed federally insured limits.

The Company’s customers are primarily hospitals and surgical centers. At December 31, 2014, no customer receivable balance was 10% or greater of the Company’s total trade accounts receivable. At December 31, 2013, one customer receivable balance was 15% of the Company’s total trade accounts receivable. There were two customers that accounted for 10% or more of the Company’s revenue representing 28% of revenue for the year ended December 31, 2014. There was one customer that accounted for 10% or more of the Company’s revenue representing 14% of revenue for the year ended December 31, 2013.

Credit to customers is granted based upon an analysis of the customers’ individual credit worthiness. The Company’s allowance for bad debts as of December 31, 2014 and 2013 was $54,000 and $49,000, respectively. For the years ended December 31, 2014 and 2013, the Company recorded bad debt expense of $65,000 and $5,000, respectively.

Revenue Recognition

The Company derives its product revenue primarily from the sale of spinal fusion devices and related products used in the treatment of spine disorders. The Company’s product revenue is generated from sales to two types of customers: (1) surgeons and hospitals and (2) stocking distributors. Most of our products are sold on a consignment basis through a network of independent sales distributors; however, the Company also sells its products to independent stocking distributors. Product revenue is recognized when all four of the following criteria are met: (1) persuasive evidence that an arrangement exists; (2) delivery of the products has occurred; (3) the selling price of the product is fixed or determinable; and (4) collectability is reasonably assured. The Company generates the majority of its revenue from the sale of inventory that is consigned to independent sales distributors that sell the Company’s products to surgeons and hospitals. For these products, we recognize revenue at the time we are notified the product has been used or implanted and all other revenue recognition criteria have been met. For all other transactions, the Company recognizes revenue when title and risk of loss transfer to the stocking distributor, and all other revenue recognition criteria have been met.

The Company generally recognizes revenue from sales to stocking distributors at the time the product is shipped to the distributor. Stocking distributors, who sell the products to their customers, take title to the products and assume all risks of ownership at time of shipment. The Company's stocking distributors are obligated to pay within specified terms regardless of when, if ever, they sell the products. The Company's policy is to classify shipping and handling costs billed to customers as an offset to total shipping expense in the statement of operations, primarily within sales and marketing. In general, the Company's customers do not have any rights of return or exchange.

Cost of Revenue

The expenses that are included in cost of revenue include all direct product costs and manufacturing costs. Specific provisions for excess or obsolete inventory are also included in cost of revenue. Beginning in January 2013, cost of revenue also includes the 2.3% excise tax on the sale of medical devices in the United States.

Cash, Cash Equivalents, Restricted Cash, and Investments

The Company considers all cash on deposit, money market accounts and highly-liquid debt instruments purchased with original maturities of three months or less to be cash and cash equivalents. Restricted cash consisted of cash we received from payments of our accounts receivables held in a segregated account that could have been applied to pay amounts owed under our revolving credit facility with General Electric Capital Corporation. The Company's investments in marketable debt and equity securities were deemed by management to be available for sale and were reported at fair market value with the net unrealized appreciation or depreciation reported as a component of accumulated other comprehensive loss in stockholders' deficit. At the time of sale, any realized appreciation or depreciation, calculated by the specific identification method, was recognized in other income and expense.

Inventories

Inventories are stated at the lower of cost or market, with cost for manufactured inventory determined under the standard cost method which approximates first-in first-out ("FIFO"). Manufactured inventory consists of raw material, direct labor and manufacturing overhead cost components. Inventories purchased from third-party manufacturers are stated at the lower of cost or market using the first-in, first-out method. The Company reviews the carrying value of inventory on a periodic basis for excess or obsolete items, and records any write-down as a cost of revenue, as necessary. It is reasonably possible that the Company may be required to make adjustments to the carrying value of inventory in future periods. Inventory write-downs for excess or obsolete inventory are recorded as a cost of revenue. The Company holds consigned inventory at distributor and other customer locations where revenue recognition criteria have not yet been achieved.

Property and Equipment

Property and equipment, including surgical instruments and leasehold improvements, are stated at cost, less accumulated depreciation and amortization. Property and equipment are depreciated using the straight-line method over the estimated useful lives of the assets, which range from three to five years. Leasehold improvements are amortized over the shorter of their estimated useful lives or the related lease term, generally five years.

In accounting for long-lived assets, the Company makes estimates about the expected useful lives of the assets, the expected residual values of certain of these assets, and the potential for impairment based on the fair value of the assets and the cash flows they generate. The Company periodically evaluates the carrying value of long-lived assets to be held and used when events and circumstances indicate that the carrying amount of an asset may not be recovered. The Company has not recognized any impairment loss for property and equipment for the years ended December 31, 2014 and 2013.

Long-Lived Assets, Indefinite-lived Intangible and Goodwill

Periodically, the Company assesses potential impairment of its long-lived assets, which include property, equipment, and acquired intangible assets. The Company performs an impairment review whenever events or changes in circumstances indicate that the carrying value may not be recoverable. Factors the Company considers important which could trigger an impairment review include, but are not limited to, significant under-performance relative to historical or projected future operating results, significant changes in the manner of its use of acquired assets or its overall business strategy, and significant industry or economic trends. When the Company determines that the carrying value of a long-lived asset may not be recoverable based upon the existence of one or more of the above indicators, the Company determines the recoverability by comparing the carrying amount of the asset to net future undiscounted cash flows that the asset is expected to generate and recognizes an impairment charge equal to the amount by which the carrying amount exceeds the fair market value of the asset. The Company amortizes finite-lived

intangible assets on a straight-line basis over their estimated useful lives. The Company recorded no impairment loss for definite-lived intangible assets during the years ended December 31, 2014 and 2013.

The Company tests goodwill and indefinite-lived intangibles for impairment annually as of December 31, or whenever events or changes in circumstances indicate that goodwill or indefinitely-lived intangibles may be impaired. For goodwill, the Company initially assesses qualitative factors to determine whether the existence of events or circumstances leads to a determination that it is more-likely-than-not that the fair value of a reporting unit is less than its carrying amount. For goodwill impairment testing purposes, we consider the value of our equity, including the value of our convertible preferred stock, in the total carrying value of our single reporting unit. If, after assessing the totality of events or circumstances, the Company determines it is more-likely-than-not that the fair value of a reporting unit is less than its carrying amount, then the Company performs a first step by comparing the book value of net assets to the fair value of the Company's single reporting unit. If the fair value is determined to be less than the book value, a second step is performed to compute the amount of impairment as the difference between the estimated fair value of goodwill and the carrying value. The Company performed the first step and determined that it was not more-likely-than-not that the fair value of the Company's single reporting unit was less than its carrying amount and no goodwill impairment was recognized during the years ended December 31, 2014 and 2013.

The impairment test for indefinite-lived intangible assets not subject to amortization involves a comparison of the estimated fair value of the intangible asset, using the income approach, with its carrying value. If the carrying value of the intangible asset exceeds its fair value, an impairment loss is recognized in an amount equal to that excess. The Company recorded no impairment loss for indefinite-lived intangible assets during the years ended December 31, 2014 and 2013.

Derivative Liabilities

Derivative liabilities includes the fair value of instruments such as common stock warrants, preferred stock warrants and convertible features of notes, that are initially recorded at fair value and are required to be re-measured to fair value at each reporting period under provisions of ASC 480, Distinguishing Liabilities from Equity, or ASC 815, Derivatives and Hedging. The change in fair value of the instruments is recognized as a component of other income (expense), in the Company's statements of operations and comprehensive loss until the instruments settle or expire. The Company estimates the fair value of these instruments using the Black-Scholes-Merton valuation model. The significant assumptions used in estimating the fair value include the exercise price, volatility of the stock underlying the instrument, risk-free interest rate, estimated fair value of the stock underlying the instrument and the estimated life of the instrument.

The effect of changes to these significant assumptions on the estimated liability for these instruments is as follows:

Fair value of underlying stock increases	Warrant liability increases
Risk free interest increases	Warrant liability decreases
Expected average life increases	Warrant liability increases
Expected dividend yield increases	Warrant liability decreases
Expected volatility increases	Warrant liability increases

Research and Development

All research and development costs, including those funded by third parties, are expensed as incurred. Research and development costs consist of engineering, product development, test-part manufacturing, testing, developing and validating the manufacturing process, and regulatory related costs. Research and development expenses also include employee compensation, employee and nonemployee stock-based compensation, supplies and materials, consultant services, and travel and facilities expenses related to research activities.

Advertising Costs

Advertising costs are expensed as incurred. The primary component of the Company's advertising expenses is advertising in trade periodicals. Advertising costs were approximately $149,000 and $403,000 million for the years ended December 31, 2014 and 2013, respectively.

Income Taxes

The Company recognizes a liability or asset for the deferred tax consequences of all temporary differences between the tax basis of assets and liabilities and their reported amounts in the financial statements that will result in taxable or deductible amounts in future years when the reported amounts of the assets and liabilities are recovered or settled. The Company recognizes interest and penalties as a component of the provision for income taxes. No interest or penalties were recognized in the years ended December 31, 2014 and 2013.

Stock-Based Compensation

The Company measures stock-based compensation expense related to employee stock-based awards based on the estimated fair value of the awards as determined on the date of grant and is recognized as expense over the remaining requisite service period. The Company utilizes the Black-Scholes-Merton option pricing model to estimate the fair value of employee stock options. The Black-Scholes-Merton model requires the input of highly subjective and complex assumptions, including the estimated fair value of the Company's common stock on the date of grant, the expected term of the stock option, and the expected volatility of the Company's common stock over the period equal to the expected term of the grant. The Company estimates forfeitures at the date of grant and revises the estimates, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

The Company accounts for stock options to purchase shares of stock that are issued to non-employees based on the estimated fair value of such instruments using the Black-Scholes-Merton option pricing model. The measurement of stock-based compensation expense for these instruments is variable and subject to periodic adjustments to the estimated fair value until the awards vest. Any resulting change in the estimated fair value is recognized in the Company's consolidated statements of operations during the period in which the related services are rendered.

Offering Costs

Offering costs consist of legal, accounting and other advisory costs related to the Company's efforts to raise capital. At December 31, 2013, the Company had deferred offering costs of $2.8 million related to the IPO of the Company's common stock. Additional costs related to the Company's IPO activities were deferred until the completion of the IPO in February 2014, at which time they were reclassified to additional paid-in capital as a reduction of the IPO proceeds.

Since the warrants issued in the Company's November 2014 secondary offering were considered liabilities, a portion of the offering costs were expensed and the remaining amount was reclassified to additional paid-in capital as a reduction of proceeds from the secondary offering.

New Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU) No. 2014-09, Revenue from Contracts with Customers ("ASU 2014-09"), which supersedes nearly all existing revenue recognition guidance under U.S. GAAP. The core principle is that a company should recognize revenue when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. ASU 2014-09 defines a five step process to achieve this core principle and, in doing so, more judgment and estimates may be required within the revenue recognition process than are required under existing U.S. GAAP. The standard is effective for annual periods beginning after December 15, 2016, and interim periods therein, and shall be applied either retrospectively to each period presented or as a cumulative-effect adjustment as of the date of adoption. The Company is evaluating the potential impact of this adoption on its consolidated financial statements.

In August 2014, the FASB issued ASU No. 2014-15 Disclosure of Uncertainties About an Entity's Ability to Continue as a Going Concern, which provides guidance on determining when and how to disclose going concern uncertainties in the financial statements. The new standard requires management to perform interim and annual assessments of an entity's ability to continue as a going concern. The update is effective for annual periods ending after December 15, 2016, and interim periods thereafter. Early adoption is permitted. The impact on the Company's financial statements of adopting ASU 2014-15 is currently being assessed by management.

Net Loss Per Share

Basic net loss per share is calculated by dividing the net loss by the weighted-average number of common shares outstanding for the period, without consideration for common stock equivalents. Diluted net loss per share is calculated by dividing the net loss by the weighted-average number of common share equivalents outstanding for the period determined using the treasury-stock method. Dilutive common stock equivalents are comprised of convertible preferred stock, warrants for the purchase of convertible preferred stock and common stock, convertible notes, and stock options and restricted stock units outstanding under the Company's equity incentive plans. For all periods presented, there is no difference in the number of shares used to calculate basic and diluted shares outstanding due to the Company's net loss position.

Potentially dilutive securities not included in the calculation of diluted net loss per share because to do so would be anti-dilutive are as follows (in common stock equivalent shares):

	December 31,	
	2014	2013
Common stock warrants	16,657,021	473,835
Convertible notes	8,772,111	-
Common stock options	1,383,479	106,544
Restricted stock units	1,059,745	168,832
Convertible preferred stock	-	3,884,788
Preferred stock warrants	-	102,810
	27,872,356	4,736,809

Shares are based on the terms of securities outstanding as of the date presented. When anti-dilution provisions were triggered for the Series F convertible preferred stock, additional dilution occurred.

2. Inventories

The components of inventory were as follows (in thousands):

	December 31, 2014	December 31, 2013
Raw materials	$ 839	$ 1,025
WIP	486	1,410
Finished Goods	10,350	7,649
	$ 11,675	$ 10,084

Finished goods include consigned inventory in the amounts of approximately $3.0 million and $5.5 million as of December 31, 2014 and December 31, 2013, respectively.

3. Property and Equipment

The following is a summary of the components of property and equipment (in thousands):

	December 31,	
	2014	2013

Manufacturing and lab equipment	$7,427	$7,163
Surgical instruments	8,217	7,721
Leasehold improvements	1,439	1,439
Software and computer equipment	845	807
Furniture and equipment	628	621
	18,556	17,751
Less: accumulated depreciation and amortization	(15,041)	(14,220)
	$3,515	$3,531

4. Intangible Assets

Intangible assets consisted of the following (in thousands):

	December 31, 2014	December 31, 2013
Customer relationships	$ 3,990	$ 3,990
Developed technology	4,685	4,685
Other patents and patent applications	562	562
Trademarks	350	350
	9,587	9,587
Less accumulated amortization	(5,399)	(4,899)
	$ 4,188	$ 4,688

Based on the recorded intangibles at December 31, 2014, the estimated amortization expense for each of the five years ending in 2019 is approximately $501,000 per year and $1.5 million thereafter.

5. Fair Value Measurements and Marketable Securities

Financial Instruments Measured and Recorded at Fair Value on a Recurring Basis

The Company measures and records certain financial instruments at fair value on a recurring basis. Fair value is based on the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, under a three-tier fair value hierarchy which prioritizes the inputs used in measuring fair value as follows:

Level 1 - quoted market prices for identical assets or liabilities in active markets.

Level 2 - observable prices that are based on inputs not quoted on active markets, but corroborated by market data.

Level 3 - unobservable inputs reflecting management’s assumptions, consistent with reasonably available assumptions made by other market participants. These valuations require significant judgment.

The Company classifies assets and liabilities measured at fair value in their entirety based on the lowest level of input that is significant to their fair value measurement. No financial assets were measured on a recurring basis at December 31, 2014 and December 31, 2013. The following tables set forth the financial liabilities measured at fair value on a recurring basis by level within the fair value hierarchy at December 31, 2014 and 2013:

	Fair Value Measurements at December 31, 2014	
Description	Level 3	Total

	Level 1	Level 2		
Derivative liability				
Common stock warrants	$-	$ -	$11,358	$11,358
Conversion feature of notes	-	-	2,612	2,612
Total derivative liability	$-	$ -	$13,970	$13,970

	Fair Value Measurements at December 31, 2013			
Description	Level 1	Level 2	Level 3	Total
Derivative liability				
Preferred stock warrants	$-	$ -	$11	$11
Common stock warrants	-	-	199	199
Total derivative liability	$-	$ -	$210	$210

The Company did not have any transfers of assets and liabilities between Level 1 and Level 2 of the fair value measurement hierarchy during the years ended December 31, 2014 and 2013. The following table presents a reconciliation of the derivative liabilities measured at fair value on a recurring basis using significant unobservable inputs (Level 3) during the years ended December 31, 2014 and 2013:

	Common Stock Warrants	Preferred Stock Warrants	Conversion Feature of Notes	Total Derivative Liability
Balance at December 31, 2012	$(2,783)	$ (526)	$ -	$ (3,309)
Issuances of derivatives	(871)	-	-	(871)
Modification of terms	(424)	-	-	(424)
Change in fair value	3,879	515	-	4,394
Balance at December 31, 2013	$(199)	$ (11)	$ -	$ (210)
Balance at December 31, 2013	$(199)	$ (11)	$ -	$ (210)
Issuances of derivatives	(12,617)	-	(1,930)	(14,547)
Reclassification from liability to equity	-	5	-	5
Extinguishment of derivative liabilities	24	-	1,008	1,032
Change in fair value	1,434	6	(1,690)	(250)
Balance at December 31, 2014	$(11,358)	$ -	$ (2,612)	$ (13,970)

Common Stock Warrants

The Company has issued certain warrants to purchase shares of common stock, which are considered mark-to-market liabilities and are re-measured to fair value at each reporting period in accordance with accounting guidance.

The assumptions used in estimating the common stock warrant liability at December 31, 2014 and December 31, 2013 were as follows:

	December 31, 2014		December 31, 2013	
Estimated fair value of common share	$ 0.80		$ 5.75	
Weighted-average risk free interest rate	1.53	%	1.26	%
Weighted-average expected life (in years)	4.7		4.1	
Expected dividend yield	0	%	0	%
Weighted average expected volatility	116	%	47	%

Preferred Stock Warrants

The Company had issued warrants to purchase shares of convertible preferred stock in prior periods. The Company accounted for these warrants under the provisions of ASC Topic 480, Distinguishing Liabilities from Equity. Accordingly, the Company initially recorded a liability for the fair value of these warrants and then re-measured the liability at the end of each reporting period.

Upon completion of the IPO in February 2014, all 2,344,731 outstanding warrants exercisable for shares of preferred stock were converted into 159,834 warrants exercisable for shares of common stock and the convertible preferred stock warrant liability was reclassified to stockholders' equity. There were no warrants exercisable for shares of preferred stock outstanding at December 31, 2014.

The assumptions used in estimating the preferred stock warrant liability at December 31, 2013 were as follows:

	December 31, 2013	
Estimated fair value of common share	$ 5.75	
Weighted-average risk free interest rate	1.11	%
Weighted-average expected life (in years)	3.6	
Expected dividend yield	0	%
Weighted average expected volatility	44	%

Conversion Feature of Notes

The Company entered into convertible notes in 2014. The conversion features of the notes were evaluated and determined to be derivatives and are re-measured to fair value at each reporting period.

The assumptions used in estimating the conversion feature of the notes at December 31, 2014 were as follows:

	December 31, 2014	
Estimated fair value of common share	$ 0.80	
Weighted-average risk free interest rate	0.67	%
Weighted-average expected life (in years)	1.6	
Expected dividend yield	0	%
Weighted average expected volatility	32	%

Fair Value of Other Financial Instruments

The Company’s recorded values of cash and cash equivalents, accounts receivable, accounts payable and accrued liabilities approximate their fair values based on their short-term nature. The recorded value of notes payable approximates the fair value as the interest rate approximates market interest rates.

Marketable Securities

There were no marketable securities at December 31, 2014 and 2013. The Company received proceeds of $2.7 million from the maturities and sales of marketable securities and realized gains from these sales of $2,000 during the year ended December 31, 2013.

6. Accrued Liabilities

Accrued liabilities consisted of the following (in thousands):

	December 31, 2014	December 31, 2013
Commissions	$ 846	$ 989
Payroll and related expenses	1,001	645
Royalties	531	277
Interest payable	333	119
Final loan payment fees	233	1,281

Offering costs	-	323
Deferred rent	57	32
Other	145	45
	$ 3,146	$ 3,711

7. Debt and Line of Credit

In December 2012, the Company closed on a $21.5 million senior secured credit facility with a bank consortium led by GE Capital (the “GE Secured Lending Facility”). The facility consisted of a term loan in the original principal amount of $18.0 million and an up to $3.5 million revolving line of credit secured by the Company’s accounts receivable, based on certain defined criteria, and was to mature in May 2016. The term loan included interest only payments for a period of 12 months, followed by monthly principal payments of approximately $600,000 for a period of 30 months, which the Company commenced paying in January 2014. The term loan bore interest at the fixed rate of 7.5% per annum. There was no amount outstanding under the revolving line of credit at December 31, 2013 and on June 30, 2014 when the GE Secured Lending Facility was extinguished. The facility required a non-refundable final payment fee of $720,000, as well as an annual management fee of $15,000 per year.

