



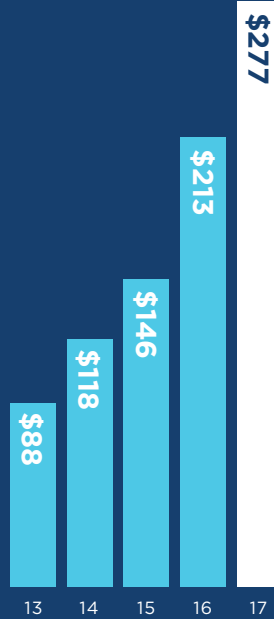
THE FAMILIES OF
HEART RECOVERY

FINANCIAL PERFORMANCE

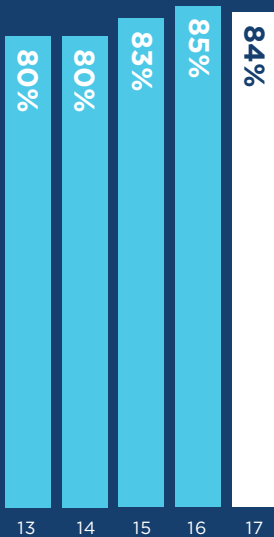
FY 2017



TOTAL REVENUE
DOLLARS IN MILLIONS



NET CASH BALANCES*
DOLLARS IN MILLIONS



GROSS MARGIN

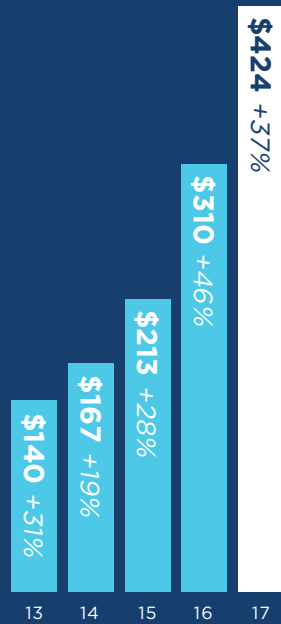


GAAP OPERATING INCOME
DOLLARS IN MILLIONS

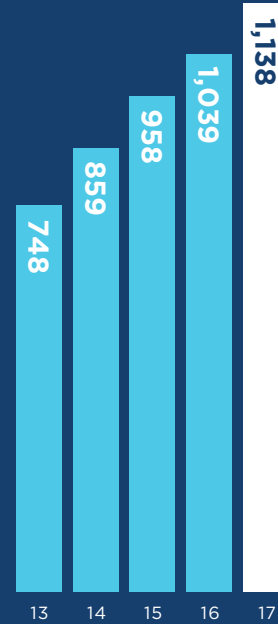
* Net cash balances are defined as total cash, short-term and long-term marketable securities, less any debt as of March 31 each year

IMPELLA[®] DEVICE PROGRESS

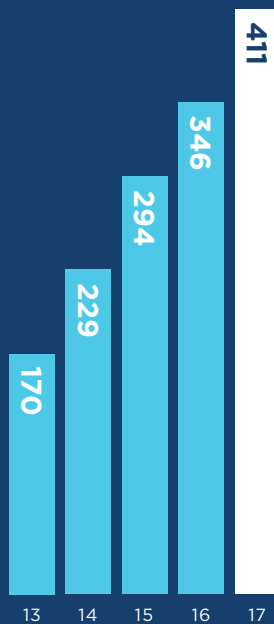
FY 2017



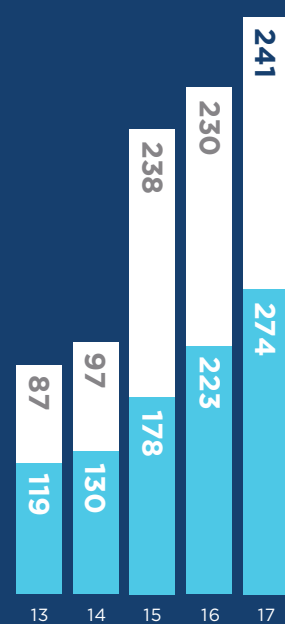
REVENUE
DOLLARS IN MILLIONS



IMPELLA 2.5[®] U.S. SITES



PUBLICATIONS



TOTAL ABIOMED PATENT PORTFOLIO

■ PATENTS ■ PATENTS PENDING

DEAR SHAREHOLDERS,

These are exciting times at Abiomed and our patient stories about heart muscle recovery continue to inspire us and accelerate the adoption of Impella® heart pumps. Thank you to our employees and dedicated customers for your work to improve the standard of care and build the Field of Heart Recovery.



Abiomed patient summit. Back: Rick McCormick, Jay Sanchez, Tom Wakeling, Duane Ackerman, Buddy Chase, Abiomed CEO Mike Minogue Front: Sonya Bow, Jara Herron, Loretta Miller, Brenda Dively, Vickie Nemeec

Abiomed had a robust fiscal year 2017, generating \$445 million in revenue; a net increase of \$116M, or growth of 35%. Abiomed remains one of the fastest growing GAAP profitable medical device companies. We continue to have a solid balance sheet ending the year with a cash position of \$277 million and no debt enhancing our ability to invest in and defend our intellectual property of 274 patents with 241 pending. Impella technology has been validated with multiple regulatory approvals, more than 400 clinical publications and an installed base of nearly 1,200 U.S. hospitals.

We also hit a significant milestone this year, announcing that Abiomed has supported more than 50,000 patients in the United States. This reflects the growing clinical need for percutaneous hemodynamic support for heart failure patients with limited treatment options.

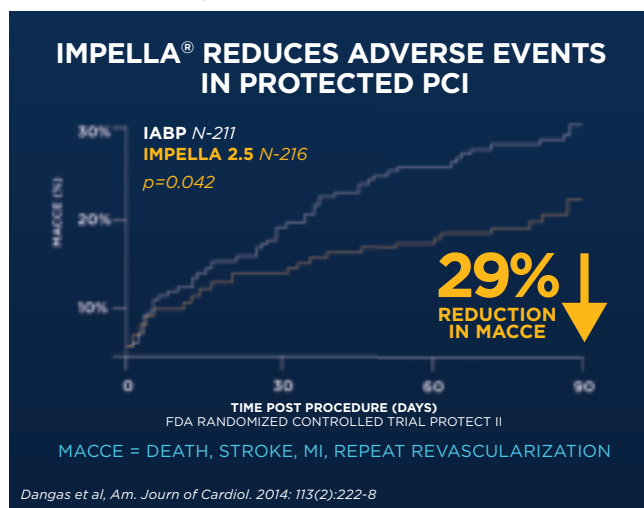
Some other highlights of the past year include:

- FDA designation as a therapy for heart recovery and approval of left side Impella heart pumps for the treatment of patients experiencing cardiogenic shock following a heart attack or open heart surgery.
- Expanded FDA approval of Impella CP® device for use in high-risk percutaneous coronary intervention (PCI).
- Japanese Ministry of Health approval for the Impella 2.5® and Impella 5.0® heart pumps for the treatment of acute heart failure.
- New, dedicated reimbursement codes in the U.S. that provide four different ways to code for Impella support.
- Increase of 35% in capacity and doubling of our manufacturing footprint in both Danvers, Massachusetts and Aachen, Germany.

We continue to execute our objectives and our FY17 achievements enable us to enter **FY18** with incredible momentum.

Impella studies and data accompanying each of our FDA approvals demonstrate that a high-risk PCI supported with an Impella heart pump, known as a Protected PCI, promotes quality of life with an improved ejection fraction (EF) for patients and cost-effectiveness for health systems.

Protect II FDA study





In the U.S. alone, many of the eligible 121,000 high-risk PCI patients per year remain unaware that Protected PCI, a new treatment option, exists for advanced coronary artery disease. Clinical evidence and public interest continue to grow for this first-of-its-kind FDA approval as “safe and effective” for high-risk PCI. With an estimated 7% penetration rate in Protected PCI, and our emphasis on physician and patient education, we have a long runway for sustainable growth.

Many high-risk heart failure patients may benefit from Protected PCI treatment to compensate for poor hemodynamics (low EF), complex coronary artery disease, patient comorbidities such as prior surgery or an elevated risk of acute kidney injury (AKI). Even some patients eligible and receiving PCI treatment with risk of acute kidney injury are “staged,” which can translate into two or three procedures over 180 days as compared to one Protected PCI. The American Heart Association journal *Circulation* recently published a 230 patient, retrospective analysis titled “Hemodynamic Support Protects Against Acute Kidney Injury in Patients Undergoing High-Risk PCI”. The paper demonstrates the benefit of Impella® support during PCI, showing substantial reduction in AKI and dialysis.

The physician community is embracing this science and technology and many are leading the way by publishing clinical outcomes and educating their peers on the benefits of complete revascularization during Protected PCI and heart recovery for elective, urgent and emergent patients. For this reason, Abiomed created the

Protected PCI Digital Community; the most robust resource for clinical data, case examples, and program development of hemodynamic support for interventional cardiology. More than 1,900 active users are regularly accessing meaningful content from over 50 physician experts and 200 presentations and sharing it with their networks. Additionally, patients have a portal to learn about treatment options, review patient experiences and find the appropriate Protected PCI hospitals in their communities.

We recently introduced the Abiomed Impella Quality (IQ) Assurance Program which includes nearly 50,000 U.S. patients in an observational database derived from the commercial tracking of those treated with Impella over the past nine years. This IQ database is combined with data collected in our cVAD Registry and FDA studies to create the largest database in the world of patients with high-risk PCI and cardiogenic shock. We believe that by sharing our data-driven insights and clinical expertise, along with our 24x7 onsite and on-call support, we can help hospitals improve outcomes. This is especially true for cardiogenic shock patients who may benefit from standardized protocols to achieve the goal of native heart recovery, not just survival and additional long-term care. Cardiogenic Shock patients are associated with one of the highest mortality rates and costs in the healthcare system.

We estimate that each year more than 100,000 cardiogenic shock patients already at U.S. hospitals would benefit from Impella and our full service support and implementation of protocols derived from top performing hospitals. Today, we have Impella adoption in cardiogenic shock patients of approximately 6% after one year of an exclusive FDA approval as “safe and effective.” Overall, it is rewarding to see improved outcomes and we expect continued adoption of best practices and protocols throughout the United States, Germany, and eventually Japan.

Looking to the future, we are also focused on new indications, new products and new geographies.

For new indications, we are exploring patients with certain types of heart attacks, such as ST elevation myocardial infarction (STEMI). Abiomed recently announced that we have enrolled the first patient in a new, FDA approved, 50-patient feasibility study to evaluate the use of Impella CP® heart pump for unloading the left ventricle prior to PCI in patients presenting with STEMI *without* cardiogenic shock. This represents each year a potential new population for Abiomed of approximately 200,000 patients in the U.S. who may benefit from hemodynamic support by reducing or limiting damage to the heart muscle during the heart attack. Despite current technology and standard of care, 76% of patients experiencing their first heart attack will develop heart failure within 5 years¹ and approximately 40% will die². We are approaching this research endeavor with great rigor and science because the concept of unloading and protecting heart muscle remains one of the most promising ideas to reduce the number of future heart failure patients.

For new products, our Impella RP® has a projected commercial launch in the U.S. in the second half of our fiscal year following a FDA PMA approval. Until that time, we are maintaining our controlled Impella RP roll-out with clinical publications, education and training.

We continue to invest and develop new product initiatives and several are planned for this year. Abiomed expects to achieve first in man (FIM) of Impella ECP™, the 9 Fr. expandable catheter 4+ liter pump and Impella 5.5™, the 5.5 liter pump with axillary implantation for ambulation and

months of use. We continue to advance the Impella BTR™, which is designed as a minimally invasive, one year heart pump with a wearable driver for hospital discharge. For new geographies, we are entering the second largest medical device market, Japan. We have received product approval, hired a dedicated team, selected our 10 training hospitals and are working with Japanese government authorities on reimbursement approval.

The foundation of our success is our Four Principles—Recovering Hearts and Saving Lives, Leading in Technology and Innovation, Growing Shareholder Value, and Sustaining a Winning Culture. These Four Principles guide our journey, unite us, and remind us to always put our Patients First. Today, Abiomed has grown to nearly 1,000 world-wide employees with offices in Danvers, Massachusetts, Aachen and Berlin, Germany and Tokyo, Japan.

In conclusion, we are making great strides in transforming the care for patients requiring percutaneous hemodynamic support. Abiomed is financially secure and operationally prepared to continue to create the Field of Heart Recovery. Thank you to our shareholders for their support and to our employees and customers for their hard work and dedication to our mission.

Sincerely,



Michael R. Minogue
Chairman, President and Chief Executive Officer



Commercial Field Team meeting April, 2017

IMPELLA® HEART PUMP PLATFORM



IMPELLA 2.5®



IMPELLA CP®



IMPELLA 5.0®



IMPELLA RP®

Breakthrough Heart Support Technologies: Abiomed's portfolio of heart support and recovery products and services offer healthcare professionals an array of choices across a broad clinical spectrum, from the catheterization lab to the surgical suite, together with interventional cardiologists and surgeons.



AUTOMATED IMPELLA® CONTROLLER

The Automated Impella Controller is the primary user control interface for the Impella platform. It controls the Impella catheter performance, monitors for alarms, and displays real time hemodynamic and catheter position information.

PIPELINE TECHNOLOGY*



IMPELLA ECP™



IMPELLA 5.5™



IMPELLA BTR™

* Impella ECP™, Impella 5.5™ and Impella BTR™ devices are currently in development and are not approved for use or sale. For indications for use and important safety information concerning Impella devices, please visit www.protectedpci.com/hcp/information/isi and www.cardiogenicshock.com/hcp/information/isi

NEW AMERICAN HEART ASSOCIATION STATISTICS PREDICT THAT BY YEAR 2035,

45% of the total U.S.
population, or approximately
131 million people,

will have at least one health problem related to heart disease,
24 million will have coronary heart disease and nearly 9
million will have congestive heart failure.

#1 CAUSE OF
DEATH IN U.S.

(1 IN 3 DEATHS)

CORONARY ARTERY
DISEASE/HEART FAILURE:
875,000 DEATHS

TOP RISK FACTORS
FOR HEART FAILURE

LOW EJECTION FRACTION &
FIRST HEART ATTACK (AMI)

#1 CARDIAC
MORTALITY RISK
IN HOSPITAL

CARDIOGENIC SHOCK

#1 HEALTH
EXPENDITURES

HEART CONDITIONS
(\$204B)

ABIOMED'S PATIENT ADVOCACY PROGRAM: HEART RECOVERY ADVOCATES VISIT ABIOMED HEADQUARTERS



WORLD'S SMALLEST
HEART PUMP HELPS SAVE
UTAH GRANDMOTHER
AFTER SERIOUS
HEART ATTACK

Last year, Abiomed introduced our Heart Recovery Advocates, a group of cardiac event survivors who have benefitted from Impella therapy and as a result, are living full and meaningful lives with their native hearts. These Advocates are on a mission to share their stories of survival and educate the public about heart recovery, which is the ideal option for patients' quality of life.



Many new survivors became Heart Recovery Advocates this year through a Heart Recovery Reunion, an event that reunites patients and the staff who treated them.

500+
TWEETS ABOUT
HEART RECOVERY

BRAD MCDONALD

IMPELLA CP® TREATED PATIENT | BAINBRIDGE ISLAND, WA

Bradley “Brad”, 69, was an active and athletic man in his earlier years. Although there was a history of heart complications in his family, Brad never imagined that he too would suffer such health issues. For years, Brad would go to the doctor and receive a normal report.

Last year, Brad began experiencing cardiac changes and his symptoms became more severe. Brad’s heart disease ultimately left him short of breath and too weak to perform his normal routines or activities. Brad found himself confined to sitting and sleeping on his couch. Life looked very bleak, and his prognosis was poor.

Fortunately, Brad was identified as an appropriate candidate for a Protected PCI. During this interventional procedure, an Impella CP device temporarily supported Brad’s heart while he received multiple stents that restored his heart’s ability to pump blood throughout his body.

Since the Protected PCI, Brad has returned to a normal quality of life—regularly exercising and enjoying time with his family. In fact, Brad feels so healthy that this spring, he and his wife drove a bright red truck from Washington State down to Arizona to visit their daughter and her expanding family.

“When I think about the fact that I might not have had the chance to meet my youngest grandchild, or to play ball with my grandchildren in the yard, I am grateful beyond words.” – BRAD MCDONALD







MELISSA OLASO

IMPELLA CP® TREATED PATIENT | VENTURA, CA

On October 18, 2014, just after giving birth, 34-year-old Melissa Olaso went into heart failure. She was unable to breathe and her blood pressure rapidly dropped. Melissa was in cardiogenic shock—a condition in which the heart cannot pump enough blood to the body’s vital organs and they begin to shut down. Melissa was immediately placed on a ventilator to help her breathe; however, she continued to deteriorate. She was emergently transferred to the CCU and placed on heart-supporting medications. Unfortunately, she continued to deteriorate and was taken urgently to the cardiac catheterization laboratory where

Dr. Rishi Patel inserted the Impella CP device to assist the pumping function of her heart. With the assistance of the Impella ventricular assist device, her heart was able to circulate blood and her condition stabilized.

With the hemodynamic support of the Impella device, Melissa’s heart began showing signs of improvement. After a few days, Melissa was on the road to recovery. Just a couple of weeks later, she was able to walk out of the hospital with her own heart. Since then, she has returned to her regular routine as an active and healthy young mother.

“To this day, I remember Melissa and her presentation very clearly. As a father and a husband, seeing a young family go from celebrating what should have been one of the happiest days of their lives to having their mother become critically ill was a challenge. Melissa was rapidly failing all medical therapies we could offer her. Fortunately, we were able to assess her appropriately and promptly give her the support her heart needed to recover. Melissa would not be alive today without the support of the Impella device. I am thankful that she was able to make a full recovery.” — **RISHI PATEL, M.D.**

“It is heartbreaking to think that I might not have been around to see my oldest daughter graduate high school and go on to university, or see my boys play basketball, or witness the many milestones of my newborn daughter. I am truly grateful that I am alive to share these memories. Not many things give you a second chance at life, but my physicians and the Impella did that for me.” - MELISSA OLASO

KRISTIE HOLMES

IMPELLA CP® TREATED PATIENT | LOS ANGELES, CA

On May 5, 2016, Kristie Holmes was driving her children to school when she began experiencing symptoms that became increasingly severe—including shallow breathing and weakness. Kristie was able to call 9-1-1 on speakerphone. With her children in the car listening, Kristie calmly explained her symptoms and was told she might be having a panic attack. As a clinical social worker, Kristie knew this was more serious and urged the operator to call for immediate care.

The paramedics arrived swiftly and Kristie was rushed by ambulance to Cedars Sinai in Los Angeles. There physicians discovered that she had suffered a massive heart attack due to two large tears in her heart—better known as a Spontaneous Coronary Artery Dissection. Kristie's body was in cardiogenic shock, which meant her heart could not pump enough blood to perfuse the end organs of the body.

Immediately upon arrival, physicians inserted an Impella CP heart pump through the femoral artery in her groin to help supplement her weakened heart. After a few days, the physicians decided to replace the first pump with a new Impella CP device which was inserted via an axillary artery near Kristie's collarbone. The axillary placement would allow her to leave her hospital bed and walk around, which would ultimately help Kristie regain her strength. She remained on Impella device support for multiple days and not only survived the ordeal, but regained enough strength to return home with her native heart.

Today, Kristie is an active mom, professor at the University of Southern California, and is on the board of the United Nations Women U.S. National Committee.

“Women need to become advocates for themselves when it comes to their health; I knew I was having a heart attack. I am glad I was able to benefit from support with Impella which enabled my heart to rest after I went into cardiogenic shock, or else things might be very different today.” - KRISTIE HOLMES



ABIOMED CITIZENSHIP AND GIVE BACK PROGRAM

MVP VETS Abiomed is a founding member of MVPVets (Mentoring Veterans Program) and CEO Michael Minogue is co-founder and chairman. MVPVets is a 510(c)(3) non-profit organization dedicated to helping military veterans transition to careers in the medical device, life science, and pharmaceutical industries. MVPVets brings together veterans, mentors and companies through career-building endeavors.



FOR MORE INFORMATION,
PLEASE CONTACT
INFO@MVPVETS.ORG



Abiomed Heart Recovery Advocates at the American Heart Association Go Red luncheon in Boston.



Abiomed is proud to support the Danvers Police and Fire Departments; CEO Mike Minogue, center.

NATIONAL

Mentoring Veterans Program (MVPVets)
American Cancer Society
American Heart Association
Barajas Foundation

MASSACHUSETTS

Big Brothers Big Sisters
Boys & Girls Clubs of Boston
Camp Harbor View
New England Patriots Charitable Foundation
The American Ireland Fund
The Inner City Catholic Schools Foundation
Visiting Nurses Association of Boston

NORTH SHORE COMMUNITY

North Shore Music Theater
St John's Preparatory School
Danvers Police Department
DARE Program
Danvers Fire Department

IN MEMORIAM

HENRI A. TERMEER, ABIOMED BOARD MEMBER 1987-2017



PHOTO: ROGER FARRINGTON

“As a mentor, Henri generously shared his wisdom and knowledge with hundreds of CEOs, including me, paving the way for many small companies to make a big difference. One of Henri’s longest commitments was to Abiomed on whose board he served since 1987, and we’re grateful for his contributions. Henri will be remembered — for his insight, vision, and sense of purpose.”

- **ABIOMED PRESIDENT, CHAIRMAN AND CHIEF EXECUTIVE OFFICER, MICHAEL R. MINOGUE**

“Henri Termeer was a brilliant leader and a dear friend. We served together on the Abiomed Board of Directors since 1987. Henri was a wonderfully warm and wise Director of Abiomed as well as one of the most important innovators who helped make Boston the Biotech Capital of the World. He will be deeply missed.”

- **W. GERALD AUSTEN, M.D., DIRECTOR EMERITUS**

2017 FORM 10-K

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended March 31, 2017

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 Number: 001-09585



ABIOMED, Inc.

(Exact Name of Registrant as Specified in Its Charter)

Delaware

(State or Other Jurisdiction of
Incorporation or Organization)

**22 Cherry Hill Drive
Danvers, Massachusetts**

(Address of Principal Executive Offices)

04-2743260

(I.R.S. Employer
Identification No.)

01923

(Zip Code)

(978) 646-1400

(Registrant's Telephone Number, Including Area Code)

Securities registered pursuant to Section 12(b) of the Act:

Common Stock, \$.01 par value

Name of Each Exchange on Which Registered:

The NASDAQ Stock Market LLC

Securities registered pursuant to 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

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

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 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 No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405) is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of the Form 10-K or any amendment to this Form 10-K

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

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/> (Do not check if a smaller reporting company)	Smaller reporting company	<input type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

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

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 as of the last business day of the registrant's most recently completed second fiscal quarter was \$5,571,835,144. As of May 12, 2017, 43,819,330 shares of the registrant's common stock, \$.01 par value, were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive Proxy Statement for Abiomed, Inc.'s 2017 Annual Meeting of Stockholders, which is scheduled to be filed within 120 days after the end of Abiomed, Inc.'s fiscal year, are incorporated by reference into Part III (Items 10, 11, 12, 13 and 14) of this Form 10-K.