At the time of extinguishment on June 30, 2014, the total outstanding principal of the GE Secured Lending Facility was $14.4 million, although the financial statements reflected a carrying value of $14.3 million due to the bifurcated value of warrants issued in connection with the GE Secured Lending Facility, which was being amortized to interest expense over the life of the loan. The Company had been in covenant default with regards to the liquidity covenant of the GE Secured Lending Facility several times during 2013. The Company entered into four amendments to its agreement with GE Capital during 2013 to forego the liquidity covenant

testing required under the facility. The fourth amendment to the agreement, which was entered into in December 2013, stipulated the liquidity covenant would not be tested by GE through January 31, 2014. In January 2014, the Company entered into a fifth amendment to the agreement that extended the time through which the liquidity covenant would not be tested to February 28, 2014. In connection with these amendments, the Company incurred amendment fees which were being amortized to interest expense over the remaining life of the loans. The unamortized deferred financing costs were $1.1 million at the time of extinguishment. The Company recorded a $1.6 million loss on extinguishment of debt during the year ended December 31, 2014.

On June 30, 2014, the Company entered into a Loan and Security Agreement with Hercules in connection with the Hercules Term Loan. The Hercules Term Loan provided the Company with a $20 million term loan, of which $15.3 million of the proceeds from the Hercules Term Loan were used to repay in full and terminate the GE Secured Lending Facility. The termination of the GE Secured Lending Facility was accounted for as an extinguishment of debt resulting in a $1.6 million loss on extinguishment of debt, which was calculated as the difference between the reacquisition price and the net carrying amount of the GE Secured Lending Facility. On June 30, 2014, the Company also entered into a Securities Purchase Agreement with MG Partners II Ltd. (“Magna”) pursuant to which the Company sold to Magna an initial convertible note (“Initial Convertible Note”) with an original principal amount of $2.9 million for a purchase price of $2.5 million. Additionally, on August 11, 2014, the Company sold to Magna an additional unsecured senior convertible note (“Additional Convertible Note”) with an original principal amount of $3.5 million for a purchase price of $3.5 million. The Initial Convertible Note and the Additional Convertible Note are collectively referred to as the Magna Convertible Notes.

Hercules Term Loan

The Hercules Term Loan matures on January 1, 2018. The Hercules Term Loan included a $200,000 closing fee, which was paid to Hercules Technology on the closing date of the loan. The closing fee has been recorded as a debt discount and is being amortized to interest expense over the life of the loan. The Hercules Term Loan also includes a non-refundable final payment fee of $1.5 million. The final payment fee is being accrued and recorded to interest expense over the life of the loan. In addition, the Company issued a warrant to Hercules Technology (“Hercules Warrant”) to purchase 516,129 shares of the Company’s common stock at an initial exercise price of $4.65, subject to adjustment. The Hercules Warrant was determined to be a derivative and the $900,000 estimated fair value of the Hercules Warrant was recorded as a debt discount and derivative liability. The debt discount is being amortized to interest expense over the life of the loan and the derivative liability will be marked to market at each reporting period. The Hercules Warrant expires on June 30, 2019. Financing costs were $1.1 million, which were recorded as deferred financing costs and are being amortized to interest expense over the life of the loan. The Hercules Term Loan also has an early termination fee of $1.2 million if the loan is paid prior to July 1, 2015.

The Hercules Term Loan bears interest at the rate of the greater of either (i) the prime rate plus 7.7%, and (ii) 10.95%. Interest accrues from the closing date of the loan and interest payments are due monthly. Principal payments are required commencing August 1, 2015 and are to be made in 30 equal installments of approximately $700,000, with the remainder due at maturity. If, however, the Company meets certain revenue conditions, the interest only period may be extended through February 1, 2016, reducing the number of required principal payments to 24 equal installments. Additionally, under certain circumstances the Company may, or Hercules Technology may, require that $1.5 million of the principal be paid in the form of shares of common stock at a fixed conversion price of $5.72 per share. The conversion feature was evaluated and determined to be conventional convertible debt with no beneficial conversion feature.

The Hercules Term Loan contains certain covenants related to restrictions on payments to certain Company affiliates, financial reporting requirements and a minimum liquidity covenant that requires the Company to maintain cash and cash equivalents of not less than $9.0 million. Although the Company was in compliance with the liquidity covenant

at December 31, 2014, the Company anticipates that it will be non-compliant with the liquidity covenant during the fourth quarter of 2015 if additional financing is not obtained, and has therefore classified the entire obligation as a current liability.

Magna Convertible Notes

The Initial Convertible Note and the Additional Convertible Note mature on June 30, 2016 and August 11, 2016, respectively, (subject to extension by the holder) and accrue interest at an annual rate of 6.0%. With respect to the Initial Convertible Note, $150,000 of the outstanding principal amount (together with any accrued and unpaid interest with respect to such portion of the principal amount) was automatically extinguished when the Company filed a registration statement registering the shares issued in connection with the Securities Purchase Agreement on July 17, 2014. In addition, $250,000 of the outstanding principal amount of the Initial Convertible Note (together with any accrued and unpaid interest with respect to such portion of the principal amount) was automatically extinguished when the registration statement was declared effective on August 6, 2014.

The Company issued 50,853 shares of its common stock to Magna as a commitment fee. The estimated fair value of the shares of common stock was $229,000 and was recorded as a debt discount and is being amortized to interest expense over the life of the loan.

The Magna Convertible Notes are convertible at any time after issuance, in whole or in part, at Magna's option, into shares of common stock at a conversion price equal to the lesser of (i) $3.75 per share or (ii) a price equal to 80% of the lowest daily volume weighted average price ("VWAP") of our common stock during the five trading days prior to conversion.

As of December 31, 2014, Magna had converted a total of $1.5 million of the principal amount of the Convertible Notes into 2,047,082 shares of common stock. The Company recorded a loss upon extinguishment of $598,000 during the year ended December 31, 2014. At December 31, 2014, the outstanding principal amounts of the Initial Convertible Note and the Additional Convertible Note were $1.0 million and $3.5 million, respectively. At December 31, 2014, the Convertible Notes if-converted value exceeded its principal amount by approximately $2.3 million using the closing stock price at December 31, 2014.

The conversion features embedded in the Initial Convertible Note and the Additional Convertible Note were determined to be derivatives and the estimated fair value of the conversion features of $848,000 and $1.1 million, respectively, were recorded as a debt discount and derivative liability. The debt discount is being amortized to interest expense over the life of the notes and the derivative liability is marked to market at each reporting period.

In addition, the Company issued a warrant to Magna ("Magna Warrant") to purchase up to 568,889 shares of its common stock at an initial exercise price of $4.65 per share. The Magna Warrant was determined to be a derivative and the estimated fair value of the warrant associated with the Magna Convertible Notes was $290,000 and was recorded as a debt discount and derivative liability. The debt discount is being amortized to interest expense over the life of the loans and the derivative liability is marked to market at each reporting period.

The Company recorded $144,000 in interest expense as per the stated interest on the Convertible Notes during the year ended December 31, 2014. The Company accreted $384,000 in interest expense related to the debt discounts on the Convertible Notes during the year ended December 31, 2014. The effective interest rate for the Initial Convertible Note and the Additional Convertible Note was 50% and 29%, respectively.

Bridge Loan

On November 6, 2014, the Company entered into a Loan and Security Agreement with Hampshire MedTech Partners II, LP ("Bridge Lender"), in connection with a $1.0 million loan to us ("Bridge Loan"), which matured on the earlier of (a) the third business day following the closing of a qualified secondary offering and (b) December 17, 2014. The Bridge Loan bore interest at the rate of 15% per annum and was due on payable upon maturity. Furthermore, the Company was obligated to pay the Bridge Lender a $75,000 commitment upon maturity. The Company closed on a qualified secondary offering on November 26, 2014 and paid the Bridge Loan and associated accrued interest and fees on December 1, 2014.

In addition, the Company issued a warrant to the Bridge Lender ("Closing Bridge Warrant"), to purchase up to 267,380 shares of our common stock, with an initial exercise price of $1.87 per share. The Closing Bridge Warrant was determined to be a derivative and the $107,000 estimated fair value of the Closing Bridge Warrant was recorded as a debt discount and derivative liability. The debt discount was amortized to interest expense over the life of the loan and derivative liability is marked to market at each reporting period. Because we closed a public offering at a price per share of common stock less than the initial exercise price of the Closing Bridge Warrant, the number of warrants increased to 438,596 and the exercise price was reduced to $1.14. The Closing Bridge Warrant was exercisable upon issuance and expires on November 5, 2019. Furthermore, a warrant to purchase up to 25,000 shares of our common stock at an exercise price of $1.48 was granted to an investment advisor. This warrant was determined to be a derivative and the $20,000 estimated fair value of this warrant was recorded as a debt discount and derivative liability. The debt discount was amortized to interest expense over the life of the loan.

Outstanding long-term debt consisted of the following (in thousands):

	December 31, 2014			December 31, 2013		
	Outstanding Principal	Unamortized Discount	Net Carrying Amount	Outstanding Principal	Unamortized Discount	Net Carrying Amount
GE Secured Lending Facility	$-	$ -	$-	$18,000	$ (75)	$17,925
Hercules Term Loan	20,000	(930)	19,070	-	-	-
Convertible Note	4,500	(1,439)	3,061	-	-	-
Total debt	24,500	(2,369)	22,131	18,000	(75)	17,925
Less: Current portion	(20,000)	930	(19,070)	(18,000)	75	(17,925)
Long-term debt	$4,500	$ (1,439)	$3,061	$-	$ -	$-

The following summarizes by year the future principal payments as of December 31, 2014 (in thousands):

Years Ending December 31,	Hercules Term Loan	Magna Convertible Notes	Total
2014	$ -	$ -	$-
2015	2,949	-	2,949
2016	7,666	4,500	12,166
2017	8,567	-	8,567
2018	818	-	818
Total future principal payments	$ 20,000	$ 4,500	$24,500

8. Equity

Authorized Stock

In February 2014, prior to the completion of the IPO, the Company's certificate of incorporation was amended and restated to increase the number of authorized common shares from 150,000,000 to 250,000,000 and the number of authorized preferred shares from 100,000,000 to 130,000,000.

Common Stock

Initial Public Offering

On February 12, 2014, the Company completed an IPO of its common stock, in which the Company sold and issued 3,682,900 shares of common stock, including 182,900 shares sold pursuant to the exercise by the underwriters of their over-allotment option, at an issuance price of $5.75 per share, less underwriting discounts and commissions. The Company received proceeds of approximately $15.4 million, net of approximately $5.8 million in underwriting and other offering costs from the IPO.

On February 11, 2014, the holders of a majority of the outstanding shares of the Company's Series F convertible preferred stock agreed to waive the conversion adjustment under the Company's Restated Certificate of Incorporation such that in no event would the denominator used to calculate the conversion ratio be less than $8.00, provided that the Company completed its IPO on or before June 30, 2014. Upon completion of the IPO in February 2014, all 80,910,394 outstanding shares of preferred stock converted into 8,029,779 shares of common stock and the value of the convertible preferred stock of $161.5 million was reclassified to stockholders' equity. Furthermore, upon completion of the IPO, 2,344,731 warrants representing all outstanding warrants exercisable for shares of preferred stock converted into warrants exercisable for 159,834 shares of common stock and the convertible preferred stock warrant liability was reclassified to stockholders' equity. Following the completion of the IPO, there were no shares of preferred stock or warrants exercisable for shares of preferred stock outstanding.

Secondary Offering

On November 26, 2014, the Company completed a secondary offering, in which the Company sold and issued 11,441,646 units. Each unit was issued at a price of $1.14 and consisted of one share of common stock and one common stock warrant ("Secondary Offering Warrant"). The Company received proceeds of approximately $11.3 million, net of approximately $1.7 million in cash underwriting and other offering costs from the secondary offering. The Company issued an additional 1,716,246 Secondary Offering Warrants pursuant to the underwriters' over-allotment option.

The Secondary Offering Warrants were immediately exercisable after issuance into common shares at an exercise price of $1.48 and terminate on November 26, 2019. The Secondary Offering Warrants contain a cashless exercise provision whereby the holders may exercise warrants by paying the exercise price in cash or, in lieu of payment of the exercise price in cash, at any time 120 days after issuance, by electing to receive a cash payment from the Company equal to the Black Scholes Value (as defined below) of the number of shares the holder elects to exercise (the "Black Scholes Payment"); provided that we have discretion as to whether to deliver the Black Scholes Payment or, subject to meeting certain conditions, to deliver a number of shares of our common stock determined according to the following formula (the "Cashless Exercise"):

Total Shares = (A x B) / C

Where:

- Total Shares is the number of shares of common stock to be issued upon a Cashless Exercise

- A is the total number of shares with respect to which the warrant is then being exercised.
- B is the Black Scholes Value (as defined below).
- C is the closing bid price of our common stock as of two trading days prior to the time of such exercise.

As defined in the Secondary Offering Warrants, "Black Scholes Value" means the Black Scholes value of an option for one share of our common stock at the date of the applicable Black Scholes Payment or Cashless Exercise, which is calculated using the Black Scholes Option Pricing Model obtained from the "OV" function on Bloomberg utilizing (i) an underlying price per share equal to the closing bid price of the Common Stock as of trading day immediately preceding the date of issuance of the warrant, (ii) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the remaining term of the warrant as of the applicable Black Scholes Payment or Cashless Exercise, (iii) a strike price equal to the exercise price in effect at the time of the applicable Black Scholes Payment or Cashless Exercise, (iv) an expected volatility equal to 135% and (v) a remaining term of such option equal to five years (regardless of the actual remaining term of the warrant).

The Secondary Offering Warrants also have a mandatory exercise provision, whereby, in the event that the Company's common stock trades at a price that is 25% or more above the exercise price of the warrants for a period of at least 20 consecutive trading days at any time 120 days after issuance, the Company may, subject to certain limitations in the warrants, require the holder of the warrants to exercise the warrants for cash payment of the exercise price.

The Secondary Offering Warrants are considered to be liabilities and are marked to market at each reporting period. The Company estimated the fair value of the Secondary Offering Warrants to be $10.5 million. The Company recorded $10.5 million of the $13.0 million gross proceeds from the secondary offering to derivative liabilities and $2.5 million to equity. Furthermore, $2.0 million of the offering costs were expensed and $488,000 was recorded to additional paid-in capital as a reduction of proceeds from the secondary offering. Had the cashless exercise provision been exercised by all holders of the Secondary Offering Warrants at December 31, 2014, the Company would have had to either pay $10.5 million in cash or issue 15,479,873 shares of common stock. The number of shares of common stock that would be required to satisfy the cashless exercise provision increases as the price of the Company's stock decreases and decreases as the price of the Company's stock increases.

In addition, as part of the underwriter agreement, the Company issued a Unit Option to the Underwriter to purchase a Unit at an exercise price of $1.43. The Unit includes a share of common stock and a Secondary Offering Warrant. The Unit Option was determined to be a liability and the estimated fair value of $658,000 was included in offering costs. Furthermore, 200,000 common stock warrants were issued to a financial advisor who advised on the transaction. These warrants were determined to be liabilities and the estimated fair value of $115,000 was included in offering costs.

Other Issuances

During the year ended December 31, 2014, the Company issued 50,583 shares of common stock to Magna as a commitment fee associated with the convertible notes and 50,000 shares of restricted common stock as consideration for termination of a consulting agreement. Furthermore, 444,403 shares of common stock were issued upon the vesting of restricted stock awards and 9,328 upon exercise of warrants.

The Company had reserved shares of common stock for future issuance as follows:

	December 31,	
	2014	2013
Convertible preferred stock:		

Shares outstanding	-	3,884,788
Warrants		
Series C convertible preferred stock	-	52,325
Series D convertible preferred stock	-	12,786
Series E convertible preferred stock	-	27,224
Series F convertible preferred stock	-	10,475
Common stock warrants	16,657,021	473,835
Convertible notes	8,772,111	-
Common stock options	1,383,479	106,544
Restricted stock units	1,059,745	168,832
Shares available for grant under equity plans	-	91,659
	27,872,356	4,828,468

Shares are based on the terms of securities outstanding as of the date presented. Upon completion of the IPO in February 2014, antidilution provisions were triggered for the Series F convertible preferred stock and Series F warrants and the Series F preferred stock converted into 4,906,874 shares of common stock and the Series F warrants converted into warrants to purchase 67,499 shares of common stock. Upon completion of the IPO, all shares of preferred stock converted into 8,029,779 shares of common stock.

Convertible Preferred Stock

In August and September 2013, the Company issued an aggregate of 4,740,000 shares of Series F convertible preferred stock at a purchase price of $2.00 per share, and associated warrants to purchase 91,951 shares of common stock. The warrants expire after five years and had an exercise price of $25.77 and $0.47 per share at December 31, 2013 and 2014, respectively. In addition, the Company issued warrants to purchase an aggregate of 9,311 shares of common stock to a placement agent, in August and September 2013. These warrants expire after five years and had an exercise price of $56.70 and $0.47 per share at December 31, 2013 and 2014, respectively.

There was no outstanding convertible preferred stock at December 31, 2014. At December 31, 2013, convertible preferred stock consisted of the following:

Series	Designated Shares	Shares Issued and Outstanding	Aggregate Liquidation Preference (in thousands)
Series A	5,800,000	5,365,398	$ 3,219
Series A-1	10,400,000	10,390,463	6,234
Series B	2,300,000	1,944,147	2,333
Series B-1	3,300,000	3,299,141	3,959
Series C	7,900,000	6,682,562	13,365
Series C-1	4,325,000	4,275,000	8,550
Series D	8,300,000	7,978,800	23,936
Series D-1	6,300,000	6,145,667	18,437
Series E	16,200,000	15,201,716	30,404
Series F	20,710,000	19,627,500	39,255
Undesignated	14,465,000	-	-
Total	100,000,000	80,910,394	$ 149,692

Upon completion of the IPO in February 2014, all 80,910,394 outstanding shares of preferred stock converted into 8,029,779 shares of common stock and the value of the convertible preferred stock of $161.5 million was reclassified to stockholders' equity.

The rights and preferences of the convertible preferred stock were as follows:

Dividends

Holders of the convertible preferred stock shall be entitled to receive noncumulative dividends in preference to any dividend on common stock payable only if declared by the Board of Directors. As of December 31, 2014 and 2013, the Board of Directors had not declared any dividends.

Liquidation Preference

In the event of any liquidation or winding up of the Company, including in the event of the merger, consolidation and sale of the Company, the holders of Series F convertible preferred stock were entitled to receive, in preference to holders of all other series of preferred stock and holders of common stock, a per share amount equal to $2.00, plus all accrued but unpaid dividends, when, as and if declared. If the Series F convertible preferred stock liquidation preference had been paid in full to holders of such preferred stock, thereafter, the holders of Series A and A-1, Series B and B-1, Series C and C-1, Series D and D-1 convertible preferred stock, and Series E convertible preferred stock, would have been entitled to receive ratably, and in preference to the holders of common stock, a per share amount equal to $0.60 for Series A and A-1 convertible preferred stock, $1.20 for Series B and B-1 convertible preferred stock, $2.00 for Series C and C-1 convertible preferred stock, $3.00 for Series D and D-1 convertible preferred stock, and $2.00 for Series E convertible preferred stock plus, with respect to each such series of preferred stock, all declared but unpaid dividends. After the payment of the liquidation preference to the holders of the preferred stock, the remaining assets would have been distributed ratably to the holders of the common stock.

A sale, merger, reorganization, liquidation, dissolution or winding up of the Company may have, in certain circumstances, been deemed to be a liquidation event and trigger the liquidation preferences associated with the outstanding shares of convertible preferred stock. Because a change in control could occur and not be solely within the control of the Company, all convertible preferred stock was deemed to be redeemable and classified outside of permanent equity in the accompanying consolidated balance sheets. However, because the timing of any such redemption was uncertain, the Company did not accrete the carrying value of the convertible preferred stock to its liquidation preference.

Conversion

The holders of the convertible preferred stock had the right to convert the shares of preferred stock held by such holders, at any time, into shares of common stock. Upon conversion, any declared but unpaid dividends on the preferred stock would have been paid in additional shares of common stock.

The convertible preferred stock was automatically converted into common stock, at the then applicable conversion ratio, upon the closing of a public offering of shares of common stock at a per share price not less than the then applicable conversion price (as adjusted for stock splits, stock dividends, recapitalizations, etc.).

The conversion ratio of each series of convertible preferred stock at December 31, 2013, was as follows:

Series	Conversion Ratio
Series A	0.0388
Series A-1	0.0582
Series B	0.0414
Series B-1	0.0591
Series C	0.0435
Series C-1	0.0631
Series D	0.0505
Series D-1	0.0653
Series E	0.0441
Series F	0.0388

On February 11, 2014, the holders of a majority of the outstanding shares of the Company’s Series F convertible preferred stock agreed to waive the conversion adjustment under the Company’s Restated Certificate of Incorporation such that in no event would the denominator used to calculate the conversion ratio be less than $8.00, provided that the Company completed its IPO on or before June 30, 2014. Upon completion of the IPO in February 2014, all 19,627,500 shares of Series F convertible preferred stock converted into 4,906,874 shares of common stock.