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NOTE REGARDING TRADEMARKS

ABIOMED, ABIOCOR, IMPELLA, IMPELLA 2.5, IMPELLA 5.0, IMPELLA LD, IMPELLA CP, and IMPELLA RP are trademarks of ABIOMED, Inc., and are registered in the U.S. and certain foreign countries. BVS is a trademark of ABIOMED, Inc. and is registered in the U.S. AB5000 and cVAD REGISTRY are trademarks of ABIOMED, Inc. RECOVER is a trademark of Abiomed Europe GmbH, a subsidiary of ABIOMED, Inc., and is registered in certain foreign countries.

NOTE REGARDING COMPANY REFERENCES

Throughout this report on Form 10-K (the “Report”), “Abiomed, Inc.,” the “Company,” “we,” “us” and “our” refer to ABIOMED, Inc. and its consolidated subsidiaries.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This report, including the documents incorporated by reference in this report, includes forward-looking statements. These forward-looking statements may be accompanied by such words as “anticipate,” “believe,” “estimate,” “expect,” “forecast,” “intend,” “may,” “plan,” “potential,” “project,” “target,” “will” and other words and terms of similar meaning. Each forward-looking statement in this report is subject to risks and uncertainties that could cause actual results to differ materially from those expressed or implied by such statement. Forward-looking statements in these documents include, but are not necessarily limited to, those relating to:

- *the ability of patients, hospitals and other customers using our products to obtain reimbursement of their medical expenses by government healthcare programs and private insurers including potential changes to current government and private insurers’ reimbursements;*
- *other competing therapies that may in the future be available to heart failure patients;*
- *the development of new and enhancement of existing products and anticipated costs, including research and development, sales and marketing, manufacturing and training costs associated with product development;*
- *our plans to potentially acquire new businesses or technologies;*
- *the potential markets that exist or could develop for our products and products under development;*
- *our business strategy, and commercial plans for our products, including our expansion into new markets such as Japan;*
- *our revenue and revenue growth expectations, our level of operating expenses and our goal of maintaining profitability;*
- *expected capital expenditures for the fiscal year ending March 31, 2018;*
- *demand for and expected shipments of our products;*
- *our belief that the existing manufacturing facilities give us the necessary physical capacity to produce sufficient quantities of products to meet anticipated demand;*
- *the expectation that we will be able to expand our manufacturing capacity to support expected demand for our Impella devices;*
- *the expectation that our suppliers will furnish us required components when we need them or be able to provide us inventory materials to support our expected growth in demand for our products;*
- *our ability to protect our intellectual property, including patent, trademark, copyright, trade secret and domain name protection;*
- *our belief that patents will issue pursuant to our pending or future patent applications;*
- *possible shifts in the revenue mix associated with our products; our ability to increase revenues from our Impella® line of heart pumps and the sufficiency of revenues, profits and cash flows to fund future operations;*
- *our expectation that almost all of our product and service revenue in the near future will be from our Impella devices;*
- *future actions related to or results of ongoing investigations and litigation, and expenditures or costs related thereto;*
- *our expectations concerning additional PMA supplement submissions for Impella devices;*
- *our expectations regarding continuing consolidation of medical device customers into larger purchasing groups and any resulting pressure on product pricing;*
- *plans with respect to clinical trials and registries; and*
- *the sufficiency of our liquidity and capital resources.*

Factors that could cause actual results or conditions to differ from those anticipated by these and other forward-looking statements include our inability to predict the outcome of investigations and litigation and associated expenses; possible delays in our research and development programs; our ability to obtain regulatory approvals and market our products, and uncertainties related to regulatory processes; greater government scrutiny and regulation of the medical device industry and our ability to respond to changing laws and regulations affecting our industry and changing enforcement practices related thereto; the inability to manufacture products in commercial quantities at acceptable costs to meet expected customer demand, the acceptance by physicians and hospitals of our products; the impact of competitive products and pricing; uncertainties associated with future capital needs and the risks identified under “Risk Factors” section set forth in Item 1A of Part I and elsewhere in this report, as well as other information we file with the U.S. Securities and Exchange Commission, or SEC. Readers are cautioned not to place undue reliance on any forward-looking statements contained in this report, which speak only as of the date of this report. We do not undertake any obligation to update or revise these forward-looking statements whether as a result of new information, future events or otherwise, unless otherwise required by law. Our business is subject to substantial risks and uncertainties, including those referenced above. Investors, potential investors, and others should give careful consideration to these risks and uncertainties.

PART I

ITEM 1. BUSINESS

Overview

We are a leading provider of temporary mechanical circulatory support devices, and we offer a continuum of care to heart failure patients. We develop, manufacture and market proprietary products that are designed to enable the heart to rest, heal and recover by improving blood flow to the coronary arteries and end-organs and/or temporarily assisting the pumping function of the heart. Our products are used in the cardiac catheterization lab, or cath lab, by interventional cardiologists, the electrophysiology lab, the hybrid lab and in the heart surgery suite by heart surgeons. A physician may use our devices for patients who are in need of hemodynamic support prophylactically, urgently or emergently before, during or after angioplasty or heart surgery procedures. We believe that heart recovery is the optimal clinical outcome for a patient experiencing heart failure because it enhances the potential for the patient to go home with the patient's native heart, facilitating the restoration of quality of life. In addition, we believe, that for the care of such patients, heart recovery is often the most cost-effective solution for the healthcare system.

Our strategic focus, which has resulted in the majority of our revenue growth is the market penetration of our family of Impella® heart pumps. The Impella device portfolio, which includes the Impella 2.5®, Impella CP®, Impella RP®, Impella LD® and Impella 5.0® devices, has supported numerous patients worldwide. We expect that almost all of our product and service revenue in the near future will be from our Impella devices. Revenues from our non-Impella devices, largely focused on the heart surgery suite, have been decreasing over the past several years and are expected to be insignificant as we have strategically shifted our sales and marketing efforts towards our Impella devices, primarily in the cath lab.

In March 2015, we received a Pre-Market Approval, or PMA, from the U.S. Food and Drug Administration, or FDA, for use of the Impella 2.5 device during elective and urgent high-risk percutaneous coronary intervention, or PCI, procedures. In December 2016, the FDA expanded this PMA approval in the U.S. to include the Impella CP device. With these PMA indications, the Impella 2.5 and Impella CP devices provide the only minimally invasive hemodynamic support treatment options indicated for use during high-risk PCI procedures. In April 2016, the FDA approved a PMA supplement for our Impella 2.5, Impella CP, Impella 5.0 and Impella LD devices to provide treatment for ongoing cardiogenic shock that occurs following a heart attack or open heart surgery. The intent of the Impella system therapy is to reduce ventricular work and to provide the circulatory support necessary to allow heart recovery and early assessment of residual myocardial function.

In March 2017, we submitted a PMA application for Impella RP. We expect to continue to make additional PMA supplement submissions for our suite of Impella devices for additional indications.

Our Impella 2.5, Impella 5.0, Impella LD, Impella CP and Impella RP devices also have CE Mark approval and Health Canada approval, which allows us to market these devices in the European Union and Canada.

In September 2016, we received Pharmaceuticals and Medical Devices Agency, or PMDA, approval from the Japanese Ministry of Health, Labour & Welfare for our Impella 2.5 and Impella 5.0 heart pumps to provide treatment of drug-resistant acute heart failure in Japan. We are preparing for the market launch in Japan, including working with Japanese government authorities to obtain appropriate reimbursement for these products. We do not expect to have any material revenue in Japan during fiscal 2018.

In May 2017, we announced the enrollment of the first patient in the FDA approved prospective feasibility study, STEMI Door to Unloading with Impella CP system in acute myocardial infarction. This trial will focus on feasibility and safety of unloading the left ventricle using the Impella CP heart pump prior to primary PCI in patients presenting with ST segment elevation myocardial infarction, or STEMI, without cardiogenic shock with the hypothesis that this will potentially reduce infarct size. The study, which received Investigational Device Exemption, or IDE, approval from the FDA in October 2016, is a prospective, multi-center feasibility study. Up to 50 patients at 10 sites will be enrolled in the study. We enrolled the first patient in this study in April 2017 and we expect to complete enrollment in fiscal 2019.

Corporate Background

Our Company was founded in 1981 and we are currently incorporated in Delaware. Our common stock is listed on the NASDAQ Global Select Market under the ticker symbol ABMD.

Our principal executive offices are located at 22 Cherry Hill Drive, Danvers, Massachusetts 01923. Our telephone number is (978) 646-1400. We make available, free of charge on our website located at www.abiomed.com, our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to those reports, as soon as reasonably practicable after filing such reports with the SEC. ABIOMED, Inc. has a Code of Conduct and Compliance Policy that applies to all of its

directors, officers, and employees. A paper copy of this document may be obtained free of charge by writing to the Company's Chief Compliance Officer at our principal executive offices or by email at ir@abiomed.com. Our audit committee, governance and nominating committee and compensation committee charters are also posted on our website. The contents of our website are not incorporated by reference into this report. In addition, the public may read and copy any materials we file or furnish with the SEC, at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549 or may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. Moreover, the SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding reports that we file or furnish electronically with the SEC at www.sec.gov.

Our Products

Impella 2.5[®]

The Impella 2.5 device is a percutaneous micro heart pump with an integrated motor and sensors. The device is designed primarily for use by interventional cardiologists to support patients in the cath lab who may require assistance to maintain circulation. The Impella 2.5 heart pump can be quickly inserted via the femoral artery to reach the left ventricle of the heart where it is directly deployed to draw blood out of the ventricle and deliver it to the circulatory system. This function is intended to reduce ventricular work and provide blood flow to vital organs. The Impella 2.5 heart pump is introduced with normal interventional cardiology procedures and can pump up to 2.5 liters of blood per minute.

The Impella 2.5 device received 510(k) clearance from the FDA in June 2008 for partial circulatory support for up to six hours. In March 2015, we received a PMA from the FDA for the use of the Impella 2.5 device during elective and urgent high-risk PCI procedures. With this PMA indication, the Impella 2.5 device became the first FDA approved hemodynamic support device for use during high-risk PCI procedures. Under this first PMA, the Impella 2.5 is a temporary (up to six hours) ventricular support device indicated for use during high-risk PCI performed in elective or urgent hemodynamically stable patients with severe coronary artery disease and depressed left ventricular ejection fraction, when a heart team, including a cardiac surgeon, that has determined high-risk PCI is the appropriate therapeutic option. Use of the Impella 2.5 device in these patients may prevent hemodynamic instability that may occur during planned temporary coronary occlusions and may reduce periprocedural and post-procedural adverse events. The product labeling allows for the clinical decision by physicians to leave the Impella 2.5 device in place beyond the intended duration of up to six hours should unforeseen circumstances arise. Pursuant to our PMA approval requirements, we are conducting a single-arm, post-approval study on the Impella 2.5 device, collecting data on high-risk PCI patients. The study is a prospective, multi-center study comprised of 369 patients from up to 70 sites supported with the Impella 2.5 system.

In April 2016, the FDA approved a supplement to our March 2015 PMA approval for the use of our Impella 2.5, Impella CP, Impella 5.0 and Impella LD devices to provide treatment for ongoing cardiogenic shock. This PMA supplement covers a set of indications related to the use of the Impella devices in patients suffering cardiogenic shock following acute myocardial infarction or cardiac surgery and allows for a longer duration of support.

The data submitted to the FDA in support of the PMA supplement included an analysis of 415 patients from the RECOVER 1 study and the U.S. Impella registry, or cVAD Registry[™], as well as a literature review using the Impella devices in 692 patients from 17 clinical studies. The PMA supplement also included a safety analysis evaluating the information in the FDA medical device reporting, or MDR, database, following the use of the Impella devices in more than 24,000 patients and which draws from seven years of experience using the Impella devices in the U.S. We believe this is the most comprehensive review ever submitted to the FDA for circulatory support in the cardiogenic shock population.

Pursuant to the April 2016 PMA approval, the Impella 2.5, Impella CP, Impella 5.0 and Impella LD catheters, in conjunction with the Automated Impella Controller, or AIC, were approved as temporary ventricular support devices intended for short term use (≤ 4 days for the Impella 2.5 and Impella CP, and ≤ 6 days for the Impella 5.0 and LD) and indicated for the treatment of ongoing cardiogenic shock that occurs immediately (< 48 hours) following acute myocardial infarction or open heart surgery as a result of isolated left ventricular failure that is not responsive to optimal medical management and conventional treatment measures. The intent of the Impella system therapy is to reduce ventricular work and to provide the circulatory support necessary to allow heart recovery and early assessment of residual myocardial function. Optimal medical management and convention treatment measures include volume loading and use of pressors and inotropes, with or without an intraortic balloon pump, or IABP.

The Impella 2.5 device has CE Mark approval in Europe for up to five days of use and is approved for use in up to 40 countries. The Impella 2.5 device also has Health Canada approval which allows us to market the device in Canada.

In September 2016, we received PMDA approval from the Japanese Ministry of Health, Labour & Welfare for our Impella 2.5 and Impella 5.0 heart pumps to provide treatment of drug-resistant acute heart failure in Japan. We are preparing for the market launch

in Japan, including working with Japanese government authorities to obtain reimbursement for these products. We do not expect to have any material revenue in Japan during fiscal 2018.

We expect to continue to make additional PMA supplement submissions for our Impella devices for additional clinical indications.

Impella CP®

In September 2012, we announced that the Impella CP device received 510(k) clearance from the FDA. The Impella CP device provides blood flow of approximately one liter more per minute than the Impella 2.5 device and is primarily used by either interventional cardiologists to support patients in the cath lab or by cardiac surgeons in the heart surgery suite.

In April 2016, the FDA approved the PMA supplement for certain of our devices, including our Impella CP device to provide treatment for ongoing cardiogenic shock.

In December 2016, we received PMA approval from the FDA for the use of the Impella CP device during elective and urgent high-risk PCI procedures, identical to the indication for use for the Impella 2.5 device. This approval allows the Impella CP to be used as a temporary (≤ 6 hours) ventricular support system indicated for use during high risk PCI procedures performed in elective or urgent hemodynamically stable patients with severe coronary artery disease and depressed left ventricular ejection fraction, when a heart team, including a cardiac surgeon, has determined that high risk PCI is the appropriate therapeutic option. The product labeling allows for the clinical decision by physicians to leave the Impella CP device in place beyond the intended duration of up to six hours should unforeseen circumstances arise.

In May 2017, we announced the enrollment of the first patient in the FDA approved prospective feasibility study, STEMI Door to Unloading with Impella CP system in acute myocardial infarction. This trial will focus on feasibility and safety of unloading the left ventricle using the Impella CP heart pump prior to primary PCI in patients presenting with ST segment elevation myocardial infarction, or STEMI, without cardiogenic shock with the hypothesis that this will potentially reduce infarct size. The study, which received Investigational Device Exemption, or IDE, approval from the FDA in October 2016, is a prospective, multi-center feasibility study. Up to 50 patients at 10 sites will be enrolled in the study. We enrolled the first patient in this study in April 2017 and we expect to complete enrollment in fiscal 2019.

The primary endpoints of the feasibility study will focus on safety, including Adverse Cardiovascular and Cerebrovascular Events, or MACCE, at 30 days. All patients will undergo cardiac magnetic resonance imaging to assess infarct size as a percent of left ventricular mass at 30 days post-PCI. Patients will be randomized to Impella CP placement with immediate primary PCI, or to Impella CP placement with 30 minutes of unloading prior to primary PCI. The hypothesis of this novel approach to treating STEMI patients, based on extensive mechanistic research, is that unloading the left ventricle prior to PCI reduces myocardial work load, oxygen demand and also initiates a cardio-protective effect at the myocardial cell level, which may alleviate myocardial damage caused by reperfusion injury at the time of revascularization. This feasibility study will help refine the protocol and lay the groundwork for a future pivotal study with more sites and patients and will be designed for statistical significance.

We expect to continue to make additional PMA supplement submissions for our Impella devices for additional clinical indications.

The Impella CP device has CE Mark approval in Europe for up to five days of use and is approved for use in up to 40 countries.

Impella 5.0® and Impella LD®

The Impella 5.0 and Impella LD devices are percutaneous micro heart pumps with integrated motors and sensors for use primarily in the heart surgery suite. These devices are designed to support patients who require higher levels of circulatory support as compared to the Impella 2.5.

The Impella 5.0 device can be inserted into the left ventricle via femoral cut down or through the axillary artery. The Impella 5.0 device is passed into the ascending aorta, across the valve and into the left ventricle. The Impella LD device is similar to the Impella 5.0 device, but it is implanted directly into the ascending aorta through an aortic graft. Both of these procedures are normally performed with the assistance of heart surgeons in the surgery suite. The Impella 5.0 and Impella LD devices can pump up to five liters of blood per minute, potentially providing full circulatory support.

The Impella 5.0 and Impella LD devices originally received 510(k) clearance in April 2009, for circulatory support for up to six hours. In April 2016, the FDA approved the PMA supplement for certain of our devices, including our Impella 5.0 and Impella LD devices to provide treatment for ongoing cardiogenic shock following a heart attack or open heart surgery.

The Impella 5.0 and Impella LD devices have CE Mark approval in Europe for up to ten days' duration and are approved for use in over 40 countries.

In September 2016, we received PMDA approval from the Japanese Ministry of Health, Labor & Welfare for our Impella 2.5 and Impella 5.0 heart pumps to provide treatment of drug-resistant acute heart failure in Japan. We are preparing for the market launch in Japan, including working with Japanese government authorities to obtain reimbursement for these products. We do not expect to have any material revenue in Japan during fiscal 2018.

Impella RP®

The Impella RP is a percutaneous catheter-based axial flow pump that is designed to allow greater than four liters of blood flow per minute and is intended to provide the flow and pressure needed to compensate for right side heart failure. The Impella RP is the first percutaneous single access heart pump designed for right heart support to receive FDA approval. The Impella RP device is approved to provide support of the right heart during times of acute failure for certain patients who have received a left ventricle assist device or have suffered heart failure due to acute myocardial infarction, or AMI, a failed heart transplant, or following open heart surgery.

In November 2012, the Impella RP device received U.S. investigational device exemption, or IDE, approval from the FDA for use in RECOVER RIGHT, a pivotal clinical study in the U.S. This was a 30 patient study that presented signs of right side heart failure, required hemodynamic support, and were capable of being treated in the catheterization lab or cardiac surgery suite. The study was completed in March 2014 and collected safety and effectiveness data on the percutaneous use of the Impella RP device and was submitted to the FDA in support of a Humanitarian Device Exemption, or HDE, submission. An HDE is similar to a PMA application but is intended for patient populations of 8,000 or less per year in the U.S. and is subject to certain profit and use restrictions. In December 2016, the 21st Century Cures Act increased the upper population limit for an HDE from 4,000 to 8,000. An HDE approval requires demonstration of the safety and probable benefit of the product, which is a lower standard than is applied to a PMA. In order to receive an HDE, there must be no comparable devices approved under a PMA that are available to treat the targeted population. An approved HDE authorizes sales of the device to any hospital after review and approval by the hospital's Institutional Review Board. In January 2015, we received HDE approval for the Impella RP device from the FDA. As part of the HDE approval, we were required to conduct post approval studies for the Impella RP device. We have completed our Impella RP post-market studies and submitted a PMA application in March 2017 with the FDA to convert our HDE approval to a PMA.

In April 2014, the Impella RP device received CE Mark approval which allows for commercial sales of the Impella RP device in the European Union and other countries that require a CE Mark approval for commercial sales.

AB5000™

The AB5000 Circulatory Support System is for the temporary support of acute heart failure patients in profound shock, including patients suffering from cardiogenic shock after a heart attack, post-cardiotomy cardiogenic shock, or myocarditis. The AB5000 device was approved by the FDA in 2003. Revenues from the AB5000 device have been declining in recent years and we do not expect to have any significant revenues from this product in the future. We are no longer producing the AB5000 product as we focus our efforts on the Impella family of devices.

ECP

In July 2014, we acquired all of the issued shares of ECP Entwicklungsgesellschaft mbH, or ECP, a German limited liability company, for \$13.0 million in cash, with additional potential payments up to a maximum of \$15.0 million based on the achievement of certain technical, regulatory and commercial milestones. In connection with this acquisition, ECP acquired all of the issued shares of AIS GmbH Aachen Innovative Solutions, or AIS, a German limited liability company, for \$2.8 million in cash which was provided by us. AIS, based in Aachen, Germany, holds certain intellectual property useful to ECP's business, and, prior to being acquired by ECP, had licensed such intellectual property to ECP.

ECP, based in Berlin, Germany, is engaged in research, development, prototyping and the pre-serial production of a percutaneous expandable catheter pump which increases blood circulation from the heart with an external drive shaft. The ECP pump is designed for blood flow of >3 liters/minute. It is intended to be delivered on the standard Impella 9 Fr catheter using the Impella Automated Controller console and will include an 18 Fr expandable inflow in the left ventricle with a smooth membrane crossing the

left ventricle. The Impella ECP™ pump is still in early stages of research and development and has not been approved for commercial use or sale.

Summary of Recent Financial Performance

For fiscal 2017, we recognized net income of \$52.1 million, or \$1.21 per basic share and \$1.17 per diluted share, compared to \$38.1 million, or \$0.90 per basic share and \$0.85 per diluted share for the prior fiscal year. For fiscal year 2017, total revenue was \$445.3 million, up 35% compared to revenue of \$329.5 million in fiscal year 2016. The increase in our net income for fiscal 2017 was driven primarily by higher Impella product revenue due to greater utilization of our Impella devices in the U.S. and Germany. Information regarding our total assets are contained within our consolidated financial statements in this Report.

Our Markets

According to the AHA's Heart Disease and Stroke Statistics 2017 Update Report, coronary heart disease, or CHD, causes approximately one of every seven deaths in the U.S. CHD is a condition of the coronary arteries that causes reduced blood flow and insufficient oxygen delivery to the affected portion of the heart. CHD leads to acute myocardial infarction, or AMI, commonly known as a heart attack, which may lead to heart failure, a condition in which the heart is unable to pump enough blood to the body's major organs.

A broad spectrum of therapies exists for the treatment of patients in early stages of CHD. Angioplasty procedures and stents are commonly used in the cath lab to restore and increase blood flow to the heart. These treatments are often successful in slowing the progression of heart disease, extending life, and/or improving the quality of life for some period of time. Patients presenting with acute cardiac injuries potentially have recoverable hearts. Treatment for these patients in pre-shock in the cath lab is primarily focused on hemodynamic stabilization. Acute heart failure patients in profound shock typically require treatment in the surgery suite. These are patients suffering from cardiogenic shock after a heart attack, post-cardiotomy cardiogenic shock or myocarditis complicated with cardiogenic shock. Chronic heart failure patients have hearts that are unlikely to be recoverable due to left and/or right-side heart failure and their conditions cause their hearts to fail over time. Limited therapies exist today for patients with severe, end-stage, or chronic heart failure.

In more severe cases of heart failure, patients are sent directly to the surgery suite for coronary bypass or valve replacement surgery. The most severe acute heart failure patients are in profound cardiogenic shock, including those suffering from myocarditis (a viral attack of the heart), or from those suffering from an impaired ability of the heart to pump blood after a heart attack or heart surgery. These patients typically require treatments involving the use of mechanical circulatory support devices that provide increased blood flow and reduce the stress on the heart. Many less severe patients in the cath lab could also benefit from circulatory support devices or other clinical treatment, which could potentially prevent them from entering into profound shock.

There are a few primary types of devices used in the cath lab and surgery suite in the U.S. for circulatory support for pre-shock and profound shock patients: intra-aortic balloons, or IABs, percutaneous assist devices, and surgical ventricular assist devices, or VADs.

An IAB is an inflatable balloon inserted via a catheter into a patient's circulatory system and is inflated and deflated in the aorta. This is used as an initial line of therapy in the cath lab or the surgery suite for patients with diminished heart function. However, IABs typically provide only limited enhancement and depend on the patient's own heart to generate the majority of the patient's blood flow. In addition, IABs are often required to be used in conjunction with inotropes or other drugs to stimulate heart muscle ejection. The use of these drugs, however, increases the risk of mortality. Further, the clinical efficacy of IABs has been challenged due to the conclusions of the randomized, prospective, open-label, multicenter "SHOCK II" Trial. The conclusion of the trial was that the use of IAB counterpulsation did not significantly reduce 30-day mortality in patients with cardiogenic shock complicating acute myocardial infarction for whom an early revascularization strategy was planned. Further, IABs have limited effectiveness in patients that are arrhythmic and/or in cardiogenic shock and published reports have indicated that IABs do not reduce mortality for patients in cardiogenic shock.

Percutaneous assist devices and VADs are mechanical devices that help the failing heart pump blood or take over the pumping function of the failing heart. Historically, VADs have been highly invasive and require implantation in the surgery suite. Percutaneous assist devices allow for less invasive placement and removal, and can be done through a small puncture in the leg in the cath lab, electrophysiology lab, or operating room. The use of surgically placed VADs generally falls into three sub-categories: recovery, bridge-to-transplant and destination therapy.

Recovery VADs are designed to enable the patient's heart to rest and potentially recover so that the patient can return home with his or her own heart. Because recovery is the goal, these devices are designed to minimize damage to heart tissue and are removed once the patient's heart has recovered. If possible, recovery of a patient's heart is generally preferred to transplantation or prolonged device implantation, both of which have significant side effects for the patient and increase the risk of mortality. We believe heart recovery is a preferred clinical outcome for patients, since it generally lowers the overall relative cost to the healthcare system versus alternative therapies and treatment paths that may require multiple surgeries, lengthy or repeated hospital stays, chronic therapeutic and immunosuppressant drugs and other related healthcare costs.

Research and Product Development

Since our founding in 1981, we have gained substantial expertise in circulatory support through the development of many product platforms to support heart patients. This includes our Impella platform that we currently market and other technologies that we have supported, such as our AB5000 systems. We also continue to work on developing new technologies as well, such as the ECP development program. Our current strategy is to develop a complete portfolio of products across the continuum of care in heart recovery, primarily focused in the area of circulatory care. We intend to continue to use this experience to develop additional circulatory support products as well as making enhancements to our existing products. In addition, we have a number of new products at various stages of development, some of which integrate the Impella technology platform.

As of March 31, 2017, our research and development staff consisted of 179 full-time employees. We expended \$66.4 million, \$49.8 million and \$36.0 million on research and development in fiscal years 2017, 2016 and 2015, respectively. Our research and development expenditures include costs related to clinical trials, including ongoing clinical studies for our Impella devices.

Sales, Clinical Support, Marketing and Field Service

As of March 31, 2017, our worldwide sales, clinical support, marketing and field service teams included 398 full-time employees, 324 of whom are in the U.S. and Canada and 74 of whom are in Europe and Japan. In recent years, we have significantly increased the number of our direct sales and clinical support personnel in the U.S and Germany.

Our clinical support personnel consist primarily of registered nurses and other personnel with considerable experience in either the surgery suite or the cath lab, and they play a critical role in training customers in the use of our products.

International sales (sales outside the U.S., primarily in Europe) accounted for 9%, 8% and 10% of total revenue during fiscal years 2017, 2016 and 2015, respectively.

Manufacturing

We manufacture our products in Danvers, Massachusetts and Aachen, Germany. Our Aachen facility performs final assembly and manufactures most of our disposable Impella devices, including the Impella 2.5, Impella 5.0, Impella LD, Impella CP and Impella RP devices. Our Danvers facility also manufactures the Impella CP device, certain Impella subsystems and accessories, including our Automated Impella Console, or AIC, our console for our Impella devices. In addition, we rely on third-party suppliers to provide us with components used in our existing products and products under development. For example, we outsource some of the manufacturing for components and circuit cards within our consoles.

We believe our existing manufacturing facilities give us the necessary physical capacity to produce sufficient quantities of products to meet anticipated demand for at least the next twelve months based on our current revenue forecast. We have recently expanded our manufacturing capacity in both our Aachen and Danvers facilities to support the growing demand for our Impella devices. We expect to continue to expand our manufacturing capacity as we support expected growing demand for our Impella devices. Our U.S. and German manufacturing facilities are certified as being in compliance with standards established by the International Organization for Standardization, or ISO, and operate under the FDA's good manufacturing practice requirements for medical devices set forth in the Quality System Regulation, or QSR.

Intellectual Property

We have developed significant know-how and proprietary technology, upon which our business depends. To protect our know-how and proprietary technology, we rely on trade secret laws, trademarks, patents, copyrights, and confidentiality agreements and other contracts. However, these methods afford only limited protection. Others may independently develop substantially equivalent proprietary information or technology, gain access to our trade secrets or disclose or use such secrets or technology without our approval.

A substantial portion of our intellectual property rights relating to the Impella devices and other products under development, such as the ECP pump, is in the form of trade secrets, rather than patents. We protect our trade secrets and proprietary knowledge in part through confidentiality agreements with employees, consultants and other parties. We cannot assure you that our trade secrets will not become known to or be independently developed by our competitors.

We own or have rights to numerous U.S. and foreign patents. Our U.S. patents have expiration dates ranging from 2017 to 2035 and our foreign patents have expiration dates ranging from 2017 to 2033. We also own or have rights to certain pending U.S. and foreign patent applications. We believe patents will issue pursuant to such applications, but cannot guarantee it. Moreover, neither the timing of any issuance, the scope of protection, nor the actual issue date of these pending applications can be forecasted with precision. Where we have licensed patent rights from third parties, we are generally required to pay royalties.

Our patents may not provide us with competitive advantages. Our pending or future patent applications may not be issued. Others may hold or obtain patents that cover aspects or uses of our innovations. The patents of others may render our patents obsolete, limit our ability to patent or practice our innovations, or otherwise have an adverse effect on our ability to conduct business. Because foreign patents may afford less protection than U.S. patents, they may not adequately protect our technology.

The medical device industry is characterized by a large number of patents and by frequent and substantial intellectual property litigation. Our products and technologies could infringe on the proprietary rights of third parties. If third parties successfully assert infringement or other claims against us, we may not be able to sell our products or we may have to pay significant damages and ongoing royalties. In addition, patent or intellectual property disputes or litigation may be costly, result in product development delays, or divert the efforts and attention of our management and technical personnel. If any such disputes or litigation arise, we may seek to enter into a royalty or licensing arrangement. However, such an arrangement may not be available on commercially acceptable terms, if at all. We may decide, in the alternative, to litigate the claims or seek to design around the patented or otherwise protected proprietary technology, which may also be costly and time consuming.

The U.S. government may obtain certain rights to use or disclose technical data developed under government contracts that supported the development of some of our products. We retain the right to obtain patents on any inventions developed under those contracts, provided we follow prescribed procedures and are subject to a non-exclusive, non-transferable, royalty-free license to the U.S. government.

Competition

Competition among providers of treatments for the failing heart is intense and subject to rapid technological change and evolving industry requirements and standards. We compete with companies that have substantially greater or broader financial, product development, sales and marketing resources and experience than we do. Furthermore, new product development and technological change characterize the areas in which we compete. Our present or future products could be rendered obsolete or uneconomical as a result of technological advances by one or more of our present or future competitors or by other therapies, including drug therapies. We must continue to develop and commercialize new products and technologies to remain competitive in the cardiovascular medical technology industry. We believe that we compete primarily on the basis of clinical superiority supported by extensive data, and innovative features that enhance patient benefit, product performance, ease of use and reliability. Customer and clinical support, and data that demonstrate both improvement in a patient's quality of life and a product's cost-effectiveness are additional aspects of competition.

The cardiovascular segment of the medical technology industry is dynamic and subject to significant change due to cost-of-care considerations, regulatory reform, industry and customer consolidation, and evolving patient needs. The ability to provide products and technologies that demonstrate value and improve clinical outcomes is becoming increasingly important for medical technology manufacturers.

We are aware of other heart replacement device research efforts in the U.S., Canada, Europe and Japan. In addition, there are a number of companies; including Getinge (Maquet Cardiovascular), Abbott Laboratories, Medtronic, Edwards Lifesciences, CardiacAssist, Terumo Heart, Inc., Teleflex, Inc. and several early-stage companies, that are developing heart assist products, including implantable left ventricular assist devices and miniaturized rotary ventricular assist devices that directly and indirectly compete with our products.

Third-Party Reimbursement

Our products and services are generally purchased by healthcare institutions that rely on third-party payers to cover and reimburse the costs of related patient care. In the U.S., as well as in many foreign countries, government-funded or private insurance programs pay the cost of a significant portion of a patient's medical expenses. No uniform policy of coverage or reimbursement for medical technology exists among all these payers. Therefore, coverage and reimbursement can differ significantly from payer to payer and by jurisdiction.

Third-party payers may include government healthcare programs such as Medicare or Medicaid, private insurers or managed care organizations. The Centers for Medicare & Medicaid Services, or CMS, is responsible for administering the Medicare program in the U.S. and, along with its contractors, establishes coverage and reimbursement policies for the Medicare program. Medicare's coverage and reimbursement policies are particularly significant to our business because a large percentage of the population for which our products are intended includes elderly individuals who are Medicare beneficiaries. In addition, private payers often follow the coverage and reimbursement policies of Medicare. We cannot assure that government or private third-party payers will continue to cover and reimburse the procedures using our products in whole or in part in the future or that payment rates for reimbursement will be adequate.

Medicare payment may be made, in appropriate cases, for procedures performed in the in-patient hospital setting using our technology. Medicare generally reimburses healthcare institutions in which the procedures are performed based upon prospectively determined amounts. For hospital in-patient stays, the prospective payment generally is determined by the patient's condition and other patient data and procedures performed during the in-patient stay, using a classification system known as International Classification of Diseases, or ICD, and medical severity diagnosis-related groups, or MS DRGs. Prospective rates are adjusted for, among other things, regional differences, co-morbidity and complications. Hospitals performing in-patient procedures using our devices generally do not receive separate Medicare reimbursement for the specific costs of purchasing or implanting our products. Rather, reimbursement for these costs is bundled with the MS DRG-based payments made to hospitals for the procedures during which our devices are implanted, removed, repaired or replaced. Because prospective payments are based on predetermined rates and may be less than a hospital's actual costs in furnishing care, hospitals have incentives to lower their in-patient operating costs by utilizing products, devices and supplies that will reduce the length of in-patient stays, decrease labor or otherwise lower their costs.

Coverage and reimbursements for procedures to implant, remove, replace or repair our products are generally established in the U.S. market. For instance, Medicare covers the use of LVADs when used for support of blood circulation post-cardiotomy, as a temporary life-support system until a human heart becomes available for transplant, or as destination therapy for patients who require permanent mechanical cardiac support, when the use is consistent with FDA approval and FDA-approved labeling instructions, as applicable. Coverage and reimbursements for procedures to implant the Impella 2.5, Impella CP, Impella 5.0, Impella LD and Impella RP devices are also established for in-hospital use by Medicare including ICD-10 for procedures and MS DRG coding. Actual coverage and payment may vary by local Medicare fiscal intermediary or third-party insurer. Our Impella devices are also covered by commercial and/or Medicare plans of many third-party insurers including Aetna, Humana, Cigna, HCSC Blue Cross Blue Shield, and United Healthcare.

In October 2016, the American Hospital Association (AHA) Coding Clinic publication confirmed MS-DRG 215, Heart Assist System Implant, for an Impella catheterization lab implant and ICU care. In addition to the October 2016 update, a recent AHA Coding Clinical publication in March 2017 added clarification of coding for implant of bi-ventricular Impella heart support along with the removal of the device provides hospital payment in MS-DRG 1 or 2 depending upon severity of illness. The Company's Impella heart pumps are now most commonly reimbursed under four MS-DRG categories including: 1) assistance in the catheterization lab only in MS-DRGs 216-221; 2) implant, assistance and removal after leaving the catheterization lab in MS-DRG 215; 3) right and left side heart support known as bi-ventricular and removal in MS-DRG 1-2, and; 4) hospitals receiving transferred patients with removal of the device in MS-DRG 268-269. In prior years, Impella was primarily reimbursed in only one category of MS-DRGs 216-221. The AHA and Centers for Medicare and Medicaid Services (CMS) have facilitated a system of care around the utilization of percutaneous heart pumps for the catheterization lab, ICU support, and transfer of patients to specialized centers. This progress also represents the expansion of Impella FDA indications for High Risk PCI, AMI Cardiogenic Shock, and bi-ventricular support.

In April 2017, the CMS released a proposed set of hospital payment levels for patient discharges after October 1, 2017. The Proposed Rule for the Inpatient Prospective Payment System (IPPS) is available on the CMS website at cms.gov and is open for public comment until June 13, 2017. Under the proposed rule, all discharges prior to October 1, 2017 are to remain under the current payment levels, and the final rulemaking is expected to be released in August 2017. The final rulemaking may differ substantially from this proposal. The text of the Proposed Rule did not include any changes to payment, coding or MS-DRG assignments for Impella, percutaneous heart assist, or related technology. However, data tables also released with the Proposed Rule include changes for all MS-DRGs which included a proposed reduction for MS-DRG 215 of 34.8%. The remaining MS-DRG categories have

proposed changes ranging from -7% to +3.5%. Even if the rule is finalized as proposed, all current MS-DRG rates will remain in place until October 2017.

In addition to payments to hospitals for procedures using our technology, Medicare makes separate payments to physicians for their professional services when they perform surgeries to implant, remove, replace or repair our devices or when they perform percutaneous insertion and removal of Impella devices. Physicians generally bill for such services using a coding system known as Current Procedural Terminology, or CPT, codes. Physician services performed in connection with the implantation, removal, replacement or repair of our approved products are billed using a variety of CPT codes. Generally, Medicare payment levels for physician services are based on the Medicare Physician Fee Schedule and are revised annually by CMS.

In general, third-party reimbursement programs in the U.S. and abroad, whether government-funded or commercially insured, are developing a variety of increasingly sophisticated methods of controlling healthcare costs, including prospective reimbursement and capitation programs, group purchasing, reducing benefit coverage, requiring second opinions prior to major surgery, negotiating reductions to charges on patient bills, promoting healthier lifestyle initiatives and exploring more cost-effective methods of delivering healthcare. These types of cost-containment programs, as well as legislative or regulatory changes to reimbursement policies, could limit the amount which healthcare providers may be willing to pay for our medical devices.

Government Regulation and Other Matters

Our products and facilities are subject to regulation by numerous government agencies, including the FDA, European Community Notified Bodies, and the Japanese Pharmaceuticals and Medical Devices Agency, to confirm compliance with the various laws and regulations governing the development, testing, manufacturing, labeling, marketing, and distribution of our products. We are also governed by federal, state, local, and international laws of general applicability, such as those regulating employee health and safety, and the protection of the environment. Overall, the amount and scope of domestic and foreign laws and regulations applicable to our business has increased over time.

United States Regulation

In the U.S., the FDA has responsibility for regulating medical devices under the authority of the Federal Food, Drug and Cosmetic Act, or FDCA. The FDA regulates design, development, testing, clinical studies, manufacturing, labeling, distribution, import, export, sale promotion, and record keeping for medical devices, and reporting of adverse events, recalls, or other field actions by manufacturers and users to identify potential problems with marketed medical devices. Many of the devices that we develop, manufacture and market are in a category for which the FDA has implemented stringent clinical investigation and pre-market clearance or approval requirements. The process of obtaining FDA clearance or approval to market a product is resource intensive, lengthy, and costly. FDA review may involve substantial delays that adversely affect the marketing and sale of our products. A number of our products are pending regulatory clearance or approval to begin commercial sales in various markets. Ultimately, the FDA may not authorize the commercial release of a medical device if it determines the device is not safe and effective or does not meet other standards for clearance or approval. Additionally, even if a product is cleared or approved, the FDA may require postmarket testing and surveillance programs to monitor the effects of these products once commercialized.

The FDA has the authority to halt the distribution of certain medical devices, detain or seize adulterated or misbranded medical devices, order the repair, replacement, or refund of the costs of such devices, or preclude the importation of devices that are or appear to be violative. The FDA also conducts inspections to determine compliance with the QSR concerning the manufacturing and design of devices and medical device reporting regulations, recall regulations, clinical testing regulations, and other requirements. The FDA may withdraw product clearances or approvals due to failure to comply with regulatory standards, or the occurrence of unforeseen problems following initial approval, and require notification of health professionals and others with regard to medical devices that present unreasonable risks of substantial harm to the public health. Additionally, the failure to comply with FDA or comparable regulatory standards or the discovery of previously unknown product problems could result in fines, delays, or suspensions of regulatory clearances or approvals, seizures, injunctions, recalls, refunds, civil money penalties, or criminal prosecution. Our compliance with applicable regulatory requirements is subject to continual review. Moreover, the FDA and several other U.S. agencies administer controls over the export of medical devices from the U.S. and the import of devices into the U.S., which could also subject us to sanctions for noncompliance.

Premarket Regulation

In the U.S., the FDA strictly regulates medical devices under the authority of the Federal Food, Drug and Cosmetic Act, or FDCA, and its regulations. The FDA classifies medical devices into one of three classes (Class I, II or III) based on the statutory

framework described in the FFDCA. Class III devices are typically life-sustaining, life-supporting or implantable devices, or new devices that have not been found to be substantially equivalent to legally marketed devices. Class III devices must generally receive PMA approval by the FDA before they may be marketed.

The PMA approval pathway requires that the applicant demonstrate to the FDA's satisfaction, based on valid scientific evidence, that there is a reasonable assurance of the safety and effectiveness of the device for its intended use. During the PMA process, the FDA examines detailed data to assess the safety and effectiveness of the device. This information includes design, development, manufacture, labeling, advertising, preclinical testing and clinical study data. Prior to approving a PMA, the FDA may conduct an inspection of the manufacturing facilities and the clinical sites where supporting studies were conducted. The facility inspection evaluates the company's compliance with the QSR. An inspection of clinical sites evaluates compliance with good clinical practice standards, including, for studies conducted under an investigational device exemption, or IDE, that the studies meet the requirements of FDA's IDE regulations. Typically, the FDA will convene an advisory panel meeting to review the data presented in the PMA. The panel's recommendation is given substantial weight, but is not binding on the FDA. Under a set of performance measures that the FDA has committed to achieving in return for the receipt of user fees from manufacturers, FDA attempts to review all PMAs not requiring an advisory panel meeting within 180 "FDA days" and review of a PMA application that does require an advisory panel meeting within 320 "FDA days." The term "FDA days" excludes the time the applicant spends responding to FDA requests for additional information. While the FDA has approved PMA applications within the allotted time period, reviews can occur over a significantly longer period. Upon completion of its review, FDA will either approve or deny the PMA.

If the FDA's evaluation is favorable, the PMA is approved and the device may be marketed in the U.S. The FDA may approve a PMA with post-approval conditions such as post-market collection of clinical data. Failure to comply with the conditions of approval can result in material adverse enforcement action, including the loss or withdrawal of the PMA approval. A PMA approval may include significant limitations on the indicated uses for which a device may be marketed. FDA interprets the FFDCA as prohibiting the promotion of approved medical devices for unapproved uses. After approval of a PMA, a new PMA or PMA supplement is required in the event of a significant modification to the device, the device labeling, or the manufacturing process. FDA can initiate proceedings to withdraw a PMA approval for failure to comply with regulatory requirements or the occurrence of unforeseen problems following initial marketing.

In March 2015, we received a PMA approval, from the FDA for use of the Impella 2.5 device in the U.S. during elective and urgent high-risk percutaneous coronary intervention, or PCI, procedures. In December 2016, the FDA expanded this PMA approval in the U.S. to include the Impella CP device. With these PMA indications, the Impella 2.5 and Impella CP devices provide the only minimally invasive treatment options indicated for use during high-risk PCI procedures. In April 2016, the FDA approved a PMA supplement for our Impella 2.5, Impella CP, Impella 5.0 and Impella LD devices to provide treatment for ongoing cardiogenic shock, which occurs following heart attack or open heart surgery. The intent of the treatment is to reduce ventricular work and to provide the circulatory support necessary to allow heart recovery and early assessment of residual myocardial function. We expect to make additional PMA supplement submissions for additional indications for use for our Impella devices in the future.

When clinical trials of a device are required in order to obtain FDA approval, the sponsor of the trial is generally required to file an IDE application before commencing the trials. The FDA reviews and must approve an IDE before a clinical study may begin in the U.S. In addition, the clinical study must be approved by an Institutional Review Board, or IRB, for each clinical site. The FDA, an IRB, or we may suspend a clinical trial at any time for various reasons, including if information emerges suggesting that the subjects are being exposed to an unacceptable health risk. All clinical studies of investigational devices must be conducted in compliance with FDA requirements. Following the completion of a study, the data from the study must be collected, analyzed and presented in an appropriate submission to the FDA, either as a report submitted to the IDE file or in a marketing application such as a PMA.

In addition, certain medical devices can be approved by the FDA in the U.S. under an HDE rather than a PMA. In order for a device to be eligible for an HDE, there must be a qualifying target patient population of less than 8,000 patients per year for which there is no other comparable device available to treat the condition. In December 2016, the 21st Century Cures Act increased the upper population limit for an HDE from 4,000 to 8,000. The FDA must agree that a device meets these criteria before it can be approved under an HDE. FDA approval of an HDE also requires demonstration that the device is safe for its intended application, that it is potentially effective, and that the probable benefits outweigh the associated risks. If another device receives approval through the PMA process that addresses the same patient population as the HDE device, the HDE device may need to be withdrawn from the U.S. market. An approved HDE authorizes sales of the device to any hospital after review and approval by the hospital's IRB. Proposed modifications to approved HDE devices, like modifications to approved PMA devices, require FDA approval through a new HDE application or an HDE supplement.