The conversion ratio of each series of convertible preferred stock at time of conversion was as follows:

Series	Conversion Ratio
Series A	0.0388
Series A-1	0.0582
Series B	0.0414
Series B-1	0.0591
Series C	0.0435

Series C-1	0.0631
Series D	0.0505
Series D-1	0.0653
Series E	0.0441
Series F	0.2500

Voting Rights

The preferred stock will vote together with the common stock, and not as separate classes, except as specifically provided below or as otherwise required by law. Each share of preferred stock shall have a number of votes equal to the number of shares of common stock the preferred stock is convertible into on an as-converted basis.

Unless an affirmative vote of 50% of the combined outstanding shares of preferred stock, voting separately as a class, is obtained, the Company shall not undertake any of the following: (i) declaration or payment of any dividend or other distribution or payment on the (or the redemption, purchase or other acquisition for value of any) capital stock of the Company or any subsidiary; (ii) any liquidation, dissolution, recapitalization or reorganization of the Company; (iii) transfer or disposition of assets or rights with a value of more than $1,000,000; and/or (iv) any amendment to the Company's certificate of incorporation that changes or alters any of the preferences, voting powers or other rights and privileges of preferred stock.

Registration Rights

The preferred stockholders and warrant holders were granted registration rights that provide these holders the right to request, beginning 180 days after the completion of a qualifying initial public offering, that the Company file a registration statement to register under the Securities Act the common stock that would be issued upon conversion of the preferred shares or exercise of the warrants. Thereupon, the Company is obligated to use commercially reasonable efforts to timely file a registration statement. These registration rights are subject to certain conditions and limitations, including the Company's right, based on advice of the lead managing underwriter of a future offering, to limit the number of shares included in any such registration under certain circumstances.

9. Stock-Based Compensation

Option and Equity Plans

In January 2014, the Company's board of directors increased the aggregate number of shares issuable under the 2012 Employee, Director and Consultant Equity Incentive Plan (the "2012 Plan") to 3,000,000, which was approved by the shareholders in February 2014.

The total number of shares available for grant under the 2012 Plan at December 31, 2014 was 113,914.

Stock Options

A summary of the Company's stock option activity for the year ended December 31, 2014 was as follows:

	Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Life (Years)	Intrinsic Value
Outstanding at December 31, 2013	106,544	$ 28.90		
Granted	1,448,751	$ 3.30		
Exercised	-	-		
Forfeited	(157,102)	$ 3.84		
Expired	(14,714)	$ 10.54		
Outstanding at December 31, 2014	1,383,479	$ 5.13	9.2	$ 18,600

Exercisable at December 31, 2014	339,110	$	11.42	8.1	$ -
Vested and expected to vest at December 31, 2014	1,327,485	$	5.22	9.2	$ 17,700

The aggregate intrinsic value in the table above is calculated as the difference between the estimated fair value of the Company's stock at December 31, 2014 and the exercise price of each option.

The weighted average grant date fair value of options granted during the years ended December 31, 2014 and 2013 was $1.67 and $0.07, respectively. The total intrinsic value of options exercised during the years ended December 31, 2014 and 2013 was $0 and $900,000, respectively, calculated as the difference between the exercise price of the underlying stock option awards and the estimated fair value of the Company's common stock on the date of exercise. Cash received from option exercises for the years ended December 31, 2014 and 2013 was $0 and $77,000, respectively. The Company recorded no tax benefit related to options exercised during the years ended December 31, 2014 and 2013.

The Company estimates the fair value of each stock option on the grant date using the Black-Scholes-Merton valuation model, which requires several estimates including an estimate of the fair value of the underlying common stock on grant date. The expected volatility was based on an average of the historical volatility of a peer group of similar companies. The expected term was calculated utilizing the simplified method. The risk-free interest rate was based on the U.S. Treasury yield curve in effect at the time of grant for the expected term of the option.

No options were granted to employees during the year ended December 31, 2013. The following weighted average assumptions were used in the calculation to estimate the fair value of options granted to employees during the year ended December 31, 2014:

Weighted-average risk-free interest rate	1.85%
Weighted-average expected life (in years)	6.30
Expected dividend yield	0 %
Weighted-average expected volatility	47 %

Restricted Stock Awards

Restricted stock awards ("RSA") activity for the year ended December 31, 2014 was as follows:

	Number of Awards	Weighted-Average Grant Date Fair Value
Unvested at December 31, 2013	168,832	$ 14.36
Granted	1,815,259	$ 5.71
Vested	(1,650,562)	$ 6.09
Forfeited	(333,529)	$ 5.98
Unvested at December 31, 2014	-	

The total fair value of RSAs vested during the years ended December 31, 2014 and 2013 was $3.0 million and $110,000, respectively.

In February 2013, employees of the Company elected to exchange 93,968 stock options for an equal number of restricted stock units ("RSUs") pursuant to a one-time tender offer approved by the board of directors. The RSUs vested upon the expiration of a lock-up period in connection with an underwritten public offering of shares of the Company's common stock. The incremental fair value on the date of the exchange, representing the difference between the value of the original stock options and the value of the RSUs issued of approximately $758,000 was recognized during the year ended December 31, 2014.

Stock-Based Awards Granted to Nonemployees

The Company from time to time grants options to purchase common stock or restricted stock awards to non-employees for services rendered and records expense ratably over the vesting period of each award and records expense ratably over the vesting period of each stock option award. The Company estimates the fair value of the stock options using the Black-Scholes-Merton valuation model at each reporting date. The Company granted 165,387 options and 94,560 restricted stock awards to non-employees and recorded stock-based compensation expense of $712,000 during the year ended December 31, 2014. The Company granted 13,191 options and 13,121 restricted stock awards to nonemployees and recorded $248,000 in stock-based compensation expense during the year ended December 31, 2013.

The following assumptions were used in the Black-Scholes-Merton valuation model related to non-employee stock options granted during the years ended December 31, 2014 and 2013:

	December 31, 2014		December 31, 2013	
Weighted-average risk-free interest rate	2.52	%	2.74	%
Weighted-average expected life (in years)	9.7		10.0	
Expected dividend yield	0	%	0	%
Weighted-average expected volatility	44	%	52	%

Summary of Stock-Based Compensation Expense

Total stock-based compensation expense included in the condensed consolidated statements of operations and comprehensive loss was allocated as follows (in thousands):

	Year Ended December 31,	
	2014	2013
Cost of revenue	$317	$-
Research and development	1,318	56
General and administrative	6,244	224
Selling and marketing	2,338	273
Capitalized into inventory	784	2
Total stock-based compensation expense	$11,001	$555

Unrecognized stock-based compensation at December 31, 2014 was as follows (in thousands):

	Unrecognized Stock-Based Compensation	Weighted Average Remaining Period of Recognition (in years)
Stock options	$ 1,197	2.1

10. Income Taxes

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amount of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes.

The following is a reconciliation of the expected statutory federal income tax provision to the actual income tax benefit (in thousands):

	Years Ended December 31,	
	2014	2013
Federal statutory rate	(34.0)%	(34.0)%
State taxes, net of federal benefit	(4.3)%	(4.3)%
Research and development credits	(0.7)%	(3.0)%
Equity related expenses	2.9 %	(5.0)%
Change in valuation allowance	36.1 %	46.3 %
Total income tax expense	0.0 %	0.0 %

Significant components of the Company's deferred tax assets and liabilities were as follows (in thousands):

	December 31,	
	2014	2013
Deferred tax assets:		
Net operating loss carryforwards	$50,673	$42,661
Depreciation	60	17
Research credits	2,587	2,350
Other	6,057	2,823
Total deferred tax assets	59,377	47,851
Deferred tax liabilities:		
Amortization of intangible assets	(918)	(1,028)
Total deferred tax liabilities	(918)	(1,028)
Net deferred tax assets	58,459	46,823
Less valuation allowance	(58,593)	(46,957)
Net deferred tax assets (liabilities)	$(134)	$(134)

At December 31, 2014 and 2013, the Company had net operating loss carryforwards for federal and state income tax purposes of approximately $132.5 million and $111.5 million, respectively. The federal and state net operating loss carryforwards will expire from 2023 to 2034, unless previously utilized.

During the years ended December 31, 2014 and 2013, the Company recognized no amounts related to tax interest or penalties related to uncertain tax positions. The Company is subject to taxation in the United States and various state jurisdictions. The Company currently has no years under examination by any jurisdiction.

A valuation allowance has been established as realization of such deferred tax assets has not met the more likely-than-not threshold requirement. If the Company's judgment changes and it is determined that the Company will be able to realize these deferred tax assets, the tax benefits relating to any reversal of the valuation allowance on deferred tax assets will be accounted for as a reduction to income tax expense. The tax valuation allowance increased by approximately $11.7 million and $3.8 million for the years ended December 31, 2014 and 2013, respectively.

11. Commitments and Contingencies

The Company currently leases laboratory, manufacturing and office space and equipment under noncancelable operating leases which provide for rent holidays and escalating payments. Lease incentives, including rent holidays, allowances for tenant improvements and rent escalation provisions, are recorded as deferred rent. Rent under operating leases is recognized on a straight-line basis beginning with lease commencement through the end of the lease term. For each of the years ended December 31, 2014 and 2013, rental expense was approximately $810,000 and $830,000, respectively.

The following table summarizes future minimum rental payments required under operating leases that have initial or remaining non-cancelable lease terms in excess of one year as of December 31, 2014 (in thousands):

Years ending December 31:	
2015	$883
2016	910
2017	938
2018	962
2019	980
Total minimum lease payments	$4,673

The Company has entered into consulting and development agreements with some of its advisors, including some surgeon advisors. The Company has agreed to pay some of the surgeon advisors a portion of the net profits attributable to the sale of specific spine products for which the surgeon advisors provided the Company with consulting and related services related to the conceptualization, development, testing, clearance, approval and/or related matters involving implant products. The Company is obligated to pay royalties to different surgeon advisors in connection with the sale of certain of its implant products. These agreements generally continue until the later of (a) ten years from the date of the agreements, and (b) the expiration of the patent rights relating to the devices covered by the agreements, when rights have been assigned by the individuals to the Company. The Company incurred royalties of $1.3 million and $892,000 related to these agreements for the years ended December 31, 2014 and 2013, respectively. None of the royalty arrangements contain minimum royalty payments.

The Company has executed agreements with certain executive officers of the Company which, upon the occurrence of certain events related to a change in control, call for payments to the executives up to three times their annual salary and accelerated vesting of previously granted stock options.

From time to time, the Company is subject to various claims and legal proceedings covering matters that arise in the ordinary course of its business activities. Management believes any liability that may ultimately result from the resolution of these matters will not have a material adverse effect on the Company's consolidated financial position, operating results, or cash flows.