In January 2015, we received FDA approval for the Impella RP heart pump under an HDE to provide circulatory assistance for up to 14 days in patients who develop acute right heart failure or decompensation after left ventricular assist device implantation,

myocardial infarction, heart transplant, or open-heart surgery. Impella RP is the first percutaneous single access heart pump designed for right heart support to receive FDA approval. As part of the HDE approval, we were required to conduct post approval studies for the Impella RP device. We have completed our Impella RP post-market studies and are currently working on a PMA application with the FDA to convert our HDE approval to a PMA approval.

Postmarket Regulation

The medical devices that we manufacture and distribute pursuant to regulatory clearances or approvals by the FDA and other countries' regulatory authorities are subject to continuing regulation by those agencies. The FDA reviews design, manufacturing, and distribution practices, labeling and record keeping, and manufacturers' required reports of adverse experience and other information to identify potential problems with marketed medical devices. Among other FDA requirements, we must comply with the FDA's good manufacturing practice regulations for medical devices, known as QSR. These regulations govern the methods used in, and the facilities and controls used for, the design, testing, manufacture, packaging, labeling, storage, installation, and servicing of all finished medical devices intended for human use. We must also comply with Medical Device Reporting, or MDR requirements, which require us to report to the FDA any incident in any of our products that may have caused or contributed to a death or serious injury, including medical intervention to prevent a death or serious injury, or in which any of our products malfunctioned and, if such malfunction were to recur, would be likely to cause or contribute to a death or serious injury. Labeling, advertising, and promotional activities are subject to scrutiny by the FDA and, in certain circumstances, by the Federal Trade Commission. FDA's enforcement policy prohibiting the marketing of approved medical devices for unapproved uses. We are subject to routine inspection by the FDA for compliance with the QSR and MDR requirements, as well as other applicable regulations. If the FDA were to conclude that we are not in compliance with applicable laws or regulations, or that any of our medical devices are ineffective or pose an unreasonable health risk, the FDA could ban such medical devices, detain or seize adulterated or misbranded medical devices, order a recall, repair, replacement, or refund of such devices, and require us to notify health professionals and others that the devices present unreasonable risks of substantial harm to the public health. The FDA may also seek a judicial injunction enjoining certain violations of the FFDCRA and imposing operating restrictions and assess civil or criminal fines and penalties against our officers, employees, or us. The FDA may also recommend criminal prosecution to the U.S. Department of Justice. Regulatory authorities outside the U.S. enforce similar laws and regulations within their respective jurisdictions.

The FDA and other regulatory agencies actively enforce regulations prohibiting promotion of off-label uses and the promotion of products for which marketing clearance has not been obtained. If the FDA or another regulatory agency determines that our promotional materials or training constitutes promotion of an unapproved use, it could request that we modify our training or promotional materials or subject us to regulatory enforcement actions, including the issuance of a warning letter, injunction, seizure, civil fine and criminal penalties. Although our policy is to refrain from statements that could be considered off-label promotion of our products, the FDA or another regulatory agency could disagree and conclude that we have engaged in off-label promotion.

On April 25, 2014, we received an administrative subpoena from the Boston regional office of the U.S. Department of Health and Human Services, or HHS, Office of Inspector General requesting materials relating to our reimbursement of employee expenses and remuneration to healthcare providers from July 2012 through December 2012, in connection with a civil investigation under the False Claims Act (the "FCA Investigation"). Subsequently, we received Civil Investigative Demands from the U.S. Attorney's Office for the District of Massachusetts that collectively sought additional information relating to this matter for the time period of January 1, 2011 through September 14, 2016. We continue to cooperate fully with the government in this investigation and are exploring various ways to resolve this matter with the government. We are not able to predict what action, if any, might be taken in the future as a result of the investigation, or the potential impact to our financial position.

The FDA can require post-market surveillance, or PMS, for significant risk devices, such as our medical devices, that require ongoing collection, analysis, and periodic submission to the FDA of clinical data during commercialization over a period of up to several years. The PMS data collection requirements are often burdensome and expensive. The failure to comply with the FDA's regulations can result in enforcement action, including seizure of products, injunction, prosecution, civil fines and penalties, recall and/or suspension of FDA approval.

The FDA, in cooperation with U.S. Customs and Border Protection, or CBP, administers controls over the import and export of medical devices into and out of the U.S. International sales of our medical devices that have not received FDA approval are therefore subject to FDA export requirements. The CBP imposes its own regulatory requirements on the import of medical devices, including inspection and possible sanctions for noncompliance.

We are also subject to additional laws and regulations that govern our business operations, products, and technologies, including:

- federal, state, and foreign anti-kickback laws and regulations, which generally prohibit payments and other financial benefits to physicians or other purchasers of medical products as an inducement to purchase a product;
- the Stark law, which prohibits physicians from referring Medicare patients to a provider that bills this program for the provision of certain designated health services if the physician (or a member of the physician's immediate family) has a financial relationship with that provider, subject to numerous specific exemptions;
- federal and state laws and regulations that protect the confidentiality of certain patient health information, including patient records, and restrict the use and disclosure of such information, in particular, the Health Insurance Portability and Accountability Act of 1996, or HIPAA;
- the Physician Payments Sunshine Act, or PPSA, which requires public disclosure of the financial relationships of United States physicians and teaching hospitals with applicable manufacturers, including medical device, pharmaceutical, and biologics companies;
- the False Claims Act, or FCA, which prohibits the submission of false or otherwise improper claims for payment to a federally funded health care program, and health care fraud statutes that prohibit false statements and improper claims to any third-party payer; and may be enforced through whistleblower or 'qui tam' lawsuits filed by private individuals, and
- the U.S. Foreign Corrupt Practices Act, or FCPA, which can be used to prosecute companies in the U.S. for arrangements with foreign government officials or other parties outside the U.S.

Failure to comply with these laws and regulations could result in criminal liability, significant fines or penalties, negative publicity, and substantial costs and expenses associated with investigation enforcement activities, and individual settlement agreements that impose a government monitor for a period of several years. To assist in our compliance efforts, we adhere to many codes of ethics and conduct regarding our sales and marketing activities in the United States and other countries in which we operate, including the ABIOMED code of Conduct and Compliance Policy.

International Regulation

Internationally, the approval and regulation of medical devices is subject to a variety of laws and regulation. In Europe, our products are subject to extensive regulatory requirements. Our Impella 2.5, Impella 5.0, Impella LD, Impella CP, Impella RP, and AIC are all approved under CE Mark and are available for sale in the European Union. The European Union requires that medical devices may only be placed on the market if they do not compromise safety and health when properly installed, maintained, and used in accordance with their intended purpose. National laws conforming to the European Union's legislation regulate our products under the medical devices regulatory system. Although the more variable national requirements under which medical devices were formerly regulated have been substantially replaced by the European Union Medical Devices Directive, individual nations can still impose unique requirements that may require supplemental submissions. The European Union medical device laws require manufacturers to declare that their products conform to the essential regulatory requirements after which the products may be placed on the market bearing the CE Mark. Manufacturers' quality systems for products in all but the lowest risk classification are also subject to certification and audit by an independent notified body. In Europe, particular emphasis is being placed on more sophisticated and faster procedures for the reporting of adverse events to the competent authorities.

In Japan, pre-market approval and clinical studies are required as is governmental pricing approval for medical devices. Clinical studies are subject to a stringent "Good Clinical Practices" standard. Approval time frames from the Japanese Ministry of Health, Labour and Welfare vary from simple notifications to review periods of one or more years, depending on the complexity and risk level of the device. In addition, importation of medical devices into Japan is subject to the "Good Import Practices" regulations. As with any highly regulated market, significant changes in the regulatory environment could adversely affect future sales. In September 2016, we received PMDA approval from the Japanese Ministry of Health, Labour & Welfare for our Impella 2.5 and Impella 5.0 heart pumps to provide treatment of drug-resistant acute heart failure in Japan. We are preparing for the market launch in Japan, including working with Japanese government authorities to obtain reimbursement for these products.

In many of the other foreign countries in which we market our products, we may be subject to regulations affecting, among other things:

- product standards and specifications;
- packaging requirements;
- labeling requirements;
- product collection and disposal requirements;
- quality system requirements;
- import restrictions;
- tariffs;
- duties; and
- tax requirements.

Many of the regulations applicable to our devices and products in these countries are similar to those of the FDA. In some countries, the level of government regulation of medical devices is increasing, which can lengthen time to market and increase registration and approval costs. In many countries, the national health or social security organizations require our products to be qualified before they can be marketed and considered eligible for reimbursement.

Health Care Initiatives

Government and private sector initiatives to limit the growth of health care costs, including price regulation and competitive pricing, coverage and payment policies, comparative effectiveness reviews, technology assessments, and managed-care arrangements, are continuing in many countries where we do business, including the U.S., Europe, and Japan. As a result of these changes, the marketplace has placed increased emphasis on the delivery of more cost-effective medical therapies. For example, government programs, private health care insurance, and managed-care plans have attempted to control costs by restricting coverage and limiting the level of reimbursement for procedures or treatments, and some third-party payers require their pre-approval before new or innovative devices or therapies are utilized by patients. These various initiatives have created increased price sensitivity over medical products generally and may impact demand for our products and technologies.

The delivery of our products is subject to regulation by the HHS in the U.S. and comparable state and foreign agencies responsible for reimbursement and regulation of health care items and services. Foreign governments also impose regulations in connection with their health care reimbursement programs and the delivery of health care items and services. Reimbursement schedules regulate the amount the U.S. government will reimburse hospitals and doctors for the inpatient care of persons covered by Medicare. CMS may also review whether and/or under what circumstances a procedure or technology is reimbursable for Medicare beneficiaries. Changes in current reimbursement levels could have an adverse effect on market demand and our pricing flexibility.

Health care cost containment efforts have also prompted domestic hospitals and other customers of medical device manufacturers to consolidate into larger purchasing groups to enhance purchasing power, and this trend is expected to continue. The medical device industry has also experienced some consolidation, partly in order to offer a broader range of products to large purchasers. As a result, transactions with customers are larger, more complex, and tend to involve more long-term contracts than in the past. These larger customers, due to their enhanced purchasing power, may attempt to increase the pressure on product pricing.

Health Care Reform

In March 2010, the U.S. Congress enacted the Patient Protection and Affordable Care Act and the Health Care and Education Reconciliation Act, or together, the Affordable Care Act (“ACA”). The law includes provisions that, among other things, reduce or limit Medicare reimbursement, mandate that all individuals have health insurance (with limited exceptions) and impose increased taxes. Specifically, the law requires the medical device industry to subsidize healthcare reform in the form of a medical device excise tax on United States sales of most medical devices beginning in 2013. We began paying the medical device excise tax in January 2013.

In December 2015, the Protecting Americans from Tax Hikes Act of 2015 (“PATH Act”) was implemented, which suspended the medical device excise tax implemented as part of the Affordable Care Act for a two-year period through December 31, 2017. The suspension has had a positive impact on our operating expenses for fiscal years 2016 and 2017, but is scheduled to resume beginning in January 2018. Additionally, the PATH Act permanently extended the research and development tax credit.

In December 2016, legislation was signed into law that, among other things, increases funding for medical research and eases the development and approval of experimental treatments. Known as the 21st Century Cures Act, the law also provides new funding for the National Institutes of Health and the FDA. A notable impact from this new law is an increase in the upper population limit for an HDE from 4,000 to 8,000. Although it will take some time to be fully implemented, the 21st Century Cures Act could help accelerate the discovery, development, and delivery of medical advancements to ensure more timely access to new treatments and cures for patients in need.

Initiatives to repeal the ACA, in whole or in part, to delay elements of implementation or funding, and to offer amendments or supplements to modify its provisions have been persistent and have increased as a result of the 2016 election. The ultimate outcomes of legislative attempts to repeal or amend the ACA and legal challenges to the ACA are unknown. Results of recent Congressional elections and the change of presidential administrations beginning in 2017 have created a political environment in which substantial portions of the ACA could be repealed or revised. HHS has delayed the implementation of regulations that would have placed at risk, based on health outcomes, portions of Medicare payment to hospitals, physicians, and related healthcare providers for certain cardiac procedures. On May 4, 2017, the United States House of Representatives voted to pass the American Health Care Act (and thereby repeal much of the ACA) by a narrow margin of 217 to 213, sending the bill to the Senate for deliberation. The Senate has indicated they will write their own version of the bill, instead of voting on the House version. It remains unclear what portions of the ACA may remain, or what any replacement or alternative programs may be created by any future legislation.

Other Regulations

We are also subject to various international, federal, state and local laws and regulations relating to such matters as safe working conditions, laboratory and manufacturing practices and the use, handling and disposal of hazardous or potentially hazardous substances used in connection with our research and development and manufacturing activities. Specifically, the manufacture of our biomaterials is subject to compliance with federal environmental regulations and by various state and local agencies. Although we believe we are in compliance with these laws and regulations in all material respects, we cannot provide assurance that we will not be required to incur significant costs to comply with these and other laws or regulations in the future.

Seasonality

Our quarterly net sales are influenced by many factors, including new product introductions, acquisitions, regulatory approvals, patient and physician holiday schedules, and other factors. Net sales in the first half of our fiscal year are typically lower than the second half of our fiscal year due to the seasonality of the U.S. and European markets, where summer vacation schedules normally result in fewer medical procedures.

Employees

As of March 31, 2017, we had 908 full-time employees, including:

- 179 in product engineering, research and development, clinical development and regulatory;
- 398 in sales, clinical support, marketing, field service and related support;
- 247 in manufacturing; and
- 84 in general and administration.

We routinely enter into contractual agreements with our employees, which typically include confidentiality and non-competition commitments. Our employees are not represented by unions. We consider our employee relations to be good. If we were unable to attract and retain qualified personnel in the future, our operations could be negatively impacted.

ITEM 1A. RISK FACTORS

Investing in our common stock involves a high degree of risk. Before making an investment decision, you should carefully consider these risks as well as the other information we include or incorporate by reference in this report, including our consolidated financial statements and the related notes. The risks and uncertainties we have described are not the only ones we face. If any of these risks materialize, the trading price of our common stock could fall and you could lose all or part of your investment.

This section includes or refers to forward-looking statements. You should read the explanation of the qualifications and limitations of such forward-looking statements discussed at the beginning of the report.

Risks Related to Our Business

We depend on Impella® products for a significant portion of our revenues.

We derive, and expect to continue to derive in the near future, almost all of our revenues from sales of our Impella devices. While we cannot fully predict what level of revenues our Impella devices will generate, we anticipate that Impella product sales will continue to account for a significant portion of our revenues in the foreseeable future. Implementation of our business strategy depends on continued sales of our Impella devices. Our ability to generate sales of our Impella devices may be impaired by the factors described below:

- our failure to obtain approvals from the FDA and foreign regulatory authorities or to comply with government regulations, or the withdrawal of market clearance or the taking of other enforcement actions that could limit or impair our ability to sell our products;
- lack of acceptance or continued acceptance by physicians;
- our reliance on specialized suppliers for certain components and materials;
- manufacturing or quality control problems;
- our inability to protect our proprietary technologies or an infringement of others' patents;
- the loss of a distributor or a distributor's failure to perform its obligations;
- our failure to compete successfully against our existing or potential competitors;
- additional risks associated with selling in international markets;
- long and variable sales and deployment cycles;
- failure by third-party payers to provide appropriate levels of reimbursement for hospitals and physicians using our products;
- our failure to comply with federal and state regulations; and
- product liability claims.

If we fail to compete successfully against our existing or potential competitors, our sales or operating results may be harmed.

Competition from other companies offering circulatory care products is intense and subject to rapid technological change and evolving industry requirements and standards. We compete with companies that have substantially greater or broader financial, product development, sales and marketing resources and experience than we do. Our ability to compete effectively depends upon our ability to distinguish our company and our products from our competitors and their products. Factors affecting our competitive position include:

- the availability of other products and procedures that are technically equivalent or superior to our products, and which may be sold at lower prices;
- product performance and design;
- product safety;
- sales, marketing and distribution capabilities;
- comparable clinical outcomes;
- success and timing of new product development and introductions;
- physician and hospital acceptance of our products;
- penetration into existing and new geographic markets; and
- intellectual property protection.

Our customers are primarily hospitals that have limited budgets. As a result, our products compete against a broad range of medical devices and other therapies for these limited funds. Our success will depend in large part upon our ability to enhance our existing products, to develop new products to meet regulatory and customer requirements and to achieve market acceptance for our

products. We believe that important competitive factors with respect to the development and commercialization of our products include the relative speed with which we can develop products, establish clinical utility, complete clinical trials and regulatory approval processes, obtain and protect reimbursement, maintain cost effectiveness for our products, and supply commercial quantities of our products to our customers.

Advances in medical technology, biotechnology and pharmaceuticals may reduce the size of the potential markets for our products or render our products obsolete. We are aware of other heart replacement device research efforts in the U.S., Canada, Europe and Japan. In addition, there are a number of companies; including Getinge (Maquet Cardiovascular), Abbott Laboratories, Medtronic, Edwards Lifesciences, CardiacAssist, Terumo Heart, Inc., Teleflex, Inc. and several early-stage companies, that are developing heart assist products, including implantable left ventricular assist devices and miniaturized rotary ventricular assist devices that directly and indirectly compete with our products.

If we do not effectively manage our growth, we may be unable to successfully develop, market and sell our products.

Our future revenue and operating results will depend on our ability to manage the anticipated growth of our business. We have experienced significant growth in recent years in the scope of our operations and we have increased our employee headcount. This growth has placed significant demands on our management as well as our financial and operations resources. In order to achieve our business objectives, we will need to continue to grow. However, continued growth presents numerous challenges, including:

- developing our global sales, marketing and administrative infrastructure and capabilities;
- expanding manufacturing capacity, maintaining quality and increasing production;
- increasing our foreign and domestic regulatory compliance capabilities;
- implementing appropriate operational, financial and IT systems and internal controls;
- identifying, attracting and retaining qualified personnel, particularly experienced clinical staff; and
- hiring, training, managing and supervising our personnel worldwide.

Any failure to manage our growth effectively could impede our ability to successfully develop, market and sell our products, which could seriously harm our business.

The demand for our products and products under development is unproven, and we may be unable to successfully commercialize our products.

Our products and products under development may not enjoy commercial acceptance or success, which could adversely affect our business and operational results. We need to create markets for our Impella devices and other existing products, as well as other new or future products, including achieving market acceptance among physicians, hospitals, patients and third-party payers. In particular, we need to gain acceptance of our Impella devices among interventional cardiologists and heart surgeons. The obstacles we will face in trying to create successful commercial markets for our products include:

- limitations inherent in first-generation devices, and our potential inability to develop successive improvements, including increases in service life and improvements in the ease of use of our products;
- introduction by other companies of new treatments, products and technologies that compete with our products;
- timing and amount of reimbursement for these products, if any, by third-party payers;
- potential reluctance of clinicians and hospitals to obtain and support adequate training to use our products;
- cost of our products; and
- potential reluctance of physicians, patients and society as a whole to accept medical devices that replace or assist the heart and risk of mechanical failure inherent in such devices.

If we fail to obtain and maintain necessary governmental approvals for our products and indications, we may be unable to market and sell our products in certain jurisdictions.

Medical devices such as ours are extensively regulated by the FDA in the U.S. and by other federal, state, local and foreign authorities. Governmental regulations relate to the testing, development, manufacturing, labeling, design, sale, promotion, distribution, importing, exporting and shipping of our products. In the U.S., before we can market a new medical device, or a new use of, or claim for, or significant modification to, an existing product, we must generally first receive PMA approval from the FDA. This process can

be expensive and lengthy and entail significant expenses, primarily related to clinical trials. It generally takes between one to three years to receive approval, or even longer, from the time the PMA application is submitted to the FDA. Regulatory clearances or approvals, either foreign or domestic, may not be granted on a timely basis, if at all. If we are unable to obtain regulatory approvals or clearances for use of our products under development, or if the patient populations for which they are approved are not sufficiently broad, the commercial success of these products could be limited. The FDA may also limit the claims that we can make about our products. Our medical devices are now subject to the PMA and HDE processes. In December 2012, as part of an initiative to review regulatory requirements for certain Class III devices, an FDA panel voted to recommend continuation of Class III status for temporary ventricular support devices within the non-roller type cardiopulmonary bypass blood pumps category, which includes our Impella devices. PMA or HDE approval requires that any significant modifications to the design, materials, or intended use of those devices require FDA approval through PMA or HDE supplemental applications, and our devices will be subject to more burdensome regulatory reporting requirements than they had been under 510(k) clearance.

If we do not receive FDA approval or clearance for one or more of our products, we will be unable to market and sell those products in the U.S., which would have a material adverse effect on our operations and prospects.

We also market or are beginning to market our products in international markets, including the European Union, Canada, and Japan. Regulatory approval processes differ among those jurisdictions and approval in the U.S. or any other single jurisdiction does not guarantee approval in any other jurisdiction. Obtaining foreign approvals could involve significant delays, difficulties and costs for us and could require additional clinical trials.

If the FDA or another regulatory or enforcement agency determines that we have promoted or products for one or more off-label uses, we may be subject to various penalties, including civil or criminal penalties.

The FDA, the U.S. Department of Justice, the Office of the Inspector General of Department of Health and Human Services, and other regulatory or enforcement agencies actively enforce regulations prohibiting the promotion of unapproved medical devices and the promotion of otherwise approved or cleared medical devices for unapproved uses. If any such agency determines that our promotional materials or training constitutes promotion of an unapproved use, it could request that we modify our training or promotional materials or subject us to regulatory enforcement actions, including the issuance of a warning letter, injunction, seizure, civil fine and criminal penalties. Although our policy is to refrain from statements that could be considered off-label promotion of our products, such agencies could disagree and conclude that we have engaged in off-label promotion.

To the extent a regulatory agency commences such an investigation in the future; we may not be able to resolve that matter, without incurring penalties or facing significant consequences. Even if we are successful in resolving such a matter without incurring penalties, responding to a subpoena or other government inquest could result in substantial costs and could significantly and adversely impact our reputation and divert management's attention and resources, which could have a material adverse effect on our business, operating results, financial condition and ability to finance our operations.

Off-label use of our products may result in injuries that lead to product liability suits, which could be costly to our business.

The use of our products outside their approved indications for use, or "off-label use," may increase the risk of injury to patients. Clinicians may use our products for off-label uses, as the FDA does not restrict or regulate a clinician's choice of treatment within the practice of medicine. Off-label use of our products may increase the risk of product liability claims against us. Product liability claims are expensive to defend and could divert our management's attention and result in substantial damage awards against us.

Unsuccessful clinical trials or procedures relating to products under development could have a material adverse effect on our prospects.

The regulatory approval process for new products and new indications for existing products often requires extensive clinical trials and procedures, including early clinical feasibility studies. Unfavorable or inconsistent clinical data from current or future clinical trials or procedures conducted by us, our competitors, or third parties, or perceptions regarding such clinical data, could adversely affect both our ability to obtain necessary approvals and the market's view of our future prospects. Such clinical trials and procedures are inherently uncertain and there can be no assurance that these clinical trials or procedures will be completed in a timely or cost-effective manner or result in a commercially viable product or expanded indication. Failure to successfully complete these clinical trials or procedures in a timely and cost-effective manner could have a material adverse effect on our prospects. Clinical trials or procedures may experience significant setbacks even after earlier trials have shown promising results. Further, preliminary results from clinical trials or procedures may be contradicted by subsequent clinical analysis. In addition, results from our clinical trials or procedures may not be supported by actual long-term studies or clinical experience. If preliminary clinical results are later contradicted, or if initial results cannot be supported by actual long-term studies or clinical experience, our business could be adversely affected. Clinical trials or procedures may be delayed, suspended, or terminated by us, the FDA, or other regulatory

authorities at any time, if it is believed that the trial participants face unacceptable health risks for numerous other reasons. The FDA may disagree with our interpretation of the data from our clinical trials, or may find the clinical trial design, conduct or results inadequate to demonstrate safety and effectiveness of the product candidate. The FDA may also require additional pre-clinical studies or clinical trials which could further delay approval of our products.

Our products are subject to extensive regulatory requirements, including continuing regulatory review, which could affect the manufacturing and marketing of our products.

The FDA and other regulatory agencies continue to review products even after they have received initial approval. If and when the FDA or another regulatory agency clears or approves our products under development, the manufacture and marketing of these products will be subject to continuing regulation, post approval clinical studies, including compliance with the FDA's adverse event reporting requirements, prohibitions on promoting a product for unapproved uses, and Quality System Regulation, or QSR, requirements, which obligate manufacturers, including third-party and contract manufacturers, to adhere to stringent design, testing, control, documentation and other quality assurance procedures during the design and manufacture of a device.

Any modification to an FDA approved device that could significantly affect its safety or effectiveness, or that would constitute a major change in its intended use, requires a supplemental PMA or HDE approval. The FDA requires each manufacturer to determine in the first instance whether a modification requires approval, but the FDA may review and potentially disagree with any such decision. Modifications of this type are common with new products. We anticipate that the first generation of each of our products will undergo a number of changes, refinements, enhancements and improvements over time. If the FDA requires us to seek approval for modification of a previously approved product for which we have concluded that new clearances or approvals are unnecessary, we may be required to cease marketing or to recall the modified product until we obtain clearance or approval and we may be subject to significant regulatory fines or penalties, which could have a material adverse effect on our financial results and competitive position. We also cannot assure you that we will be successful in obtaining clearances or approvals for our modifications, if required. We and our third-party suppliers of product components are also subject to inspection and market surveillance by the FDA and other regulatory agencies for QSR and our regulatory other requirements, the interpretation of which can change. Compliance with QSR and similar legal requirements can be difficult and expensive. Enforcement actions resulting from failure to comply with government requirements could result in fines, suspensions of approvals or clearances, recalls or seizure of products, operating restrictions or shutdown, and criminal prosecutions that could adversely affect the manufacture and marketing of our products. The FDA or another regulatory agency could withdraw a previously approved product from the market upon receipt of newly discovered information, including a failure to comply with regulatory requirements, the occurrence of unanticipated safety problems or other defects in products following approval, or other reasons, which could adversely affect our operating results.

Even after receiving regulatory clearance or approval, our products may be subject to product recalls which could harm our reputation and divert our managerial and financial resources.

The FDA and similar governmental authorities in other countries have the authority to order mandatory recall of our products or order their removal from the market if the government finds that our products might cause adverse health consequences or death. A government-mandated or voluntary recall by us could occur as a result of component failures, manufacturing errors by us or our suppliers or design defects, including labeling defects, or unanticipated safety problems. We have in the past initiated voluntary recalls for some of our products and we could do so in the future. Any recall of our products may harm our reputation with customers and divert managerial and financial resources.

We depend on third-party reimbursement to our customers for market acceptance of our products. If third-party payers fail to provide coverage and appropriate levels of reimbursement for the medical procedures in which our products are used, our sales and profitability would be adversely affected.

Sales of medical devices largely depend on the reimbursement of patients' medical expenses by government healthcare programs and private health insurers. Without the financial support of government reimbursement or third-party insurers' payments for patient care, the market for our products will be limited. Medical products and devices incorporating new technologies are closely examined by governments and private insurers to determine whether the products and devices will be covered by reimbursement, and if so, the level of reimbursement which may apply.

In October 2016, the American Hospital Association (AHA) Coding Clinic publication confirmed MS-DRG 215, Heart Assist System Implant, for an Impella catheterization lab implant and ICU care. In addition to the October 2016 update, a recent AHA Coding Clinical publication in March 2017 added clarification of coding for implant of bi-ventricular Impella heart support along with the removal of the device provides hospital payment in MS-DRG 1 or 2 depending upon severity of illness. The Company's Impella heart pumps are now most commonly reimbursed under four MS-DRG categories including: 1) assistance in the catheterization lab only in MS-DRGs 216-221; 2) implant, assistance and removal after leaving the catheterization lab in MS-DRG 215; 3) right and left

side heart support known as bi-ventricular and removal in MS-DRG 1-2, and; 4) hospitals receiving transferred patients with removal of the device in MS-DRG 268-269. In prior years, Impella was primarily reimbursed in only one category of MS-DRGs 216-221. The AHA and Centers for Medicare and Medicaid Services (CMS) have facilitated a system of care around the utilization of percutaneous heart pumps for the catheterization lab, ICU support, and transfer of patients to specialized centers. This progress also represents the expansion of Impella FDA indications for High Risk PCI, AMI Cardiogenic Shock, and bi-ventricular support.

In April 2017, the CMS released a proposed set of hospital payment levels for patient discharges after October 1, 2017. The Proposed Rule for the Inpatient Prospective Payment System is open for public comment until June 13, 2017. Under the proposed rule, all discharges prior to October 1, 2017 are to remain under the current payment levels, and the final rulemaking is expected to be released in August 2017. The text of the Proposed Rule did not include any changes to payment, coding or MS-DRG assignments for Impella, percutaneous heart assist, or related technology. However, data tables also released with the Proposed Rule include changes for all MS-DRGs which included a proposed reduction for MS-DRG 215 of 34.8%. The remaining MS-DRG categories have proposed changes ranging from -7% to +3.5%. Even if the rule is finalized as proposed, all current MS-DRG rates will remain in place until October 2017.

We cannot be sure that additional third-party payers will cover and/or adequately reimburse use of our products or other products under development, to enable us to sell them at profitable prices.

In addition, third-party payers increasingly are requiring evidence that medical devices are cost-effective and if we are unable to meet this requirement, the third-party payer may not reimburse the use of our products, which could reduce sales of our products to healthcare providers who depend upon reimbursement for payment. We also cannot be sure that third-party payers will continue the current levels of reimbursement to physicians and medical centers for use of our products. Any reduction in the amount of this reimbursement could harm our business. Increasing awareness of healthcare costs, public interest in healthcare reform and continuing pressure from Medicare, Medicaid, group purchasing organizations and other payers to reduce costs in the healthcare industry, as well as increasing competition from other protective products, could make it more difficult for us to sell our products at current prices.

Changes in healthcare reimbursement systems in the U.S. and abroad could reduce our revenues and profitability.

In March 2010, the U.S. federal government enacted the Affordable Care Act, or ACA, which made changes to the manner in which many healthcare services are provided and paid for in the U.S. The ACA includes provisions that, among other things, reduce or limit Medicare reimbursement, require all individuals to have health insurance (with limited exceptions) and impose increased taxes on certain companies and individuals. Results of the recent U.S. elections in 2016 have created a political environment in which substantial portions of the ACA could be repealed or revised. It remains unclear what portions of the ACA may remain, or what any replacement or alternative programs may be created by any future legislation. Any such future repeal or replacement may have significant impact on the reimbursement for healthcare services generally, including reducing significantly the number of Americans who have health insurance, which could lead our health care provider customers to be more cost conscious. Accordingly, our business and results of operations could therefore be adversely affected by any future federal or state healthcare reform legislation.

Internationally, medical reimbursement systems vary significantly from country to country, with some countries limiting medical centers spending through fixed budgets, regardless of levels of patient treatment, and other countries requiring application for, and approval of, government or third-party reimbursement. Even if we succeed in bringing our new products to market, uncertainties regarding future healthcare policy, legislation and regulation, as well as private market practices, could affect our ability to sell our products in commercially acceptable quantities at profitable prices in certain countries.

We must comply with healthcare “fraud and abuse” laws, and we could face substantial penalties for non-compliance and be excluded from government healthcare programs, which would adversely affect our business, financial condition and results of operations.

Certain federal and state healthcare laws and regulations pertaining to fraud and abuse and patients’ rights may be applicable to our business. We may be subject to healthcare fraud and abuse regulation and patient privacy regulation by both the federal government and the states in which we conduct our business. The laws and regulations that govern our business operations, products, and technologies, and may affect our ability to operate include:

- federal, state, and foreign anti-kickback laws and regulations, which generally prohibit payments to physicians or other purchasers of medical products as an inducement to purchase a product;

- the Stark law, which prohibits physicians from referring Medicare or Medicaid patients to a provider that bills these programs for the provision of certain designated health services if the physician (or a member of the physician's immediate family) has a financial relationship with that provider;
- federal and state laws and regulations that protect the confidentiality of certain patient health information, including patient records, and restrict the use and disclosure of such information, in particular, the Health Insurance Portability and Accountability Act of 1996, or HIPAA;
- the Physician Payments Sunshine Act, or PPSA, which requires public disclosure of the financial relationships of U.S. physicians and teaching hospitals with applicable manufacturers, including medical device, pharmaceutical, and biologics companies;
- the False Claims Act, or FCA, which prohibits the submission of false or otherwise improper claims for payment to a federally funded health care program, and health care fraud statutes that prohibit false statements and improper claims to any third-party payer; and
- the U.S. Foreign Corrupt Practices Act, or FCPA, which can be used to prosecute companies in the U.S. for arrangements with foreign government officials or other parties outside the U.S.

Failure to comply with these laws and regulations could result in criminal liability, significant fines or penalties, negative publicity, and substantial costs and expenses associated with investigation, enforcement activities, and individual settlement agreements that impose a government monitor for a period of several years. To assist in our compliance efforts, we adhere to many codes of ethics and conduct regarding our sales and marketing activities in the United States and other countries in which we operate.

On April 25, 2014, we received an administrative subpoena from the Boston regional office of the U.S. Department of Health and Human Services, or HHS, Office of Inspector General requesting materials relating to our reimbursement of employee expenses and remuneration to healthcare providers from July 2012 through December 2012, in connection with a civil investigation under the False Claims Act (the "FCA Investigation"). Subsequently, we received Civil Investigative Demands from the U.S. Attorney's Office for the District of Massachusetts that collectively sought additional information relating to this matter for the time period of January 1, 2011 through September 14, 2016. We continue to cooperate fully with the government in this investigation and are exploring various ways to resolve this matter with the government. We are not able to predict what action, if any, might be taken in the future as a result of the investigation, or the potential impact to our financial position.

Our future success depends in part on the development of new circulatory assist products, and our development efforts may not be successful.

We are devoting most of our research and development and regulatory efforts, and significant financial resources, to the development of our Impella devices and product extensions of existing commercial products and new products. In July 2014, we acquired ECP, a German company engaged in the research, development, prototyping and pre-serial production of a percutaneous expandable catheter pump which increases blood circulation from the heart with an external drive shaft. The development of new products and product extensions presents enormous challenges in a variety of areas, including blood compatible surfaces, blood compatible flow, manufacturing techniques, pumping mechanisms, physiological control, energy transfer, anatomical fit and surgical techniques. We may be unable to overcome all of these challenges, which could adversely affect our results of operations and prospects and limit our ability to bring new products to market.

The commercial success of our products will require acceptance by heart surgeons and interventional cardiologists, a limited number of whom have significant influence over medical device selection and purchasing decisions.

We may achieve our business objectives only if our products are accepted and recommended by leading cardiovascular surgeons and interventional cardiologists, whose decisions are likely to be based on a determination that our products are safe and cost-effective and represent acceptable methods of treatment. Although we have developed relationships with leading cardiac surgeons, the commercial success of Impella and our other products will require that we also develop relationships with leading interventional cardiologists in cath labs. We cannot assure you that we can maintain our existing relationships and arrangements or that we can establish new relationships in support of our products. If cardiovascular surgeons and interventional cardiologists do not consider our products to be adequate for the treatment of our target cardiac patient population or if a sufficient number of these clinicians recommend and use competing products, it would seriously harm our business.

Expansion into hospital cardiac centers that have not historically used our products may incur long sales and training cycles that may cause our product sales and operating results to vary significantly from quarter-to-quarter.

Our products have lengthy sales cycles and we may incur substantial sales and marketing expenses and expend significant effort without making a sale. We sell primarily to hospitals that often have administrative requirements to introduce and expand a new

technology, such as Impella, at their sites. Even after making the decision to purchase our Impella devices, our customers often deploy our products slowly or infrequently. In addition, cardiac centers that buy the majority of our products are usually led by cardiac surgeons who are heavily recruited by competing hospitals or by hospitals looking to increase their profiles. When one of these cardiac surgeons moves to a new hospital, we sometimes experience a temporary but significant reduction in purchases by the hospital from which the physician has departed while it replaces the lead physician supporting our Impella devices. As a result, our product sales and operating results may vary significantly from quarter to quarter. In addition, product purchases often lag initial expressions of interest in our product by new centers as training and education regarding the use of the products and as well as internal hospital administrative procedures are typically required prior to the initial implant procedures.

The training required for clinicians to use our products could reduce the market acceptance of our products and reduce our revenue.

Clinicians must be trained to use our products proficiently. It is critical to the success of our business that we ensure that there are a sufficient number of clinicians familiar with, trained on and proficient in the use of our products. Convincing clinicians to dedicate the time and energy necessary to obtain adequate training in the use of our products is challenging and we may not be successful in these efforts. If clinicians are not properly trained, they may misuse or ineffectively use our products. Any improper use of our products may result in unsatisfactory outcomes, patient injury, negative publicity or lawsuits against us, any of which could harm our reputation and affect future product sales. Furthermore, our inability to educate and train clinicians to use our products may lead to lower demand for our products.

If we are unable to develop additional, high-quality manufacturing capacity, our growth may be limited and our business could be seriously harmed.

To be successful, we believe we will need to increase our manufacturing capacity to support continued demand for our products. We may encounter difficulties in scaling up manufacturing of our products, including problems related to product yields, quality control and assurance, component and service availability, dependable sources of supply, adequacy of internal control policies and procedures and lack of skilled personnel. If we cannot hire, train and retain enough experienced and capable scientific and technical workers, we may not be able to manufacture sufficient quantities of our existing or future products on-time and at an acceptable cost, which could limit market acceptance of our products or otherwise damage our business. In order for our manufacturing to meet the expected demand for our Impella devices, we have been implementing process improvements on the Impella production line at our manufacturing facilities in Aachen, Germany and Danvers, Massachusetts to increase the output that we can produce at the facility. In addition to programs designed to further increase yield and capacity levels, we have expanded manufacturing employment in Aachen and Danvers and have increased manufacturing floor space in Danvers and Aachen. We have relocated selected Impella sub-assembly production to our manufacturing facility in Danvers, Massachusetts and with third party suppliers and established additional production of the Impella CP device in Danvers to support manufacturing at our main Impella production facility in Aachen. We continue to work on initiatives to expand our Impella manufacturing capacity in both Aachen and Danvers. We are also working with our existing suppliers and new suppliers to ensure we are able to have sufficient inventory and sub assembly parts as we increase our manufacturing capability to support growing demand. We are also working on process improvements, such as certain automation techniques, to allow us to manufacture our products more efficiently. If we are unable to implement these process improvements on a timely basis, it could inhibit our revenue growth.

Any failure to achieve and maintain the high manufacturing standards that our products require may seriously harm our business.

Our products require precise, high-quality manufacturing. Achieving precision and quality control requires skill and diligence by our personnel as well as our vendors. Any failure to achieve and maintain these high manufacturing standards, including the incidence of manufacturing errors, design defects or component failures could result in patient injury or death, product recalls or withdrawals, delays or failures in product testing or delivery, cost overruns or other problems that could seriously hurt our business. Despite our very high manufacturing standards, we cannot completely eliminate the risk of errors, defects or failures. If we or our vendors are unable to manufacture our products in accordance with necessary quality standards, or if we are unable to procure additional high-quality manufacturing facilities, our business and results of operations may be negatively affected.

If we cannot attract and retain key management, scientific, sales and other personnel we need, we will not be successful.

We depend heavily on the contributions of the principal members of our business, financial, technical, sales and support, regulatory and clinical, operating, manufacturing and administrative management and staff, many of whom would be difficult to replace. Our key personnel include our senior officers, many of whom have very specialized scientific, medical or operational knowledge. The loss of the service of any of the key members of our senior management team may significantly delay or prevent our achievement of our business objectives. Our ability to attract and retain qualified personnel, consultants and advisors is critical to our success. For example, many of the members of our clinical staff are registered nurses with experience in the surgery suite or cath lab,

of which only a limited number of whom seek employment with a company like ours. Competition for skilled and experienced personnel in the medical device industry is intense. We face competition for skilled and experienced management, scientific, clinical, engineering and sales personnel from numerous medical device and life sciences companies, universities, governmental entities and other research institutions. If we lose the services of any of the principal members of our management and staff, or if we are unable to attract and retain qualified personnel in the future, especially scientific and sales personnel, our business could be adversely affected.

If our suppliers cannot provide the components we require, our ability to manufacture our products could be harmed.

We rely on third-party suppliers to provide us with some components used in our existing products and products under development. For example, we outsource the manufacturing of most of our consoles other than final assembly and testing and the sterilization process for our products. Relying on third-party suppliers makes us vulnerable to component part failures or obsolescence and to interruptions in supply, either of which could impair our ability to conduct clinical tests or to ship our products to our customers on a timely basis. Using third-party vendors makes it difficult and sometimes impossible for us to test fully certain components, such as components on circuit boards, maintain quality control, manage inventory and production schedules and control production costs. Manufacturers of our product components may be required to comply with the FDA or other regulatory manufacturing regulations and to satisfy regulatory inspections in connection with the manufacture of the components. Any failure by a supplier to comply with applicable requirements could lead to a disruption in supply. Vendor lead times to supply us with ordered components vary significantly and often can exceed six months or more. Both now, and as we expand our manufacturing capacity, we cannot be sure that our suppliers will furnish us required components when we need them or be able to provide us inventory materials to support our expected growth in demand for our products. These factors could make it more difficult for us to manufacture our products effectively and efficiently and could adversely impact our results of operations.

Some of our suppliers may be the only source for a particular component, which makes us vulnerable to significant cost increases. We have many foreign suppliers for some of our parts in which we are subject to currency exchange rate volatility. Some of our vendors are small in size and may have difficulty supplying the quantity and quality of materials required for our products as our business grows. Vendors that are the sole source of certain products may decide to limit or eliminate sales of certain components due to product liability or other concerns and we might not be able to find a suitable replacement for those products. Our inventory may run out before we find alternative suppliers and we might be forced to purchase substantial inventory, if available, to last until we are able to qualify an alternate supplier. If we cannot obtain a necessary component, we may need to find, test and obtain regulatory approval or clearance for a replacement component, produce the component ourselves or redesign the related product, which would cause significant delay and could increase our manufacturing costs. Any of these events could adversely impact our results of operations.

We may not be successful in expanding our direct sales activities into international markets.

We are seeking to expand our international sales of our products by recruiting direct sales and support teams outside the U.S. Our international operations in Germany, France, Canada, Japan, the United Kingdom and Singapore are or will be subject to a number of risks, which may vary from the risks we experience in the U.S., including:

- the need to obtain regulatory approvals in foreign countries before our products may be sold or used;
- the need to procure reimbursement for our products in each foreign market;
- the generally lower level of reimbursement available in foreign markets relative to the U.S.;
- the requirement to work with distributors or other partners to sell our products;
- longer sales cycles;
- limited protection of intellectual property rights;
- difficulty and delays in collecting accounts receivable;
- different income tax and sales tax environments;
- difficulty in supporting patients using our products;
- different payroll, employee benefits and statutory requirements;
- fluctuations in the values of foreign currencies; and
- political and economic instability.

If we are unable to effectively expand our sales activities in international markets, our results of operations could be negatively impacted.

We rely on distributors to sell our products in some international markets and poor performance by a distributor could reduce our sales and harm our business.

We rely on distributors to market and sell our products in certain parts of Europe, Asia, South America and the Middle East. Many of these distributors have the exclusive right to distribute our products in their territory. We may hire distributors to market our products in additional international markets in the future. Our success in these markets will depend almost entirely upon the efforts of our distributors, over whom we have little or no control. If a distributor does not market and sell our products effectively and maintain a continued focus on the sale and distribution of our products up to our standards, we could lose sales and impair our ability to compete in that market. We are also subject to credit risk and foreign currency risk associated with shipments to our distributors and this could negatively impact our financial condition and liquidity in the future.

We have incurred losses in previous periods and it is possible that we may incur losses in future periods.

We have recognized net income of approximately \$52.1 million, \$38.1 million and \$113.7 million for the fiscal years ended March 31, 2017, 2016 and 2015, respectively. The profitability we achieved in recent years may not be indicative of our ability to sustain profitability and it is possible that we may incur losses from operations in future periods. Any losses incurred in the future may result primarily from, among other things:

- the expansion of our global distribution network;
- investments in new markets such as Japan;
- ongoing product and clinical development;
- costs related to new business development initiatives, such as potential acquisitions of businesses;
- legal expenses related to the FCA Investigation and patent related matters;
- costs associated with hiring additional personnel, performing clinical trials, continuing our research and development relating to our products under development, seeking regulatory approvals and, if we receive these approvals, commencing commercial manufacturing and marketing activities;
- expanded marketing initiatives, particularly with recent PMA approvals in the U.S.;
- income and other related taxes;
- significant expenditures necessary to market and manufacture in commercial quantities our approved circulatory care products; and
- the amount of these expenditures is difficult to forecast accurately and cost overruns may occur.

Our operating results may fluctuate unpredictably.

Historically, our annual and quarterly operating results have fluctuated widely and we expect these fluctuations to continue. Among the factors that may cause our operating results to fluctuate are:

- the timing of customer orders and deliveries;
- seasonality of sales in the U.S. and European markets, where summer vacation schedules normally result in fewer medical procedures during the first half of our fiscal year;
- competitive changes, such as price changes or new product introductions that we or our competitors may make;
- the timing of regulatory actions, such as product approvals or recalls;
- costs we incur developing and testing our Impella heart pumps and other products;
- costs we incur in anticipation of future sales, such as inventory purchases, expansion of manufacturing facilities, or establishment of international sales offices;
- costs we incur in connection with the FCA Investigation;
- additional taxes, such as the Medical Device tax and income taxes;

- impact and timing of equity awards on stock-based compensation;
- timing of certain marketing programs and events;
- the availability of physicians to use our products, as there are seasonal impacts, due to physician vacation or training events that limit their ability to be in the hospital to perform procedures that involve our products;
- impact of any businesses or technologies we may acquire in the future;
- economic conditions in the healthcare industry; and
- efforts by governments, insurance companies and others to contain healthcare costs, including changes to reimbursement policies.