12. Related-Party Transactions

Gregg R. Honigblum, the Chief Executive Officer of each of Creation Capital, LLC ("Creation Capital") and Creation Capital Advisors, LLC ("Creation Advisors"), joined the Company's board of directors in December 2006 and resigned in September 2013. The Company completed offerings of preferred stock and convertible debt through Creation Capital, as its placement agent, and it received strategic financial advisory services from Creation Advisors.

In connection with the conversion of notes to shares of Series F convertible preferred stock in December 2012, the Company was obligated to pay Creation Advisors a strategic financial advisory fee of approximately $447,000. Creation Advisors agreed to a payment plan whereby the Company would pay one half of the advisory fee (or approximately $224,000) immediately, and pay the other half in monthly installments over a period of 24 months.

In conjunction with a warrant restructuring and the sale and issuance of other shares of common stock in March 2013, Creation Advisors was paid a strategic financial advisory fee of approximately $250,000. In October 2013, the Company entered into a one-year consulting agreement for financial advisory services with Creation Advisors in which Creation Advisors was to receive compensation of up to $180,000 in cash (payable $15,000 per month). The Company paid $45,000 during the year ended December 31, 2013 under this agreement. The Company paid $45,000 under this agreement during the year ended December 31, 2014. This agreement was terminated in March 2014 and as consideration for termination of the agreement, the Company paid $60,000 and issued 50,000 restricted shares of common stock, valued at $372,000, to Creation Advisers.

13. 401(k) Plan

Effective June 1, 2004, the Company adopted a defined contribution retirement plan under Section 401(k) of the Internal Revenue Code. The plan covers substantially all employees. Eligible employees may contribute amounts to the plan, via payroll withholdings, subject to certain limitations. The plan permits, but does not require, additional matching contributions to the plan by the Company on behalf of the participants in the plan. The Company incurred approximately $164,000 and $162,000 relating to retirement contributions for the years ended December 31, 2014 and 2013, respectively.

14. Subsequent Events

In January 2015, Magna converted an additional $202,000 of the principal amount of the Convertible Notes into 372,900 shares of common stock.

In January 2015, the Company had a reduction in force and recorded $585,000 in severance expense.

Exhibit 4.27

THIS WARRANT AND THE SHARES OF CAPITAL STOCK ISSUED UPON ANY EXERCISE HEREOF HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR ANY APPLICABLE STATE SECURITIES LAWS AND MAY NOT BE SOLD OR OTHERWISE TRANSFERRED BY ANY PERSON, INCLUDING A PLEDGEE, UNLESS (1) EITHER (A) A REGISTRATION WITH RESPECT THERETO SHALL BE EFFECTIVE UNDER THE SECURITIES ACT, OR (B) THE COMPANY SHALL HAVE RECEIVED AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY THAT AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT IS AVAILABLE, AND (2) THERE SHALL HAVE BEEN COMPLIANCE WITH ALL APPLICABLE STATE SECURITIES OR "BLUE SKY" LAWS.

Right to Purchase _____ Shares of Common Stock of Amedica Corporation

Warrant No. C-

COMMON STOCK PURCHASE WARRANT

Amedica Corporation, a Delaware corporation (the "Company"), hereby certifies that for value received _____(the "Holder"), or assigns, is entitled to purchase, subject to the terms and conditions hereinafter set forth, up to _____ shares of Common Stock (the "Warrant Shares") (subject to adjustment as hereinafter provided) at the Exercise Price, payable as hereinafter provided. This Warrant is being issued pursuant to the terms of that certain financial advisory services engagement agreement, dated September 17, 2014, by and between the Company and Westlake Securities LLC (the "Engagement Agreement").

1. Definitions. As used herein, the following terms shall have the following meanings, unless the context otherwise requires:

(a) "Change of Control" shall mean the occurrence of any of the following events: (i) any "Person" (as such term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")), becomes the "Beneficial Owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of securities of the Company representing fifty percent (50%) or more of the total voting power represented by the Company's then outstanding voting securities pursuant to a transaction or a series of related transactions which the Board of Directors of the Company (the "Board") does not approve; or (ii) (A) a merger or consolidation of the Company whether or not approved by the Board, other than a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or the parent of such corporation) at least fifty percent (50%) of the total voting power represented by the voting securities of the Company or such surviving entity or parent of such corporation, as the case may be, outstanding immediately after such merger or consolidation; (B) or the Company's stockholders approve an agreement for the sale or disposition by the Company of all or substantially all of the Company's assets.

(b) "Common Stock" shall mean the Company's common stock, $0.01 par value per share.

(b) "Exercise Price" shall mean the purchase price to be paid upon exercise of this Warrant in accordance with the terms hereof, which price initially shall be $0.86 per Warrant Share. The Exercise Price shall be subject to adjustment from time to time pursuant to the provisions of Section 5 hereof.

(c) "Warrant Expiration Date" shall mean 5:00 p.m., Eastern Time, on September 17, 2019.

2. Exercise.

(a) Manner of Exercise. This Warrant may be exercised at any time or from time to time, on any day which is not a Saturday, Sunday or holiday under the laws of the State of Utah beginning on March 17, 2015 and prior to the Warrant Expiration Date, for all or any part of the Warrant Shares. In order to exercise this Warrant, in whole or in part, the Holder shall deliver to the Company at its principal executive offices, or at such other office as the Company may designate by notice in writing, (i) this originally executed Warrant and (ii) a duly executed written notice of Holder's election to exercise its Warrant in whole or in part substantially in the form of Exhibit A attached hereto, and shall pay to the Company by check made payable to the order of the Company or wire transfer of funds to a bank account designated by the Company an amount equal to the aggregate Exercise Price for all Warrant Shares as to which this Warrant is being exercised.

(b) Cashless Exercise. In addition to and without limiting the rights of the Holder hereof under the terms of this Warrant, the Holder may elect to receive, without the payment by the Holder of the Exercise Price, shares of Common Stock equal to the value of the Warrant Shares or any portion thereof by the surrender of this Warrant (or such portion of this Warrant being so exercised) together with the Net Issue Election Notice annexed hereto as

Exhibit B duly executed and completed, at its principal executive offices, or at such other office as the Company may designate by notice in writing. Thereupon, the Company shall issue to the Holder such number of fully paid, validly issued and nonassessable shares of Common Stock, as is computed using the following formula:

X= Y(A-B)

A

where

X = the number of shares of Common Stock to be issued to the Holder (or such other person or persons as directed by the Holder) upon such exercise of the rights under this Section 2(c)

Y = the total number of Warrant Shares which the Holder has surrendered for cashless exercise

A = the "Fair Market Value" of one share of Common Stock on the date that the Holder delivers the Net Issue Election Notice to the Company as provided herein

B = the Exercise Price in effect under this Warrant on the date that the Holder delivers the Net Issue Election Notice to the Company as provided herein

The "Fair Market Value" of a share of Common Stock as of a particular date (the "Valuation Date") shall mean the following: (y) if the Common Stock is then listed on a stock exchange or quoted on a quotation system, the closing sale price of one share of Common Stock on such exchange or system on the last trading day prior to the Valuation Date; or (z) if the Common Stock is not then listed on a stock exchange or quoted on a quotation system, the Fair Market Value of one share of Common Stock as of the Valuation Date shall be determined in good faith by the Board of Directors of the Company (the "Board"). The Board shall respond promptly in writing to an inquiry by the Holder prior to the exercise hereunder as to the Fair Market Value of a share of Common Stock.

(c) Issuance of Common Stock. Upon receipt of the documents and payments described in Section 2(a) or Section 2(b), as the case may be, the Company shall, as promptly as practicable, execute or cause to be executed, and deliver to the Holder a certificate or certificates representing the aggregate number of full Warrant Shares (or such other stock or securities that may be issuable upon exercise of the Warrant) issuable upon such exercise. The stock certificate or certificates so delivered shall be in the denomination specified in said notice and shall be registered in the name of the Holder. This Warrant shall be deemed to have been exercised and a certificate or certificates for shares of Common Stock shall be deemed to have been issued, and the Holder or any other person so designated to be named therein shall be deemed to have become a holder of record of such shares for all purposes as of the date said notice, together with this Warrant and the documents and payments described in Section 2(a) or 2(b), as the case may be, are received by the Company as aforesaid. If this Warrant shall have been exercised in part, the Company shall, at the time of delivery of said certificate or certificates, deliver to the Holder a new Warrant evidencing the rights of Holder to purchase the unpurchased shares of Common Stock called for by this Warrant, which new Warrant shall in all other respects be identical with this Warrant.

(d) Transfer Restriction Legend. Each certificate for Common Stock issued upon exercise of this Warrant, unless at the time of exercise the offer and sale of the Warrant Shares are registered under the Securities Act, shall bear the following legend (and any additional legend required by applicable law or rule) on the face thereof:

"THE SECURITIES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND, ACCORDINGLY, MAY NOT BE OFFERED, SOLD OR

OTHERWISE TRANSFERRED EXCEPT (A) PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OR (B) PURSUANT TO AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS AS EVIDENCED BY A LEGAL OPINION OF COUNSEL TO THE TRANSFEROR TO SUCH EFFECT, THE SUBSTANCE OF WHICH SHALL BE REASONABLY ACCEPTABLE TO THE COMPANY."

3. Reservation of Shares. The Company covenants that it will at all times until the Warrant Expiration Date reserve and keep available out of its authorized and unissued Common Stock, solely for the purpose of issue upon exercise of this Warrant, such number of Warrant Shares as shall then be issuable upon the exercise of this Warrant.

4. Loss, Theft, Destruction or Mutilation. Upon receipt of evidence satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant (including a reasonably detailed affidavit with respect to the circumstances of any loss, theft or destruction of such Warrant and a customary and reasonable indemnity and surety bond, if requested by the Company), and, in the case of any such mutilation, upon surrender and cancellation of this Warrant, the Company at its expense will execute and deliver, in lieu hereof, a new Warrant of like tenor.

5. Subdivision or Combination of Common Stock. If the Company at any time subdivides (by any stock split, stock dividend, recapitalization or otherwise) its outstanding shares of Common Stock into a greater number of shares, the Exercise Price in effect immediately prior to such subdivision will be proportionately reduced and the number of Warrant Shares issuable upon exercise of this Warrant will be proportionately increased, and if the Company at any time combines (by reverse stock split, recapitalization or otherwise) its outstanding shares of Common Stock into a smaller number of shares, the Exercise Price in effect immediately prior to such combination will be proportionately increased and the number of Warrant Shares issuable upon exercise of this Warrant will be proportionately decreased.