We believe that period-to-period comparisons of our historical results are not necessarily meaningful, and investors should not rely on them as an indication of our future performance. To the extent we experience the factors described above, our future operating results may not meet the expectations of securities analysts or investors from time to time, which may cause the market price of our common stock to decline.

We may undergo an “ownership change” for U.S. federal income tax purposes, which would limit our ability to utilize net operating losses from prior tax years.

If we undergo an “ownership change” for U.S. federal income tax purposes, our ability to utilize net operating loss carry-forwards from prior years to reduce taxable income in future tax years might be limited by operation of the Internal Revenue Code, either by limiting the amount of net operating losses that can be utilized to offset taxable income in a given year, or in total over the entire carry-forward period. Certain changes in the ownership of our common stock may result in an ownership change sufficient to limit the availability of our net operating losses. Net operating losses, foreign tax credits and research and development credits have expiry dates in the U.S. and ability to fully utilize will be dependent upon generating taxable income in the future. We also have net operating loss carry-forwards in other countries outside of the U.S. and our ability to use those losses in the future to offset taxable income could be limited by tax regulations in those countries.

We may not have sufficient funds to develop and commercialize our new products or make acquisitions of desirable companies, products or technologies.

The development, manufacture and sale of any medical device is very expensive and we may require additional funds to make acquisitions of desirable companies, products or technologies. We cannot be sure that we will have the necessary funds to develop and commercialize our new products or acquire companies, products, or technologies, or that additional funds will be available on commercially acceptable terms, if at all. If we are unable to obtain the necessary funding to support these efforts, our business may be adversely affected. We believe we have sufficient liquidity to finance our operations for the next fiscal year. We also may evaluate from time to time other financing alternatives as necessary to fund operations, and any equity or convertible debt financing may involve substantial dilution to our existing stockholders.

We own patents, trademarks, trade secrets, copyrights and other intellectual property and know-how that we believe give us a competitive advantage. If we cannot protect our intellectual property and develop or otherwise acquire additional intellectual property, competition could force us to lower our prices, which could hurt our profitability.

Our intellectual property rights are and will continue to be a critical component of our success. We rely and expect to continue to rely on a combination of intellectual property, including patent, trademark, copyright, trade secret and domain name protection laws, as well as confidentiality agreements with our employees and others, to protect our intellectual property and proprietary rights. If we fail to obtain and maintain adequate intellectual property protection, we may not be able to prevent third parties from using our proprietary technologies or from marketing products that are very similar or identical to ours.

A substantial portion of our intellectual property rights relating to the Impella devices and other products under development is in the form of trade secrets, rather than patents. Unlike patents, trade secrets are only recognized under applicable law if they are kept secret by restricting their disclosure to third parties. We protect our trade secrets and proprietary knowledge in part through confidentiality agreements with employees, consultants and other parties. However, certain consultants and third parties with whom we have business relationships, and to whom in some cases we have disclosed trade secrets and other proprietary knowledge, may also provide services to other parties in the medical device industry, including companies, universities and research organizations that are developing competing products. In addition, some of our former employees who were aware of certain of our trade secrets and other proprietary knowledge in the course of their employment may seek employment with, and become employed by, our competitors. We cannot be assured that consultants, employees and other third parties with whom we have entered into confidentiality agreements will

not breach the terms of such agreements by improperly using or disclosing our trade secrets or other proprietary knowledge, that we will have adequate remedies for any such breach, or that our trade secrets will not become known to or be independently developed by our competitors. The loss of trade secret protection for technologies or know-how relating to our product portfolio and products under development could adversely affect our business and our prospects.

Our business position also depends in part on our ability to maintain and defend our existing patents and obtain, maintain, and defend additional patents and other intellectual property rights. We intend to seek additional patents, but our pending and future patent applications may not result in issued patents or be granted on a timely basis. In addition, issued patents may not contain claims sufficiently broad to protect us against third parties with similar technologies or products or provide us with any competitive advantage, including exclusivity in a particular product area. The scope of our patent claims also may vary between countries, as individual countries have distinctive patent laws. We may be subject to challenges by third parties regarding our intellectual property, including, among others, claims regarding validity, enforceability, scope and effective term. Patent prosecution, related proceedings, and litigation in the U.S. and in other countries may be expensive, time consuming and ultimately unsuccessful. In addition, patents issued by foreign countries may afford less protection than is available under U.S. patent law and may not adequately protect our proprietary information. Our competitors may independently develop proprietary technologies and processes that are the same as or substantially equivalent to ours or design around our patents. Our competition may also hold or obtain intellectual property rights that would threaten our ability to develop or commercialize our product offerings. The expiration of patents on which we rely for protection of key products could diminish our competitive advantage and adversely affect our business and our prospects.

Companies in the medical device industry typically obtain patents and frequently engage in substantial intellectual property litigation. Our products and technologies could infringe on the rights of others. If a third-party successfully asserts a claim for infringement against us, we may be liable for substantial damages, be unable to sell products using that technology, or have to seek a license or redesign the related product. These alternatives may be uneconomical or impossible. Intellectual property litigation could be costly, result in product development delays and divert the efforts and attention of management from our business.

For a discussion of our material legal proceedings as of March 31, 2017, please see Note 11 to our consolidated financial statements entitled “Commitments and Contingencies,” which is incorporated by reference into this item.

Product liability claims could damage our reputation and adversely affect our financial results.

The clinical use of medical products, even after regulatory approval, poses an inherent risk of product liability claims. We maintain limited product liability insurance coverage, subject to certain deductibles and exclusions. We cannot be sure that product liability insurance will be available in the future or will be available on acceptable terms or at reasonable costs, or that such insurance will provide us with adequate coverage against potential liabilities. Claims against us, regardless of their merit or potential outcome, may also hurt our ability to obtain physician endorsement of our products or expand our business. As we continue to expand use of our existing products and introduce more products, we face an increased risk that a product liability claim will be brought against us.

Some of our products are designed for patients who suffer from late-stage or end-stage heart failure, and many of these patients do not survive, even when supported by our products. There are many factors beyond our control that could result in patient death, including the condition of the patient prior to use of the product, the skill and reliability of physicians and hospital personnel using and monitoring the product and product maintenance by customers. However, the failure of our products used for clinical testing or sale could give rise to product liability claims and negative publicity.

The risk of product liability claims is heightened when we sell products that are intended to support a patient until the end of life. The finite life of our products, as well as complications associated with their use, could give rise to product liability claims whether or not the products have extended or improved the quality of a patient’s life. If we have to pay product liability claims in excess of our insurance coverage, our financial condition will be adversely affected.

Quality problems can result in substantial costs and inventory write-downs.

Government regulations require us to track materials used in the manufacture of our products, so that if a problem is identified in one product it can be traced to other products that may have the same problem. An identified quality problem may require reworking or scrapping related inventory and/or recalling previous shipments. Because a malfunction in our products can possibly be life-threatening, we may be required to recall and replace, free of charge, products already in the marketplace. Any quality problem could cause us to incur significant expenses, lead to significant write-offs, injure our reputation and harm our business and financial results.

Disruptions of critical information systems or material breaches in the security of our systems could harm our business, customer relations and financial condition.

We rely in part on information technology to store information, interface with customers, maintain financial accuracy, secure our data and accurately produce our financial statements. If our information technology systems do not effectively and securely collect, store, process and report relevant data for the operation of our business, whether due to equipment malfunction or constraints, software deficiencies or human error, our ability to effectively plan, forecast and execute our business plan and comply with applicable laws and regulations would be materially impaired. Any such impairment could have a material adverse effect on our results of operations, financial condition and the timeliness with which we report our operating results.

Our business requires us to use and store personally identifiable information of our customers, vendors, employees and business partners and, in certain instances patients treated with our products in the clinical setting. We are subject to various domestic and international privacy and security regulations, including but not limited to HIPAA, which mandates, among other things, the adoption of uniform standards for the electronic exchange of information in common healthcare transactions, as well as standards relating to the privacy and security of individually identifiable health information, which require the adoption of administrative, physical and technical safeguards to protect such information. In addition, many states have enacted comparable laws addressing the privacy and security of health information, some of which are more stringent than HIPAA. If we fail to comply with these standards, we could be subject to criminal penalties and civil sanctions.

While we devote significant resources to network security, data encryption and other security measures to protect our systems and data, including our own proprietary information and the confidential and personally identifiable information of our customers, employees, business partners and patients, these measures cannot provide absolute security. The costs to eliminate or alleviate network security problems, bugs, viruses, worms, malicious software programs and security vulnerabilities could be significant, and our efforts to address these problems may not be successful, resulting potentially in the theft, loss, destruction or corruption of information we store electronically, as well as unexpected interruptions, delays or cessation of service, any of which could cause harm to our business operations. Moreover, if a computer security breach or cyber-attack affects our systems or results in the unauthorized release of proprietary or personally identifiable information, our reputation could be materially damaged and our operations could be impaired. We would also be exposed to a risk of loss or litigation and potential liability, which could have a material adverse effect on our business, results of operations and financial condition.

If we acquire other companies or businesses, we will be subject to risks that could hurt our business.

We may pursue acquisitions to obtain complementary businesses, products or technologies. Any such acquisition may not produce the revenues, earnings or business synergies that we anticipate and an acquired business, product or technology might not perform as we expect. Our management could spend a significant amount of time, effort and money in identifying, pursuing and completing the acquisition. If we complete an acquisition, we may encounter significant difficulties and incur substantial expenses in integrating the operations and personnel of the acquired company into our operations. In particular, we may lose the services of key employees of the acquired company and we may make changes in management that impair the acquired company's relationships with employees, vendors and customers. Additionally, we may acquire development-stage companies that are not yet profitable and which require continued investment, which could decrease our future earnings.

Any of these outcomes could prevent us from realizing the anticipated benefits of an acquisition. To pay for an acquisition, we might use stock or cash. Alternatively, we might borrow money from a bank or other lender. If we use stock, our stockholders would experience dilution of their ownership interests. If we use cash or debt financing, our financial liquidity would be reduced.

If we include future milestones as part of the potential purchase price of an acquisition, as we did in connection with our acquisition of ECP in July 2014, then we will have to estimate the value of these milestones each reporting period and any changes underlying these estimates with respect to expected timing or valuation of these milestones could have a volatile impact on our earnings.

Revisions to accounting standards and financial reporting and corporate governance requirements could result in changes to our standard practices and could require a significant expenditure of time, attention and resources, especially by senior management.

We must follow accounting standards and financial reporting and corporate governance requirements and tax laws set by the governing bodies and lawmakers in the U.S. and in other jurisdictions where we do business, as well as NASDAQ. From time to time, these governing bodies and lawmakers implement new and revised rules and laws. These new and revised accounting standards and financial reporting and corporate governance requirements may require changes to our financial statements, financial and governance reporting requirements, the composition of our Board of Directors, the responsibility and manner of operation of various board level

committees and the information filed by us with the governing bodies. Our main accounting practices that may be affected by changes in the accounting principles are as follows:

- accounting for revenue recognition;
- accounting for intangibles—goodwill and other;
- fair value measurement;
- accounting for income taxes;
- accounting for stock-based compensation;
- accounting for leases; and
- accounting for business combinations.

Implementing changes required by new standards, requirements or laws likely will require a significant expenditure of time, attention and resources. It is impossible to completely predict the impact, if any, on us of future changes to accounting standards and financial reporting and corporate governance requirements.

We use estimates, make judgments and apply certain methods in measuring the progress of our business in determining our financial results and in applying our accounting policies. As these estimates, judgments and methods change, our assessment of the progress of our business and our results of operations could vary.

The methods, estimates and judgments we use in applying our accounting policies have a significant impact on our results of operations. Such methods, estimates and judgments are, by their nature, subject to substantial risks, complexities, uncertainties and assumptions, and factors may arise over time that may lead us to change our methods, estimates and judgments. Changes in any of our assumptions may cause variation in our financial reporting and may adversely affect our reported financial results.

Environmental and health safety laws may result in liabilities, expenses and restrictions on our operations.

Federal, state, local and foreign laws regarding environmental protection, hazardous substances and human health and safety may adversely affect our business. Using hazardous substances in our operations exposes us to the risk of accidental injury, contamination or other liability from the use, storage, importation, handling, or disposal of hazardous materials. If our or our suppliers' operations result in the contamination of the environment or expose individuals to hazardous substances, we could be liable for damages and fines, and any liability could significantly exceed our insurance coverage and have a material adverse effect on our financial condition. We maintain insurance for certain environmental risks, subject to substantial deductibles; however, we cannot assure you we can continue to maintain this insurance in the future at an acceptable cost or at all. Future changes to environmental and health and safety laws could cause us to incur additional expenses or restrict our operations.

Fluctuations in foreign currency exchange rates could result in declines in our reported sales and results of operations.

Because some of our international sales are denominated in local currencies and not in U.S. dollars, our reported sales and earnings are subject to fluctuations in foreign currency exchange rates, primarily the Euro. At present, we do not hedge our exposure to foreign currency fluctuations. As a result, sales and expenses occurring in the future that are denominated in foreign currencies may be translated into U.S. dollars at less favorable rates, resulting in reduced revenues and earnings.

Risks Related to Our Common Stock

The market price of our common stock is volatile.

The market price of our common stock has fluctuated widely and may continue to do so. For example, from April 1, 2016 to March 31, 2017, the price of our stock ranged from a low of \$92.03 per share to a high of \$132.95 per share. Many factors could cause the market price of our common stock to rise and fall. Some of these factors are:

- variations in our quarterly results of operations;
- status of regulatory approvals for our products;
- introduction of new products by us or our competitors;
- acquisitions or strategic alliances involving us or our competitors;

- changes in healthcare policy or third-party reimbursement practices;
- changes in estimates of our performance or recommendations by securities analysts;
- the hiring or departure of key personnel;
- results of clinical trials of our products;
- notice of a recall or other safety issue that impacts the ability for customers to use our products;
- future sales of shares of common stock in the public market;
- the outcome of currently pending litigation and governmental investigations, or the initiation of additional litigation or government investigations against the company; and
- market conditions in the industry, particularly around reimbursement for our products and the economy as a whole.

In addition, the stock market in general and the market for shares of medical device companies in particular have experienced extreme price and volume fluctuations in recent years. These fluctuations are often unrelated to the operating performance of particular companies. These broad market fluctuations may adversely affect the market price of our common stock. When the market price of a company's stock drops significantly, stockholders often institute securities class action litigation against that company. Any litigation against us could cause us to incur substantial costs, divert the time and attention of our management and other resources, or otherwise harm our business.

The sale of additional shares of our common stock, or the exercise of outstanding options to purchase our common stock, would dilute our stockholders' ownership interest.

We have historically issued restricted stock units and stock options to acquire our common stock and we expect to continue to issue restricted stock units and stock options to our employees and others in the future. If all outstanding stock options were exercised and all outstanding restricted stock units vested, our stockholders would suffer dilution of their ownership interest. In addition, we have issued from time to time, additional shares of our common stock in connection with acquisitions, public offerings, and other activities. Future issuances of our common stock would also result in a dilution of our stockholders' ownership interest.

Our certificate of incorporation and Delaware law could make it more difficult for a third-party to acquire us and may prevent our stockholders from realizing a premium on our stock.

Provisions of our certificate of incorporation and Delaware General Corporation Law may make it more difficult for a third-party to acquire us, even if doing so would allow our stockholders to receive a premium over the prevailing market price of our stock. Those provisions of our certificate of incorporation and Delaware law are intended to encourage potential acquirers to negotiate with us and allow our Board of Directors the opportunity to consider alternative proposals in the interest of maximizing stockholder value. However, such provisions may also discourage acquisition proposals or delay or prevent a change in control which could negatively affect our stock price.

The market value of our common stock could vary significantly based on market perceptions of the status of our product development efforts.

The perception of securities analysts regarding our product development efforts could significantly affect our stock price. As a result, the market price of our common stock has and could in the future change substantially when we or our competitors make product announcements. Many factors affecting our stock price are industry related and beyond our control.

We have not paid and do not expect to pay dividends and any return on our stockholders' investment will likely be limited to the value of our common stock.

We have never paid dividends on our common stock and do not anticipate paying dividends on our common stock in the foreseeable future. The payment of dividends on our common stock will depend on our earnings, financial condition and other business and economic factors affecting us at such time as our board of directors may consider relevant. If we do not pay dividends, our common stock may be less valuable because a return on our stockholders' investment will only occur if our stock price appreciates.

ITEM 1B. *UNRESOLVED STAFF COMMENTS*

None.

ITEM 2. *PROPERTIES*

Our corporate offices are located at 22 Cherry Hill Drive, Danvers, Massachusetts 01923. The locations and uses of our major properties as of March 31, 2017, are listed below:

<u>Location</u>	<u>Function</u>
Danvers, Massachusetts	(1) Corporate Headquarters, Research and Development, Regulatory and Clinical Affairs, Manufacturing, Administration, Marketing, Distribution
Aachen, Germany	(2) Research and Development, Regulatory and Clinical Affairs, Manufacturing, Administration, Marketing, Distribution
Berlin, Germany	(1) Research and Development, Regulatory and Clinical Affairs
Tokyo, Japan	(1) Administration, Regulatory and Clinical Affairs, Marketing, Distribution

(1) Leased properties

Our corporate headquarters is located in Danvers, Massachusetts. This facility encompasses most of our U.S. operations, including research and development, manufacturing, sales and marketing and general and administrative departments. On August 12, 2016, we entered into a new lease agreement to expand our existing corporate headquarters which includes 163,560 square feet of space. The initial term of the lease agreement commenced on August 12, 2016 and terminates on August 31, 2026. We have options to extend the initial term for three separate periods of five years each. The lease agreement provides us with an exclusive option to purchase the building on or before August 31, 2022, subject to certain conditions set forth therein. In addition, the lease agreement grants us a one-time right of first offer to purchase the building from September 1, 2022 until August 31, 2026, if the lessor decides to sell the building or receives an offer to purchase the building from a third-party buyer.

In February 2017, we entered into a lease agreement for an additional office space in Danvers, Massachusetts which expires in July 2022.

In October 2016, we entered into a lease agreement in Tokyo, Japan which expires in September 2021.

In September 2016, we entered into a lease agreement in Berlin, Germany which begins in May 2017 expires in May 2024.

(2) Owned property

In December 2016, we entered into a purchase and sale agreement to acquire its existing European headquarters in Aachen, Germany, consisting of 33,000 square feet of space. Pursuant to the purchase and sale agreement, we acquired the property for approximately \$12.6 million in February 2017.

We believe our properties have been well maintained, are in good operating condition, and provide adequate productive capacity.

ITEM 3. *LEGAL PROCEEDINGS*

We are from time to time involved in various legal actions, the outcomes of which are not within our complete control and may not be known for prolonged periods of time. For a discussion of our material legal proceedings as of March 31, 2017, please see Note 11 to our consolidated financial statements entitled "Commitments and Contingencies," which is incorporated by reference into this item.

ITEM 4. *MINE SAFETY DISCLOSURES*

Not applicable.

PART II

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

Market Price

Our common stock is traded on the NASDAQ Global Market under the symbol "ABMD." The following table sets forth the range of high and low sales prices per share of common stock, as reported by the NASDAQ Global Market for our two most recent fiscal years:

	<u>High</u>	<u>Low</u>
Fiscal Year Ended March 31, 2017		
First Quarter	\$ 109.66	\$ 92.03
Second Quarter	131.16	108.77
Third Quarter	132.95	95.14
Fourth Quarter	126.04	103.53

	<u>High</u>	<u>Low</u>
Fiscal Year Ended March 31, 2016		
First Quarter	\$ 76.90	\$ 59.04
Second Quarter	110.68	64.03
Third Quarter	99.22	68.25
Fourth Quarter	95.21	67.81

Number of Stockholders

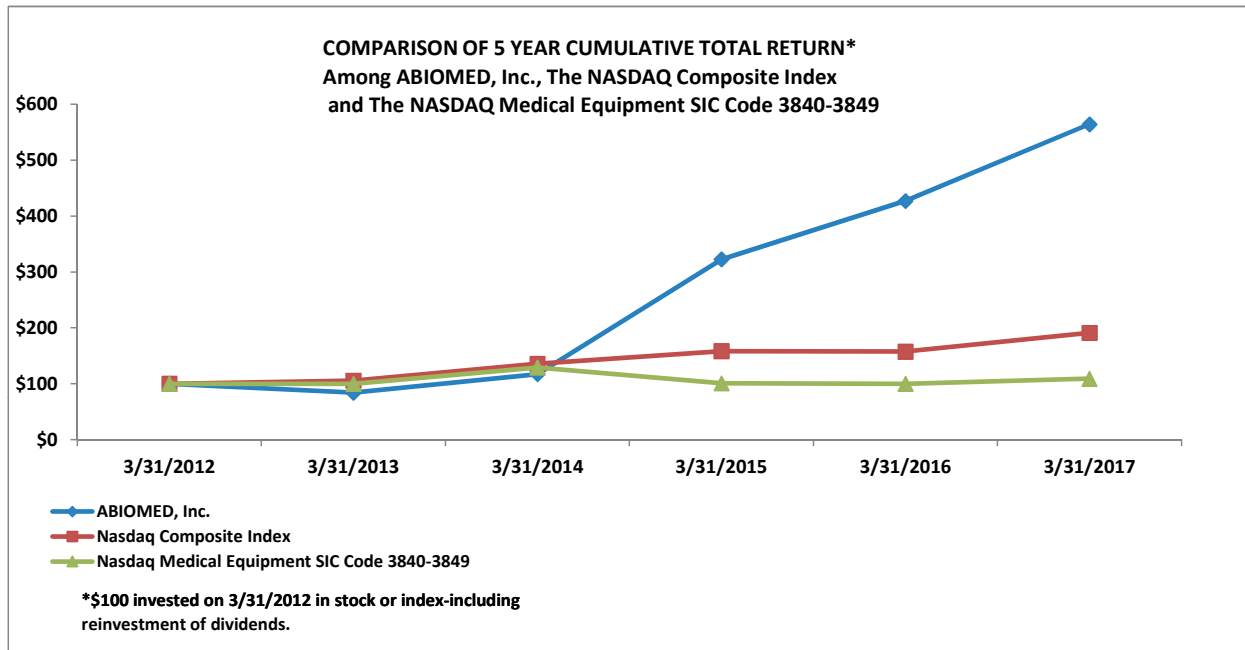
As of May 12, 2017, we had approximately 517 holders of record of our common stock and there were approximately 27,110 beneficial holders of our common stock. Many beneficial holders hold their stock through depositories, banks and brokers included as a single holder in the single "street" name of each respective depository, bank, or broker.

Dividends

We have never declared or paid any cash dividends on our common stock and do not anticipate paying any cash dividends on our common stock in the foreseeable future. We anticipate that we will retain all of our future earnings, if any, to support operations and to finance the growth and development of our business. Our payment of any future dividends will be at the discretion of our board of directors and will depend upon our financial condition, operating results, cash needs and growth plans.

Performance Graph

The following graph compares the yearly change in the cumulative total stockholder return for our last five full fiscal years, based upon the market price of our common stock, with the cumulative total return on a NASDAQ Composite Index (U.S. Companies) and a peer group, the NASDAQ Medical Equipment-SIC Code 3840-3849 Index, which is comprised of medical equipment companies, for that period. The performance graph assumes the investment of \$100 on March 31, 2012 in our Common Stock, the NASDAQ Composite Index (U.S. Companies) and the peer group index, and the reinvestment of any and all dividends.



	Cumulative Total Return (\$)					
	3/31/2012	3/31/2013	3/31/2014	3/31/2015	3/31/2016	3/31/2017
ABIOMED, Inc	100	84	117	323	427	564
Nasdaq Composite Index	100	106	136	159	158	191
Nasdaq Medical Equipment SIC Code 3840-3849	100	100	129	101	100	109

This graph is not “soliciting material” under Regulation 14A or 14C of the rules promulgated under the Securities Exchange Act of 1934, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference in any of our filings under the Securities Act of 1933, as amended, or the Exchange Act whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.

Transfer Agent

American Stock Transfer & Trust Company, 59 Maiden Lane, New York, NY 10038, is our stock Transfer Agent.

ITEM 6. SELECTED FINANCIAL DATA

The financial data included within the tables below should be read in conjunction with our consolidated financial statements and related notes and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” section of this report and our previously filed Form 10-Ks.

SELECTED CONSOLIDATED FINANCIAL DATA

(In thousands, except per share data)

	Fiscal Years Ended March 31,				
	2017	2016	2015	2014	2013
Statement of Operations Data:					
Revenue:					
Products	\$ 445,195	\$ 329,520	\$ 229,950	\$ 183,280	\$ 157,614
Funded research and development	109	23	361	363	510
	<u>445,304</u>	<u>329,543</u>	<u>230,311</u>	<u>183,643</u>	<u>158,124</u>
Costs and expenses:					
Cost of product revenue	70,627	50,419	39,945	37,322	31,596
Research and development	66,386	49,759	35,973	30,707	25,647
Selling, general and administrative	218,153	164,261	125,727	107,251	84,227
Amortization of intangible assets	-	-	-	-	111
	<u>355,166</u>	<u>264,439</u>	<u>201,645</u>	<u>175,280</u>	<u>141,581</u>
Income from operations	90,138	65,104	28,666	8,363	16,543
Other income (expense):					
Investment income (expense), net	1,554	395	196	118	(7)
Other (expense) income, net	(349)	339	(97)	49	326
	<u>1,205</u>	<u>734</u>	<u>99</u>	<u>167</u>	<u>319</u>
Income before income taxes	91,343	65,838	28,765	8,530	16,862
Income tax provision (benefit) (1)	39,227	27,691	(84,923)	1,179	1,848
Net income	<u>\$ 52,116</u>	<u>\$ 38,147</u>	<u>\$ 113,688</u>	<u>\$ 7,351</u>	<u>\$ 15,014</u>
Basic net income per share	\$ 1.21	\$ 0.90	\$ 2.80	\$ 0.19	\$ 0.38
Basic weighted average shares outstanding	43,238	42,204	40,632	39,334	39,113
Diluted net income per share	\$ 1.17	\$ 0.85	\$ 2.65	\$ 0.18	\$ 0.37
Diluted weighted average shares outstanding	44,658	44,895	42,858	41,606	41,052
Balance Sheet Data:					
Cash, cash equivalents, and short and long term marketable securities	\$ 277,091	\$ 213,053	\$ 145,954	\$ 118,340	\$ 88,113
Working capital (2)	257,341	241,851	145,720	87,555	89,549
Total assets	550,414	423,931	338,367	205,407	169,999
Stockholders' equity	452,071	368,775	291,560	168,353	137,080

- (1) Income tax benefit for the quarter and year ended March 31, 2015 were impacted by the release of the \$101.5 million valuation allowance on certain deferred tax assets.
- (2) This reflects a \$35.1 million reclassification of current deferred tax assets to long-term deferred tax assets on the March 31, 2015 consolidated balance sheet due to the adoption of ASU No. 2015-17, *Income Taxes (Topic 740)—Balance Sheet Classification of Deferred Taxes*. This reclassification did not impact working capital at March 31, 2014 and 2013 due to the full valuation allowance on deferred tax assets for those years.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

All statements, trend analysis and other information contained in the following discussion relative to markets for our products and trends in revenue, gross margin and anticipated expense levels, as well as other statements, including words such as "may," "anticipate," "believe," "plan," "estimate," "expect," and "intend" and other similar expressions constitute forward-looking statements. These forward-looking statements are subject to business and economic risks and uncertainties and our actual results of operations may differ materially from those contained in the forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed under Item 1A Risk Factors as well as other risks and uncertainties referenced in this report.

Overview

We are a leading provider of temporary mechanical circulatory support devices, and we offer a continuum of care to heart failure patients. We develop, manufacture and market proprietary products that are designed to enable the heart to rest, heal and recover by improving blood flow to the coronary arteries and end-organs and/or temporarily assisting the pumping function of the heart. Our products are used in the cardiac catheterization lab, or cath lab, by interventional cardiologists, the electrophysiology lab, the hybrid lab and in the heart surgery suite by heart surgeons. A physician may use our devices for patients who are in need of hemodynamic support prophylactically, urgently or emergently before, during or after angioplasty or heart surgery procedures. We believe that heart recovery is the optimal clinical outcome for a patient experiencing heart failure because it enhances the potential for the patient to go home with the patient's own native heart, facilitating the restoration of quality of life. In addition, we believe, that for the care of such patients, heart recovery is often the most cost-effective solution for the healthcare system.

Our strategic focus and the driver of the majority of our revenue growth is the market penetration of our family of Impella® heart pumps. The Impella device portfolio, which includes the Impella 2.5® Impella CP®, Impella RP®, Impella LD® and Impella 5.0® devices, has supported thousands of patients. We expect that almost all of our product and service revenue in the near future will be from our Impella devices. Revenues from our non-Impella devices, largely focused on the heart surgery suite, have been decreasing over the past several years and are expected to be insignificant as we have strategically shifted our sales and marketing efforts towards our Impella devices and the cath lab.

In March 2015, we received a Pre-Market Approval, or PMA, from the FDA for use of the Impella 2.5 device during elective and urgent high-risk percutaneous coronary intervention, or PCI, procedures. In December 2016, the FDA expanded this PMA approval in the U.S. to include the Impella CP device. With these PMA indications, the Impella 2.5 and Impella CP devices provide the only minimally invasive treatment options indicated for use during high-risk PCI procedures. In April 2016, the FDA approved a PMA supplement for our Impella 2.5, Impella CP, Impella 5.0 and Impella LD devices to provide treatment for ongoing cardiogenic shock that occurs following a heart attack or open heart surgery. The intent of the Impella system therapy is to reduce ventricular work and to provide the circulatory support necessary to allow heart recovery and early assessment of residual myocardial function.

Our Impella 2.5, Impella 5.0, Impella LD, Impella CP and Impella RP devices also have CE Mark approval and Health Canada approval, which allows us to market these devices in the European Union and Canada.

In September 2016, we received Pharmaceuticals and Medical Devices Agency, or PMDA, approval from the Japanese Ministry of Health, Labour & Welfare for our Impella 2.5 and Impella 5.0 heart pumps to provide treatment of drug-resistant acute heart failure in Japan. We are preparing for the market launch in Japan, including working with Japanese government authorities to obtain appropriate reimbursement for these products. We do not expect to have any material revenue in Japan during fiscal 2018.

In May 2017, we announced the enrollment of the first patient in the FDA approved prospective feasibility study, STEMI Door to Unloading with Impella CP system in acute myocardial infarction. This trial will focus on feasibility and safety of unloading the left ventricle using the Impella CP heart pump prior to primary PCI in patients presenting with ST segment elevation myocardial infarction, or STEMI, without cardiogenic shock with the hypothesis that this will potentially reduce infarct size. The study, which received Investigational Device Exemption, or IDE, approval from the FDA in October 2016, is a prospective, multi-center feasibility study. Up to 50 patients at 10 sites will be enrolled in the study. We enrolled the first patient in this study in April 2017 and we expect to complete enrollment in fiscal 2019.

In December 2016, we received PMA approval from the FDA for the use of the Impella CP device during elective and urgent high-risk PCI procedures, identical to the indication for use for the Impella 2.5 device. This approval allows the Impella CP to be used as a temporary (≤ 6 hours) ventricular support system indicated for use during high risk PCI procedures performed in elective or urgent hemodynamically stable patients with severe coronary artery disease and depressed left ventricular ejection fraction, when a heart team, including a cardiac surgeon, has determined that high risk PCI is the appropriate therapeutic option. The product labeling

allows for the clinical decision by physicians to leave the Impella CP device in place beyond the intended duration of up to six hours should unforeseen circumstances arise.

We expect to continue to make additional PMA supplement submissions for our Impella suite of devices for additional indications.

Summary of Recent Financial Performance

For fiscal 2017, we recognized net income of \$52.1 million, or \$1.21 per basic share and \$1.17 per diluted share, compared to \$38.1 million, or \$0.90 per basic share and \$0.85 per diluted share for the prior fiscal year. The increase in our net income for fiscal 2017 was driven primarily by higher Impella product revenue due to greater utilization of our Impella devices in the U.S. and Germany.

Critical Accounting Policies and Estimates

We prepare our consolidated financial statements in accordance with accounting principles generally accepted in the United States. Preparation of the consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the consolidated financial statements, as well as the reported amounts of revenue and expenses during the reporting period. Actual results could differ from these estimates. The accounting policies we believe are critical in the preparation of our consolidated financial statements relate to revenue recognition, in-process research and development, contingent consideration and income taxes. Our significant accounting policies are more fully described under the heading “Summary of Significant Accounting Policies” in Note 2 to our consolidated financial statements contained elsewhere herein.

Revenue Recognition

We recognize revenue when evidence of an arrangement exists, title has passed (generally upon shipment) or services have been rendered, the selling price is fixed or determinable and collectability is reasonably assured.

Revenue from product sales to customers is recognized when delivery has occurred. All costs related to product sales are recognized at time of delivery. We do not provide for rights of return to customers on our product revenue and therefore we do not record a provision for returns.

Maintenance and service support contract revenues are included in product revenue and are recognized ratably over the service contract term. Revenue is recognized as it is earned in limited instances where we rent console medical devices to customers on a month-to-month basis or for a longer specified period of time. Other service revenues are recognized as the services are performed.

Income Taxes

Our provision for income taxes is composed of a current and a deferred portion. The current income tax provision is calculated as the estimated taxes payable or refundable on tax returns for the current year. The deferred income tax provision is calculated for the estimated future tax effects attributable to temporary differences and net operating loss carryforwards using expected tax rates in effect in the years during which the differences are expected to reverse.

Deferred income taxes are recognized for the tax consequences in future years as the differences between the tax bases of assets and liabilities and their financial reporting amounts at each fiscal year end based on enacted tax laws and statutory tax rates applicable to the periods in which the differences are expected to impact taxable income.

We regularly assess our ability to realize our deferred tax assets. Assessing the realization of deferred tax assets requires significant management judgment. We consider whether a valuation allowance is needed on our deferred tax assets by evaluating all positive and negative evidence relative to our ability to recover deferred tax assets, including future reversals of existing taxable temporary differences, projected future taxable income, tax planning strategies and recent financial results.

We recognize and measure uncertain tax positions using a two-step approach. The first step is to evaluate the tax position for recognition by determining if, based on the technical merits, it is more likely than not that the position will be sustained upon audit, including resolution of related appeals or litigation processes, if any. The second step is to measure the tax benefit at the largest amount that is more likely than not of being realized upon ultimate settlement. We reevaluate these uncertain tax positions on an ongoing basis, when applicable. This evaluation is based on factors including, but not limited to, changes in facts or circumstances,

new information and technical insights, and changes in tax laws. Any changes in these factors could result in the recognition of a tax benefit or an additional charge to the tax provision. When applicable, we accrue for the effects of uncertain tax positions and the related potential penalties and interest through income tax expense.

Recent Accounting Pronouncements

Information regarding recent accounting pronouncements is included in Note 2. “Summary of Significant Accounting Policies” to our consolidated financial statements in this Report.

Results of Operations

The following table sets forth certain consolidated statements of operations data for the periods indicated as a percentage of total revenues:

	Fiscal Years Ended March 31,		
	2017	2016	2015
Revenue:			
Product revenue	100.0 %	100.0 %	99.8 %
Funded research and development	-	-	0.2
Total revenue	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Costs and expenses as a percentage of total revenue:			
Cost of product revenue	15.9	15.3	17.3
Research and development	14.9	15.1	15.6
Selling, general and administrative	49.0	49.8	54.6
Total costs and expenses	<u>79.8</u>	<u>80.2</u>	<u>87.5</u>
Income from operations	20.2	19.8	12.5
Other income and income tax provision (benefit)	8.5	8.2	(36.9)
Net income as a percentage of total revenue	<u>11.7 %</u>	<u>11.6 %</u>	<u>49.4 %</u>

Fiscal Years Ended March 31, 2017 and March 31, 2016 (“fiscal 2017” and “fiscal 2016”)

Revenue

Our revenue is comprised of the following:

	Fiscal Years Ended March 31,	
	2017	2016
	(in \$000's)	
Impella product revenue	\$ 423,694	\$ 310,138
Service and other revenue	19,116	16,588
Other products	2,385	2,794
Total product revenue	445,195	329,520
Funded research and development	109	23
Total revenue	<u>\$ 445,304</u>	<u>\$ 329,543</u>

Impella product revenue encompasses Impella 2.5, Impella CP, Impella 5.0, Impella LD, Impella RP and Impella AIC product sales. Service and other revenue represents revenue earned on service maintenance contracts and preventative maintenance calls. Other product revenue includes AB5000 and product accessory revenue.

Total revenue for fiscal 2017 increased \$115.8 million, or 35%, to \$445.3 million from \$329.5 million for fiscal 2016. The increase in total revenue was primarily due to increased Impella product revenue from increased utilization in the U.S. and Germany. Impella product revenue was higher as a result of recent PMA approvals in the U.S. in March 2015 for elective and high risk PCI procedures for Impella 2.5 and in April 2016 for cardiogenic shock for Impella 2.5, Impella CP, Impella 5.0 and Impella LD and in December 2016, to add Impella CP device for use in elective and high risk procedures.

Impella product revenue for fiscal 2017 increased by \$113.6 million, or 37%, to \$423.7 million from \$310.1 million for fiscal 2016. Most of the increase in Impella product revenue was from increased device sales in the U.S. related to our recent PMA approvals, as we focus on increasing utilization of our disposable catheter products through continued investment in our field organization and physician training programs. Impella product revenue outside of the U.S. grew in fiscal 2017 primarily due to increased utilization in Germany as we expand our field organization in that country. We expect product revenue from our Impella product line to continue to increase due to our recent PMAs in the U.S., continued controlled launch of Impella RP devices in the U.S. and expansion efforts in Europe, particularly Germany.

Service and other revenue for fiscal 2017 increased by \$2.5 million, or 15%, to \$19.1 million from \$16.6 million for fiscal 2016. The increase in service revenue was primarily due to an increase in preventative maintenance service contracts. We have expanded the number of Impella AIC consoles to most of our using sites and placed more consoles at existing higher using sites. Many of these sites have entered into service contracts for maintenance support of their consoles. We expect revenue growth for service revenue to be slower than product sales in the near future as most of our customers currently have service contracts with three year terms.

Other product revenue for fiscal 2017 decreased by \$0.4 million, or 14%, to \$2.4 million from \$2.8 million for fiscal 2016. Most of the decrease was due to lower AB5000 sales in the U.S. We expect that AB5000 revenue will be insignificant in the future as we are no longer manufacturing the AB5000 device and we only expect to have a minimal amount of AB5000 sales, primarily outside of the U.S. We have transitioned our sales focus in the surgical suite on Impella 5.0, Impella LD and Impella RP devices.

Costs and Expenses

Cost of Product Revenue

Cost of product revenue for fiscal 2017 increased by \$20.2 million, or 40%, to \$70.6 million from \$50.4 million for fiscal 2016. Gross margin was 84% for fiscal 2017 and 85% for fiscal 2016. The increase in cost of product revenues was related to increased growing demand for Impella devices and higher production volume and costs to support growing demand for our Impella devices. The increase in cost of product revenue was related to higher demand for our Impella devices and higher production volume and costs to support growing demand for our Impella devices. The decrease in gross margin was primarily due to larger number of shipments of AICs during fiscal 2017 and an increased investment in direct labor and overhead as we expand our manufacturing capacity.

Research and Development Expenses

Research and development expenses for fiscal 2017 increased by \$16.6 million, or 33%, to \$66.4 million from \$49.8 million for fiscal 2016. The increase in research and development expenses was primarily due to product development initiatives on our existing products and new technologies as we expanded our engineering organization, increased clinical spending primarily related to our cVAD Registry™ and our continued focus on quality initiatives for our Impella devices.

We expect research and development expenses to continue to increase in fiscal 2018 as we continue to increase clinical spending related to our cVAD Registry™ and the STEMI trial and incur additional costs as we continue to focus on engineering initiatives to improve our existing products and develop new technologies.

Selling, General and Administrative Expenses

Selling, general and administrative expenses for fiscal 2017 increased by \$53.9 million, or 33%, to \$218.2 million from \$164.3 million for fiscal 2016. The increase in selling, general and administrative expenses was primarily due to the hiring of additional field sales and clinical personnel in the U.S. and Germany, increased spending on marketing initiatives as we continue to educate physicians on the benefits of hemodynamic support after receiving PMAs in the U.S. for Impella 2.5, Impella CP, Impella 5.0 and Impella LD devices, higher stock-based compensation expense and higher legal expenses related to the FCA Investigation, ongoing patent litigation and other legal matters discussed in “Note 11. Commitments and Contingencies—Litigation,” to our consolidated financial statements.

We expect to continue to increase our expenditures on sales and marketing activities, with particular investments in field sales and clinical personnel with cath lab expertise to drive recovery awareness for acute heart failure patients. We also plan to increase our marketing, service and training investments as a result of recent PMA approvals in the U.S. for our Impella devices and as we expand to new markets outside of the U.S., such as Japan. We also expect to continue to incur significant legal expenses for the foreseeable future related to the FCA Investigation and patent related matters. Our selling, general and administrative expense could increase in the fourth quarter of fiscal 2018 with the potential return of the medical device tax in the U.S. in January 2018, that was temporarily halted in January 2016.

Income Tax Provision

We recorded an income tax provision of \$39.2 million for fiscal 2017, compared to \$27.7 million for fiscal 2016. The increase in income tax provision for fiscal 2017 was due primarily to higher income in fiscal 2017 due to higher Impella product revenue.

Net Income

For fiscal 2017, we recognized net income of \$52.1 million, or \$1.21 per basic share and \$1.17 per diluted share, compared to \$38.1 million, or \$0.90 per basic share and \$0.85 per diluted share for fiscal 2016. Our net income for fiscal 2017 was driven primarily to higher Impella product revenue due to greater utilization of our Impella devices in the U.S. and Europe.

As described within Note 2. "Summary of Significant Accounting Policies" to our consolidated financial statements in this Report, we will adopt ASU 2016-09, *Compensation-Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*, in the first quarter of fiscal 2018. We believe that the adoption of ASU 2016-09 will have a significant impact on our consolidated financial statements, most notably, the requirement to recognize certain tax benefits or shortfalls upon restricted stock unit vestings or stock option exercises in the income tax provision in our consolidated statement of operations. The adoption of ASU 2016-09 is likely to introduce fluctuations to net income, our income tax provision and earnings per share in fiscal 2018.

Fiscal Years Ended March 31, 2016 and March 31, 2015 ("fiscal 2016" and "fiscal 2015")

Revenue

Our revenue is comprised of the following:

	Fiscal Years Ended March 31,	
	2016	2015
	(in \$000's)	
Impella product revenue	\$ 310,138	\$ 212,665
Service and other revenue	16,588	13,768
Other products	2,794	3,517
Total product revenue	329,520	229,950
Funded research and development	23	361
Total revenue	<u>\$ 329,543</u>	<u>\$ 230,311</u>

Impella product revenue encompasses Impella 2.5, Impella CP, Impella 5.0, Impella LD, Impella RP and Impella AIC product sales. Service and other revenue represents revenue earned on service maintenance contracts and preventative maintenance calls. Other product revenue includes AB5000 and product accessory revenue.

Total revenue for fiscal 2016 increased by \$99.2 million, or 43%, to \$329.5 million from \$230.3 million for fiscal 2015. The increase in total revenue was primarily due to higher Impella revenue due mainly to greater utilization of our products in the U.S.

Impella product revenue for fiscal 2016 increased by \$97.4 million, or 46%, to \$310.1 million from \$212.7 million for fiscal 2015. Most of our increase in Impella revenue was from disposable catheter sales in the U.S., as we focus on increasing utilization of our disposable catheter products through continued investment in our field organization and physician training programs.

Service and other revenue for fiscal 2016 increased by \$2.8 million, or 20%, to \$16.6 million from \$13.8 million for fiscal 2015. The increase in service revenue was primarily due to an increase in preventative maintenance service contracts, as we expand the use of our Impella AIC consoles to additional sites.

Other product revenue for fiscal 2016 decreased by \$0.7 million, or 20%, to \$2.8 million from \$3.5 million for fiscal 2015. The decrease in other revenue was due to a decline in AB5000 disposable sales. We also had no sales of BVS 5000 in fiscal 2015 and we are no longer actively producing or selling that device.

Costs and Expenses

Cost of Product Revenue

Cost of product revenue for fiscal 2016 increased by \$10.5 million, or 26%, to \$50.4 million from \$39.9 million for fiscal 2015. Gross margin was 83% for fiscal 2016 and 80% for fiscal 2015. The increase in cost of product revenues was related to increased demand for Impella devices and higher production volume and costs to support growing demand for our Impella devices. Gross margin was impacted favorably in fiscal 2016 by higher manufacturing production volume, fewer shipments of Impella AIC consoles,

improved efficiencies in manufacturing production and favorable foreign currency impact of lower Euro as much of our manufacturing is performed in Germany.

Research and Development Expenses

Research and development expenses for fiscal 2016 increased by \$13.8 million, or 38%, to \$49.8 million from \$36.0 million in fiscal 2015. The increase in research and development expenses was primarily due to product development initiatives on our existing products and new technologies, increased clinical spending primarily related to our cVAD Registry™ and post approval studies, a focus on quality initiatives for our Impella devices and a full year of activities related to our ECP purchase that was completed in July 2014.