6. Consolidation, Merger, etc. If there shall be a merger or consolidation of the Company with or into another corporation (other than a merger or reorganization involving only a change in the state of incorporation of the Company), then as a part of such transaction, provision shall be made so that the Holder hereof shall thereafter be entitled to receive the number of shares of stock or other securities or property of the Company, or of the successor corporation resulting from the merger or consolidation, to which the Holder would have been entitled if the Holder had exercised this Warrant immediately prior thereto.

7. Notice of Adjustment. Upon any adjustment or other change relating to the Exercise Price or the securities purchasable upon the exercise of this Warrant, then, and in each such case, the Company shall promptly prepare and deliver to Holder notice, setting forth, in reasonable detail, the event requiring the adjustment and the method by which such adjustment was calculated.

8. Fractional Shares. The Company shall not issue fractions of shares, upon exercise of this Warrant or otherwise, or distribute certificates that evidence fractional shares. With respect to any fraction of a share called for upon any exercise hereof, such fraction shall neither be issued nor extinguished until the final exercise of this Warrant, in which event if a fraction is issuable, the Company shall pay to the Holder an amount in cash equal to such fraction multiplied by the Exercise Price, as adjusted to date pursuant to Section 5 hereof.

9. Holder Not Deemed Stockholder. The Holder shall not be entitled to vote or to receive dividends or be deemed the holder of Common Stock that may at any time be issuable upon exercise of this Warrant for any purpose whatsoever, nor shall anything contained herein be construed to confer upon the Holder any of the rights of a stockholder of the Company or any right to vote for the election of directors or upon any matter submitted to stockholders at any meeting thereof, or to receive dividends or subscription rights, until Holder shall have exercised this Warrant in accordance with the provisions hereof.

10. Successors and Assigns. This Warrant, and the obligations and rights of the Company hereunder, shall be binding upon and inure to the benefit of the Company, the Holder, and their respective successors and permitted assigns.

11. Waiver and Amendment. Any provision of this Warrant may be amended, waived or modified only upon the written consent of the Company and the Holder.

12. Notices. Any notice, request or other communication required or permitted hereunder shall be in writing and shall be delivered in accordance with the terms of Section 7.A of the Engagement Agreement.

13. Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be governed by the internal laws of the State of Delaware, United States of America, without giving effect to any choice of law or conflict of law provision or rule (whether of the State of Delaware or any other

jurisdictions) that would cause the application of the laws of any jurisdictions other than the State of Delaware.

14. Headings; References. All headings used herein are used for convenience only and will not be used to construe or interpret this Warrant. Except where otherwise indicated, all references herein to Sections refer to Sections hereof.

15. Acceptance. Receipt of this Warrant by the Holder shall constitute acceptance of and agreement to all of the terms and conditions contained herein.

[Remainder of page intentionally left blank.]

IN WITNESS WHEREOF, the Company has caused this Warrant to be duly executed as of September 17, 2014.

AMEDICA
CORPORATION

By:
Name: Kevin Ontiveros
Title: Chief Legal Officer

EXHIBIT A

EXERCISE FORM

(To be signed only on exercise of Warrant)

Amedica Corporation
1885 West 2100 South
Salt Lake City, UT 84119

The undersigned hereby irrevocably elects to exercise the right to purchase represented by the within Warrant for, and to purchase thereunder, _____ shares of common stock, $0.01 par value per share, of Amedica Corporation (the "Common Stock") at a price of $_____ per share of Common Stock, and herewith makes payment of $_____ (such payment being by check made payable to the order of Amedica Corporation, or wire transfer of funds to a bank account designated by Amedica Corporation, or any combination thereof), surrenders the Warrant and all right, title and interest therein to Amedica Corporation and requests that certificates for such shares be issued in the name of:

_____

(Please print name, address, and social security number)

_____

and, if said number of shares shall not be all the shares purchasable thereunder, that a new Warrant for the balance remaining of the shares purchasable under the within Warrant be registered in the name of the undersigned holder of the within Warrant or his Assignee as below indicated and delivered to the address stated below.

NAME OF HOLDER OR ASSIGNEE:_____

(Please print)

ADDRESS OF HOLDER

OR ASSIGNEE:_____

SIGNATURE OF HOLDER:_____

DATED:_____

EXHIBIT B

NET ISSUE ELECTION NOTICE

(To be signed only on exercise of Warrant)

Amedica Corporation
1885 West 2100 South
Salt Lake City, UT 84119

The undersigned hereby elects under Section 2(b) of this Warrant to surrender the right to purchase [_____] shares of common stock, $0.01 par value per share, of Amedica Corporation (the "Common Stock") pursuant to the within Warrant and hereby requests the issuance of [_____] shares of Common Stock. The undersigned requests that certificates for such shares be issued in the name of:

_____

(Please print name, address, and social security number)

_____

and, if said number of shares shall not be all the shares purchasable thereunder, that a new Warrant for the balance remaining of the shares purchasable under the within Warrant be registered in the name of the undersigned holder of the within Warrant or his Assignee as below indicated and delivered to the address stated below.

NAME OF HOLDER OR ASSIGNEE:_____

(Please print)

ADDRESS OF HOLDER

OR ASSIGNEE:_____

SIGNATURE OF HOLDER:_____

DATED:_____

Exhibit 4.28

THIS WARRANT AND THE SHARES OF CAPITAL STOCK ISSUED UPON ANY EXERCISE HEREOF HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR ANY APPLICABLE STATE SECURITIES LAWS AND MAY NOT BE SOLD OR OTHERWISE TRANSFERRED BY ANY PERSON, INCLUDING A PLEDGEE, UNLESS (1) EITHER (A) A REGISTRATION WITH RESPECT THERETO SHALL BE EFFECTIVE UNDER THE SECURITIES ACT, OR (B) THE COMPANY SHALL HAVE RECEIVED AN OPINION OF COUNSEL SATISFACTORY TO THE COMPANY THAT AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT IS AVAILABLE, AND (2) THERE SHALL HAVE BEEN COMPLIANCE WITH ALL APPLICABLE STATE SECURITIES OR "BLUE SKY" LAWS.

Right to Purchase _____ Shares of Common Stock of Amedica Corporation

Warrant No. C-

COMMON STOCK PURCHASE WARRANT

Amedica Corporation, a Delaware corporation (the "Company"), hereby certifies that for value received _____ (the "Holder"), or assigns, is entitled to purchase, subject to the terms and conditions hereinafter set forth, up to _____ shares of Common Stock (the "Warrant Shares") (subject to adjustment as hereinafter provided) at the Exercise Price, payable as hereinafter provided. This Warrant is being issued pursuant to the terms of that certain financial advisory services engagement agreement, dated November 12, 2014, by and between the Company and Westlake Securities LLC (the "Engagement Agreement").

1. Definitions. As used herein, the following terms shall have the following meanings, unless the context otherwise requires:

(a) "Change of Control" shall mean the occurrence of any of the following events: (i) any "Person" (as such term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")), becomes the "Beneficial Owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of securities of the Company representing fifty percent (50%) or more of the total voting power represented by the Company's then outstanding voting securities pursuant to a transaction or a series of related transactions which the Board of Directors of the Company (the "Board") does not approve; or (ii) (A) a merger or consolidation of the Company whether or not approved by the Board, other than a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or the parent of such corporation) at least fifty percent (50%) of the total voting power represented by the voting securities of the Company or such surviving entity or parent of such corporation, as the case may be, outstanding immediately after such merger or consolidation; (B) or the Company's stockholders approve an agreement for the sale or disposition by the Company of all or substantially all of the Company's assets.

(b) "Common Stock" shall mean the Company's common stock, $0.01 par value per share.

(b) "Exercise Price" shall mean the purchase price to be paid upon exercise of this Warrant in accordance with the terms hereof, which price initially shall be $1.25 per Warrant Share. The Exercise Price shall be subject to adjustment from time to time pursuant to the provisions of Section 5 hereof.

(c) "Warrant Expiration Date" shall mean 5:00 p.m., Eastern Time, on November 12, 2019.

2. Exercise.

(a) Manner of Exercise. This Warrant may be exercised at any time or from time to time, on any day which is not a Saturday, Sunday or holiday under the laws of the State of Utah beginning on May 12, 2015 and prior to the Warrant Expiration Date, for all or any part of the Warrant Shares. In order to exercise this Warrant, in whole or in part, the Holder shall deliver to the Company at its principal executive offices, or at such other office as the Company may designate by notice in writing, (i) this originally executed Warrant and (ii) a duly executed written notice of Holder's election to exercise its Warrant in whole or in part substantially in the form of Exhibit A attached hereto, and shall pay to the Company by check made payable to the order of the Company or wire transfer of funds to a bank account designated by the Company an amount equal to the aggregate Exercise Price for all Warrant Shares as to which this Warrant is being exercised.

(b) Cashless Exercise. In addition to and without limiting the rights of the Holder hereof under the terms of this Warrant, the Holder may elect to receive, without the payment by the Holder of the Exercise Price, shares of Common Stock equal to the value of the Warrant Shares or any portion thereof by the surrender of this Warrant (or such portion of this Warrant being so exercised) together with the Net Issue Election Notice annexed hereto as

Exhibit B duly executed and completed, at its principal executive offices, or at such other office as the Company may designate by notice in writing. Thereupon, the Company shall issue to the Holder such number of fully paid, validly issued and nonassessable shares of Common Stock, as is computed using the following formula:

X= Y(A-B)

A

where

X = the number of shares of Common Stock to be issued to the Holder (or such other person or persons as directed by the Holder) upon such exercise of the rights under this Section 2(c)

Y = the total number of Warrant Shares which the Holder has surrendered for cashless exercise

A = the "Fair Market Value" of one share of Common Stock on the date that the Holder delivers the Net Issue Election Notice to the Company as provided herein

B = the Exercise Price in effect under this Warrant on the date that the Holder delivers the Net Issue Election Notice to the Company as provided herein

The "Fair Market Value" of a share of Common Stock as of a particular date (the "Valuation Date") shall mean the following: (y) if the Common Stock is then listed on a stock exchange or quoted on a quotation system, the closing sale price of one share of Common Stock on such exchange or system on the last trading day prior to the Valuation Date; or (z) if the Common Stock is not then listed on a stock exchange or quoted on a quotation system, the Fair Market Value of one share of Common Stock as of the Valuation Date shall be determined in good faith by the Board of Directors of the Company (the "Board"). The Board shall respond promptly in writing to an inquiry by the Holder prior to the exercise hereunder as to the Fair Market Value of a share of Common Stock.

(c) Issuance of Common Stock. Upon receipt of the documents and payments described in Section 2(a) or Section 2(b), as the case may be, the Company shall, as promptly as practicable, execute or cause to be executed, and deliver to the Holder a certificate or certificates representing the aggregate number of full Warrant Shares (or such other stock or securities that may be issuable upon exercise of the Warrant) issuable upon such exercise. The stock certificate or certificates so delivered shall be in the denomination specified in said notice and shall be registered in the name of the Holder. This Warrant shall be deemed to have been exercised and a certificate or certificates for shares of Common Stock shall be deemed to have been issued, and the Holder or any other person so designated to be named therein shall be deemed to have become a holder of record of such shares for all purposes as of the date said notice, together with this Warrant and the documents and payments described in Section 2(a) or 2(b), as the case may be, are received by the Company as aforesaid. If this Warrant shall have been exercised in part, the Company shall, at the time of delivery of said certificate or certificates, deliver to the Holder a new Warrant evidencing the rights of Holder to purchase the unpurchased shares of Common Stock called for by this Warrant, which new Warrant shall in all other respects be identical with this Warrant.

(d) Transfer Restriction Legend. Each certificate for Common Stock issued upon exercise of this Warrant, unless at the time of exercise the offer and sale of the Warrant Shares are registered under the Securities Act, shall bear the following legend (and any additional legend required by applicable law or rule) on the face thereof:

"THE SECURITIES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND, ACCORDINGLY, MAY NOT BE OFFERED, SOLD OR

OTHERWISE TRANSFERRED EXCEPT (A) PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OR (B) PURSUANT TO AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS AS EVIDENCED BY A LEGAL OPINION OF COUNSEL TO THE TRANSFEROR TO SUCH EFFECT, THE SUBSTANCE OF WHICH SHALL BE REASONABLY ACCEPTABLE TO THE COMPANY."

3. Reservation of Shares. The Company covenants that it will at all times until the Warrant Expiration Date reserve and keep available out of its authorized and unissued Common Stock, solely for the purpose of issue upon exercise of this Warrant, such number of Warrant Shares as shall then be issuable upon the exercise of this Warrant.

4. Loss, Theft, Destruction or Mutilation. Upon receipt of evidence satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant (including a reasonably detailed affidavit with respect to the circumstances of any loss, theft or destruction of such Warrant and a customary and reasonable indemnity and surety bond, if requested by the Company), and, in the case of any such mutilation, upon surrender and cancellation of this Warrant, the Company at its expense will execute and deliver, in lieu hereof, a new Warrant of like tenor.

5. Subdivision or Combination of Common Stock. If the Company at any time subdivides (by any stock split, stock dividend, recapitalization or otherwise) its outstanding shares of Common Stock into a greater number of shares, the Exercise Price in effect immediately prior to such subdivision will be proportionately reduced and the number of Warrant Shares issuable upon exercise of this Warrant will be proportionately increased, and if the Company at any time combines (by reverse stock split, recapitalization or otherwise) its outstanding shares of Common Stock into a smaller number of shares, the Exercise Price in effect immediately prior to such combination will be proportionately increased and the number of Warrant Shares issuable upon exercise of this Warrant will be proportionately decreased.

6. Consolidation, Merger, etc. If there shall be a merger or consolidation of the Company with or into another corporation (other than a merger or reorganization involving only a change in the state of incorporation of the Company), then as a part of such transaction, provision shall be made so that the Holder hereof shall thereafter be entitled to receive the number of shares of stock or other securities or property of the Company, or of the successor corporation resulting from the merger or consolidation, to which the Holder would have been entitled if the Holder had exercised this Warrant immediately prior thereto.

7. Notice of Adjustment. Upon any adjustment or other change relating to the Exercise Price or the securities purchasable upon the exercise of this Warrant, then, and in each such case, the Company shall promptly prepare and deliver to Holder notice, setting forth, in reasonable detail, the event requiring the adjustment and the method by which such adjustment was calculated.

8. Fractional Shares. The Company shall not issue fractions of shares, upon exercise of this Warrant or otherwise, or distribute certificates that evidence fractional shares. With respect to any fraction of a share called for upon any exercise hereof, such fraction shall neither be issued nor extinguished until the final exercise of this Warrant, in which event if a fraction is issuable, the Company shall pay to the Holder an amount in cash equal to such fraction multiplied by the Exercise Price, as adjusted to date pursuant to Section 5 hereof.

9. Holder Not Deemed Stockholder. The Holder shall not be entitled to vote or to receive dividends or be deemed the holder of Common Stock that may at any time be issuable upon exercise of this Warrant for any purpose whatsoever, nor shall anything contained herein be construed to confer upon the Holder any of the rights of a stockholder of the Company or any right to vote for the election of directors or upon any matter submitted to stockholders at any meeting thereof, or to receive dividends or subscription rights, until Holder shall have exercised this Warrant in accordance with the provisions hereof.

10. Successors and Assigns. This Warrant, and the obligations and rights of the Company hereunder, shall be binding upon and inure to the benefit of the Company, the Holder, and their respective successors and permitted assigns.

11. Waiver and Amendment. Any provision of this Warrant may be amended, waived or modified only upon the written consent of the Company and the Holder.

12. Notices. Any notice, request or other communication required or permitted hereunder shall be in writing and shall be delivered in accordance with the terms of Section 7.A of the Engagement Agreement.

13. Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be governed by the internal laws of the State of Delaware, United States of America, without giving

effect to any choice of law or conflict of law provision or rule (whether of the State of Delaware or any other jurisdictions) that would cause the application of the laws of any jurisdictions other than the State of Delaware.

14. Headings; References. All headings used herein are used for convenience only and will not be used to construe or interpret this Warrant. Except where otherwise indicated, all references herein to Sections refer to Sections hereof.

15. Acceptance. Receipt of this Warrant by the Holder shall constitute acceptance of and agreement to all of the terms and conditions contained herein.

[Remainder of page intentionally left blank.]

IN WITNESS WHEREOF, the Company has caused this Warrant to be duly executed as of November 12, 2014.

AMEDICA
CORPORATION

By:
Name: Kevin Ontiveros
Title: Chief Legal Officer

EXHIBIT A

EXERCISE FORM

(To be signed only on exercise of Warrant)

Amedica Corporation
1885 West 2100 South
Salt Lake City, UT 84119

The undersigned hereby irrevocably elects to exercise the right to purchase represented by the within Warrant for, and to purchase thereunder, _____ shares of common stock, $0.01 par value per share, of Amedica Corporation (the "Common Stock") at a price of $_____ per share of Common Stock, and herewith makes payment of $_____ (such payment being by check made payable to the order of Amedica Corporation, or wire transfer of funds to a bank account designated by Amedica Corporation, or any combination thereof), surrenders the Warrant and all right, title and interest therein to Amedica Corporation and requests that certificates for such shares be issued in the name of:

_____

(Please print name, address, and social security number)

_____

and, if said number of shares shall not be all the shares purchasable thereunder, that a new Warrant for the balance remaining of the shares purchasable under the within Warrant be registered in the name of the undersigned holder of the within Warrant or his Assignee as below indicated and delivered to the address stated below.

NAME OF HOLDER OR ASSIGNEE:_____

(Please print)

ADDRESS OF HOLDER

OR ASSIGNEE:_____

SIGNATURE OF HOLDER:_____

DATED:_____

EXHIBIT B

NET ISSUE ELECTION NOTICE

(To be signed only on exercise of Warrant)

Amedica Corporation
1885 West 2100 South
Salt Lake City, UT 84119

The undersigned hereby elects under Section 2(b) of this Warrant to surrender the right to purchase [_____] shares of common stock, $0.01 par value per share, of Amedica Corporation (the "Common Stock") pursuant to the within Warrant and hereby requests the issuance of [_____] shares of Common Stock. The undersigned requests that certificates for such shares be issued in the name of:

_____

(Please print name, address, and social security number)

_____

and, if said number of shares shall not be all the shares purchasable thereunder, that a new Warrant for the balance remaining of the shares purchasable under the within Warrant be registered in the name of the undersigned holder of the within Warrant or his Assignee as below indicated and delivered to the address stated below.

NAME OF HOLDER OR ASSIGNEE:_____

(Please print)

ADDRESS OF HOLDER

OR ASSIGNEE:_____

SIGNATURE OF HOLDER:_____

DATED:_____

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statement (Form S-8 No. 333-194977) pertaining to the Amedica Corporation 2003 Stock Option Plan, the Amedica Amended and Restated 2012 Equity Incentive Plan, and the Amedica 2013 Employee Stock Purchase Plan of Amedica Corporation of our report dated March 31, 2014, with respect to the consolidated financial statements of Amedica Corporation as of December 31, 2013 and for the year then ended included in its Annual Report (Form 10-K) for the year ended December 31, 2014, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

Salt Lake City, Utah

March 24, 2015

Exhibit 23.2

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statement (Form S-8 No. 333-194977) pertaining to the Amedica Corporation Amended and Restated 2012 Equity Incentive Plan and the Amedica Corporation 2003 Stock Option Plan, of our report dated March 24, 2015, with respect to the consolidated financial statements of Amedica Corporation included in this Annual Report (Form 10-K) for the year ended December 31, 2014.

/s/Mantyla McReynolds

Salt Lake City, Utah

March 24, 2015

Exhibit 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER

I, B. Sonny Bal, certify that:

1. I have reviewed this annual report on Form 10-K of Amedica Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

(a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(c) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 24, 2015 By: /s/ B. Sonny Bal
B. Sonny Bal
Chief Executive Officer

Exhibit 31.2

CERTIFICATION OF PRINCIPAL ACCOUNTING OFFICER

I, Ty A. Lombardi, certify that:

1. I have reviewed this annual report on Form 10-K of Amedica Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and we have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(c) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent function):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls over financial reporting.

Date: March 24, 2015 /s/Ty A. Lombardi
Ty A. Lombardi
Principal Accounting Officer

Exhibit 32

CERTIFICATIONS UNDER SECTION 906

Pursuant to section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of section 1350, chapter 63 of title 18, United States Code), each of the undersigned officers of Amedica Corporation., a Delaware corporation (the "Company"), does hereby certify, to such officer's knowledge, that:

The Annual Report for the year ended December 31, 2014 (the "Form 10-K") of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and the information contained in the Form 10-K fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 24, 2015 /s/ B. Sonny Bal
B. Sonny Bal, M.D.
Chief Executive Officer

Date: March 24, 2015 /s/ Ty A. Lombardi
Ty A. Lombardi
Principal Accounting Officer