Selling, General and Administrative Expenses

Selling, general and administrative expenses for fiscal 2016 increased by \$38.6 million, or 31%, to \$164.3 million from \$125.7 million in fiscal 2015. The increase in selling, general and administrative expenses was primarily due to the hiring of additional U.S. field sales and clinical personnel, increased spending on marketing initiatives as we continue to educate physicians on the benefits of hemodynamic support after receiving PMA approval for Impella 2.5, higher stock-based compensation expense and higher professional fees to support the growth of our business.

Income Tax Provision

We recorded an income tax provision of \$27.7 million in fiscal 2016 compared to an income tax benefit of \$84.9 million in fiscal 2015. The increase in income tax provision for fiscal 2016 was due to the fact that we had a full valuation allowance on most of our federal, state and certain foreign deferred tax assets prior to March 31, 2015, at which time most of the valuation allowance was reversed. The income tax provision for fiscal 2016 was primarily due to the income before taxes of \$65.8 million generated in fiscal 2016, primarily in the U.S. and Germany. The income tax benefit in fiscal 2015 was comprised of an \$87.1 million deferred tax benefit primarily due to the release of our valuation allowance on certain of our deferred tax assets in the year ended March 31, 2015, partially offset by a current income tax provision of \$2.2 million in U.S and Germany.

Net Income

During fiscal 2016, we recognized net income of \$38.1 million, or \$0.90 per basic share and \$0.85 per diluted share, compared to \$113.7 million, or \$2.80 per basic share and \$2.65 per diluted share for fiscal 2015. Our net income for fiscal 2016 was driven primarily to higher Impella product revenue due to greater utilization of our Impella devices in the U.S. and Europe, partially offset by the increase in income tax provision for fiscal 2016 due to the fact that we had a full valuation allowance on most of our deferred tax assets prior to March 31, 2015, at which time most of the valuation allowance was reversed. Our net income for fiscal 2015 included an income tax benefit of \$84.9 million, primarily due to the release of our valuation allowance on certain of our deferred tax assets.

Liquidity and Capital Resources

At March 31, 2017, our total cash, cash equivalents, and short and long-term marketable securities totaled \$277.1 million, an increase of \$64.0 million compared to \$213.1 million at March 31, 2016. The increase in our cash, cash equivalents, and short and long-term marketable securities was due primarily to positive cash flows from operations in fiscal 2017.

A summary of our cash flow activities is as follows:

	For the Year Ended March 31,		
	2017	2016	2015
Net cash provided by operating activities	\$ 115,116	\$ 76,795	\$ 43,290
Net cash used for investing activities	(126,333)	(57,710)	(49,863)
Net cash provided by financing activities	3,867	7,160	9,523
Effect of exchange rate changes on cash	(1,841)	(415)	(1,465)
Net (decrease) increase in cash and cash equivalents	<u>\$ (9,191)</u>	<u>\$ 25,830</u>	<u>\$ 1,485</u>

Cash Provided by Operating Activities

For the year ended March 31, 2017, cash provided by operating activities consisted of net income of \$52.1 million, adjustments for non-cash items of \$57.7 million and cash provided from working capital of \$5.3 million. Our net income for fiscal 2017 was driven primarily to higher Impella product revenue due to greater utilization of our Impella devices in the U.S. and Europe, partially

offset by the increase in income tax provision for fiscal 2017. Adjustments for non-cash items consisted primarily of \$32.9 million of stock-based compensation expense, a \$25.8 million change in deferred tax provision, \$12.0 million in excess tax benefits on stock-based awards, \$6.2 million of depreciation and amortization of property, plant and equipment, \$3.1 million of write-downs of inventory and \$1.6 million of changes in fair value of consideration. The increase in cash from changes in working capital included a \$11.6 million increase in accounts receivable associated with higher revenues, a \$12.3 million increase in inventory as we build up inventory safety stock to support growing demand for our Impella devices, a \$29.8 million increase in accounts payable and accrued expenses due to increase in operating expenses.

For the year ended March 31, 2016, cash provided by operating activities consisted of net income of \$38.1 million, adjustments for non-cash items of \$54.2 million and cash used in working capital of \$15.6 million. Our net income for fiscal 2016 was driven primarily to higher Impella product revenue due to greater utilization of our Impella devices in the U.S. and Europe, partially offset by the increase in income tax provision for fiscal 2016. Adjustments for non-cash items consisted primarily of \$29.1 million of stock-based compensation expense, a \$22.3 million change in deferred tax provision and \$3.3 million of depreciation and amortization of property, plant and equipment. The decrease in cash from changes in working capital included a \$10.9 million increase in accounts receivable associated with higher revenues, a \$11.5 million increase in inventory as we build up inventory safety stock to support growing demand for our Impella devices, a \$7.4 million increase in accounts payable and accrued expenses due to increase in operating expenses.

For the year ended March 31, 2015, cash provided by operating activities consisted of net income of \$113.7 million, less non-cash items of \$65.7 million and cash used for working capital of \$4.7 million. The increase in net income in fiscal 2015 included a deferred income tax benefit of \$87.1 million primarily due to the release of our valuation allowance on certain of our deferred tax assets and higher Impella product revenue due to greater utilization in the U.S. and Europe. Adjustments for non-cash items primarily consisted of \$16.5 million of stock-based compensation expense, \$2.8 million of depreciation and amortization of long-lived assets, \$2.2 million of write-downs of inventory and a \$0.5 million change in fair value of contingent consideration. The decrease in cash from changes in working capital included an \$8.0 million increase in accounts receivable from higher revenues, a \$7.0 million increase in inventory to support growing demand for our Impella products, and a \$1.5 million increase in prepaid expenses. These amounts were partially offset by \$9.4 million increase in accounts payable and accrued expenses due to increase in operating expenses and an increase in deferred revenue of \$2.3 million.

Cash Used in Investing Activities

For the year ended March 31, 2017, net cash used for investing activities included \$73.0 million in purchases (net of maturities) of marketable securities and \$50.4 million for the purchase of property and equipment mostly related to the purchase of the Aachen, Germany facility, expansion of manufacturing cleanroom capacity and office space in Danvers, Massachusetts and Aachen, Germany and investments in upgrading computer software. We also made \$2.9 million of investments in private medical technology companies during fiscal 2017.

For the year ended March 31, 2016, net cash used for investing activities included \$41.3 million in purchases (net of maturities) of marketable securities and \$15.6 million for the purchase of property and equipment mostly related to expansion of manufacturing cleanroom capacity and office space in Danvers, Massachusetts and Aachen, Germany as well as investments in upgrading computer software. We also made a \$0.8 million investment in a private medical technology company during fiscal 2016.

For the year ended March 31, 2015, net cash used for investing activities included \$26.1 million for the purchase (net of maturities) of marketable securities, \$15.7 million for our acquisition of ECP and AIS, \$5.2 million for the purchase of property and equipment mostly related to expansion of manufacturing capacity in Danvers, Massachusetts and Aachen, Germany and \$2.9 million of investments in private medical technology companies.

Capital expenditures for fiscal 2018 are estimated to range from \$25 to \$35 million, including additional capital expenditures for manufacturing capacity expansions in our Danvers, Massachusetts and Aachen, Germany facilities, additional office space, building and leasehold improvements and software development projects.

Cash Provided by Financing Activities

For the year ended March 31, 2017, net cash provided by financing activities included \$10.7 million in proceeds from the exercise of stock options, \$1.7 million in proceeds from the issuance of stock under the employee stock purchase plan and \$12.0 million in excess tax benefits on stock-based awards. These amounts were partially offset by \$20.1 million in payments in lieu of issuance of common stock for payroll withholding taxes upon vesting of certain equity awards and \$0.4 million in principal payments on capital lease obligation.

For the year ended March 31, 2016, net cash provided by financing activities included \$9.8 million in proceeds from the exercise of stock options, \$1.1 million in proceeds from the issuance of stock under the employee stock purchase plan and \$3.6 million

in excess tax benefits on stock-based awards. These amounts were partially offset by \$7.3 million in payments in lieu of issuance of common stock for payroll withholding taxes upon vesting of certain equity awards.

For the year ended March 31, 2015, net cash provided by financing activities included \$10.9 million in proceeds from the exercise of stock options, \$0.8 million in proceeds from the issuance of stock under the employee stock purchase plan and \$0.6 million in excess tax benefits on stock-based awards. These amounts were partially offset by \$2.8 million in payments in lieu of issuance of common stock for payroll withholding taxes upon vesting of certain equity awards.

Operating Capital and Liquidity Requirements

We believe that our revenue from product sales together with existing resources will be sufficient to fund our operations for at least the next twelve months, exclusive of activities involving any future acquisitions of products or companies that complement or augment our existing line of products.

Our primary liquidity requirements are to fund the expansion of our commercial and operational infrastructure in the U.S., expand our commercial teams in the U.S. and Europe, increase our manufacturing capacity, incur additional capital expenditures as we expand our office space and manufacturing capacity in Danvers and Aachen, increase our inventory levels in order to meet growing customer demand for our Impella devices, fund new product development initiatives, prepare for commercial launches of Impella devices in new markets in the future, such as Japan, increased clinical spending, costs of legal expenses related to the FCA Investigation and ongoing patent litigation and to provide for general working capital needs. To date, we have primarily funded our operations through product sales and the sale of equity securities.

Our liquidity is influenced by our ability to sell our products in a competitive industry and our customers' ability to pay for our products. Factors that may affect liquidity include our ability to penetrate the market for our products, maintain or reduce the length of the selling cycle for our products, capital expenditures, investments in collaborative arrangements with other partners, and our ability to collect cash from customers after our products are sold. We also expect to continue to incur legal expenses for the foreseeable future related to the FCA Investigation, ongoing patent litigation and other legal matters. We continue to review our short-term and long-term cash needs on a regular basis. At March 31, 2017, we had no long-term debt outstanding.

Marketable securities at March 31, 2017 consisted of \$238.1 million held in funds that invest in U.S. Treasury, government-backed securities and corporate debt securities. We are not a party to any interest rate swaps, currency hedges or derivative contracts of any type and we currently have no exposure to commercial paper or auction rate securities markets.

Cash and cash equivalents held by our foreign subsidiaries totaled \$8.2 million and \$4.5 million at March 31, 2017 and March 31, 2016, respectively. Any operating income earned outside the U.S. is intended to be permanently reinvested in foreign jurisdictions. We do not intend or currently foresee a need to repatriate cash and cash equivalents held by our foreign subsidiaries. If we ever do need to repatriate cash to the U.S., we believe that the potential U.S. tax impact to repatriate these funds would be immaterial.

Contractual Obligations and Commercial Commitments

The following table summarizes our contractual obligations at March 31, 2017 and the effects such obligations are expected to have on our liquidity and cash flows in future periods.

	Payments Due By Fiscal Year (in \$000's)				
	Total	Less than 1 Year	1-3 Years	3-5 Years	More than 5 Years
Capital lease commitments (1)	\$ 20,518	1,311	2,698	2,763	13,746
Operating lease commitments (1)	8,173	1,670	3,125	2,626	752
Contractual obligations (2) (3)	1,415	410	670	335	—
Total obligations	\$ <u>30,106</u>	\$ <u>3,391</u>	\$ <u>6,493</u>	\$ <u>5,724</u>	\$ <u>14,498</u>

(1) See Note 11 to our consolidated financial statements entitled "Commitments and Contingencies—Leases" for disclosures related to our capital and operating lease obligations.

(2) Contractual obligations represent future cash commitments and potential liabilities under agreements with third parties, primarily for research and development activities, such as clinical trials and material purchases for new product testing. In

April 2014, we entered into an exclusive license agreement for the rights to certain optical sensor technologies in the field of cardio-circulatory assist devices. Pursuant to the terms of the license agreement, we made a \$1.5 million upfront payment upon execution of the agreement and agreed to make additional payments of up to \$4.5 million upon achievement of specified development milestones. The future milestone payment amounts have not been included in the contractual obligations table above due to the uncertainty related to the successful achievement of these milestones.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK

Our business and financial results are affected by fluctuations in world financial markets, including changes in currency exchange rates and interest rates. We manage these risks through a combination of normal operating and financing activities. We do not use derivative financial instruments.

Investment and Interest Rate Risk

Our exposure to market risk for changes in interest rates relates primarily to our investment portfolio. Our investment strategy is focused on preserving capital and supporting our liquidity requirements, while earning a reasonable market return. We invest in a variety of U.S. government and agency securities and corporate debt securities. The market value of our investments may decline if current market interest rates rise. Marketable securities at March 31, 2017 consisted of \$238.1 million held in funds that invest in U.S. Treasury and government-backed securities. If market interest rates were to increase immediately and uniformly by 10% from levels at March 31, 2017, we believe the decline in fair market value of our investment portfolio would be immaterial. Any such declines would only result in a realized loss if we choose or are forced to sell the investments before the scheduled maturity, which we currently do not anticipate.

Currency Exchange Rates

We have foreign currency exposure to exchange rate fluctuations and particularly with respect to the euro, British pound sterling and Japanese yen. Therefore, our investment in our subsidiaries is sensitive to fluctuations in currency exchange rates. The effect of a change in currency exchange rates on our net investment in international subsidiaries is reflected in the accumulated other comprehensive income component of stockholders' equity. If foreign exchange rates for our international subsidiaries were to have depreciated immediately and uniformly by 10% relative to the U.S. dollar from levels at March 31, 2017, the result would have been a reduction of stockholders' equity of approximately \$7.4 million.

Concentrations of Risk

In the normal course of business, we provide credit to customers in the health care industry, perform credit evaluations of these customers, and maintain allowances for potential credit losses, which have historically been adequate compared to actual losses. In fiscal 2017, we had no customers that represented 10% or more of our total net sales or accounts receivable.

Other Investment Risk

We are exposed to investment risks related to changes in the underlying financial condition and credit capacity of certain of our other investments. We periodically make investments in private medical device companies that focus on heart failure and heart pump technologies. The aggregate carrying amount of our other investments was \$7.2 million and \$4.4 million at March 31, 2017 and 2016, respectively, and is classified within other assets in the consolidated balance sheets. We periodically monitor these investments for other than temporary declines in market value. Should these companies experience a decline in financial condition or credit capacity, or fail to meet certain development milestones, a decline in the investments' values may occur, resulting in unrealized or realized losses.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by this item is incorporated by reference from the discussion under the heading Part IV, Item 15 "Exhibits, Financial Statement Schedules" of this Annual Report on Form 10-K.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our principal executive officer and principal financial officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended (the “Exchange Act”)) as of March 31, 2017. Based on this evaluation, our principal executive officer and principal financial officer concluded that, as of March 31, 2017, these disclosure controls and procedures were effective to provide reasonable assurance that material information required to be disclosed by us, including our consolidated subsidiaries, in reports that we file or submit under the Exchange Act, is recorded, processed, summarized and reported, within the time periods specified in the Commission rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by us in the reports that we file or submit under the Act is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure.

Evaluation of Changes in Internal Control over Financial Reporting

During the fourth quarter of our fiscal year ended March 31, 2017, there were no changes in our internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Management’s Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Exchange Act Rule 13a-15(f). Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we assessed the effectiveness of our internal control over financial reporting based on the framework in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our assessment under the framework in *Internal Control—Integrated Framework (2013)*, our management concluded that our internal control over financial reporting was effective as of March 31, 2017.

Important Considerations

Our 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. Our internal control over financial reporting includes those policies and procedures that: (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of our assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness 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.

Deloitte & Touche LLP, an independent registered public accounting firm that audited our financial statements for the fiscal year ended March 31, 2017, included in this annual report, has issued an attestation report on the effectiveness of our internal control over financial reporting. This report is set forth below:

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of
ABIOMED, Inc.
Danvers, Massachusetts

We have audited the internal control over financial reporting of ABIOMED, Inc. and subsidiaries (the “Company”) as of March 31, 2017 based on criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company’s internal control over financial reporting 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 effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company’s internal control over financial reporting is a process designed by, or under the supervision of, the company’s principal executive and principal financial officers, or persons performing similar functions, and effected by the company’s board of directors, management, and other personnel 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. A company’s internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

Because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of March 31, 2017, based on the criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements as of and for the year ended March 31, 2017 of the Company and our report dated May 25, 2017 expressed an unqualified opinion on those financial statements.

/s/ DELOITTE & TOUCHE LLP

Boston, Massachusetts
May 25, 2017

ITEM 9B. *OTHER INFORMATION*

Not applicable.

PART III

ITEM 10. *DIRECTOR, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE*

The information required by Item 10 is incorporated by reference from our definitive proxy statement which will be filed no later than 120 days after the close of the fiscal year covered by this Annual Report on Form 10-K.

We have a Code of Conduct and Compliance Policy that applies to all of its directors, officers, and employees. Our Code of Conduct and Compliance Policy is disclosed on our website and a paper copy of this document may be obtained free of charge by writing to the Company's Chief Compliance Officer at the Company's corporate headquarters located at 22 Cherry Hill Drive, Danvers, Massachusetts 01923, or by email at IR@abiomed.com.

ITEM 11. *EXECUTIVE COMPENSATION*

The information required by Item 11 is incorporated by reference from our definitive proxy statement which will be filed no later than 120 days after the close of the fiscal year covered by this Annual Report on Form 10-K.

ITEM 12. *SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCK HOLDER MATTERS*

The information required by Item 12 is incorporated by reference from our definitive proxy statement which will be filed no later than 120 days after the close of the fiscal year covered by this Annual Report on Form 10-K.

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

The information required by Item 13 is incorporated by reference from our definitive proxy statement which will be filed no later than 120 days after the close of the fiscal year covered by this Annual Report on Form 10-K.

ITEM 14. *PRINCIPAL ACCOUNTANT FEES AND SERVICES*

The information required by Item 14 is incorporated by reference from our definitive proxy statement which will be filed no later than 120 days after the close of the fiscal year covered by this Annual Report on Form 10-K.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this report:

(1) The financial statements from our Annual Report for our fiscal year ending March 31, 2017 are attached hereto.

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<u>Report of Independent Registered Public Accounting Firm</u>	F-2
<u>Consolidated Balance Sheets as of March 31, 2017 and 2016</u>	F-3
<u>Consolidated Statements of Operations for the Fiscal Years Ended March 31, 2017, 2016 and 2015</u>	F-4
<u>Consolidated Statements of Comprehensive Income for the Fiscal Years Ended March 31, 2017, 2016 and 2015</u>	F-5
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(2) Consolidated financial statement schedule

Information is contained within Note 4. "Accounts Receivable" to our consolidated financial statements in this Report.

(3) Exhibits

EXHIBIT INDEX

Exhibit No.	Description	Filed with this Form 10-K	Incorporated by Reference		Exhibit No.
			Form	Filing Date	
2.1	Share Purchase Agreement for the acquisition of Impella Cardio Systems AG, dated April 26, 2005.		8-K (File No. 001-09585)	May 16, 2005	2.1
2.2	Agreement on the Sale and Transfer of all shares in ECP Entwicklungsgesellschaft mbH		8-K (File No. 001-09585)	July 7, 2014	2.1
2.3	Agreement on the Sale and Transfer of all shares in AIS GmbH Aachen Innovative Solutions		8-K (File No. 001-09585)	July 7, 2014	2.2
3.1	Restated Certificate of Incorporation.		S-3	September 29, 1997	3.1
3.2	Restated By-Laws, as amended.		10-K (File No. 001-09585)	May 27, 2004	3.2
3.3*	Certificate of Designations of Series A Junior Participating Preferred Stock—filed as Exhibit 3.3 to the 1997 Registration Statement.		S-3	September 29, 1997	3.3
3.4	Amendment to the Company's Restated Certificate of Incorporation to increase the authorized shares of common stock from 25,000,000 to 100,000,000.		8-K (File No. 001-09585)	March 21, 2007	3.4
4.1	Specimen Certificate of common stock.		S-1	June 5, 1987	4.1
10.1*	Form of Indemnification Agreement for Directors and Officers.		S-1	June 5, 1987	10.13
10.2*	Amendment to 1992 Combination Stock Option Plan.		10-Q (File No. 001-09585)	October 14, 1997	10.2
10.3*	1988 Employee Stock Purchase Plan, as amended.		10-Q (File No. 001-09585)	February 8, 2005	10.11

Exhibit No.	Description	Filed with this Form 10-K	Incorporated by Reference		Exhibit No.
			Form	Filing Date	
10.4*	1989 Non-Qualified Stock Option Plan for Non-Employee Directors.		10-Q (File No. 001-09585)	October 27, 1995	10.1
10.5*	1998 Equity Incentive Plan.		10-Q/A (File No. 001-09585)	January 8, 1999	10
10.6*	2000 Stock Incentive Plan Agreement, as amended.		Sch. 14A (File No. 001-09585)	July 15, 2005	Appendix A
10.7*	Form of Abiomed, Inc. Non-Statutory Stock Option Agreement for the 2000 Stock Incentive Plan for Directors.		10-Q (File No. 001-09585)	February 9, 2006	10.16
10.8*	Form of Abiomed, Inc. Non-Statutory Stock Option Agreement for the 2000 Stock Incentive Plan for Employees or Consultants.		10-Q (File No. 001-09585)	February 9, 2006	10.17
10.9*	Fourth Amended and Restated 2008 Stock Incentive Plan.		10-K (File No. 001-09585)	May 28, 2015	10.29
10.10*	Form of Non-Statutory Stock Option Agreement for Employees and Consultants under 2008 Stock Incentive Plan.		8-K (File No. 001-09585)	August 18, 2008	10.1
10.11*	Form of Non-Statutory Stock Option Agreement for Non-Employee Directors under 2008 Stock Incentive Plan.		8-K (File No. 001-09585)	August 18, 2008	10.2
10.12*	Form of Restricted Stock Agreement under 2008 Stock Incentive Plan.		8-K (File No. 001-09585)	August 18, 2008	10.3
10.13*	2015 Omnibus Incentive Plan.		Sch. 14A (File No. 001-09585)	July 2, 2015	Appendix A
10.14*	Form of TSR Award (Performance and Time-Based RSU).		10-Q (File No. 001-09585)	August 6, 2015	10.4
10.15*	TSR Award Agreement (Performance- and Time-Based RSU) of Michael R. Minogue dated November 14, 2016.		10-Q (File No. 001-09585)	February 3, 2017	10.1
10.16*	Form of Employee Time-Based RSU Agreement under the 2015 Omnibus Incentive Plan.	X			
10.17*	Form of Non-Employee Director Time-Based RSU Agreement under the 2015 Omnibus Incentive Plan.		10-Q (File No. 001-09585)	February 5, 2016	10.4
10.18*	Form of Field Employee Time-Based Option Agreement under the 2015 Omnibus Incentive Plan.	X			
10.19*	Form of Performance-Based RSU Agreement under the 2015 Omnibus Incentive Plan.	X			
10.20*	Form of Non-Employee Director Time-Based Option Agreement.		10-Q (File No. 001-09585)	February 5, 2016	10.7
10.21*	Employment Agreement of Michael R. Minogue dated April 5, 2004 (including Change in Control		10-Q (File No. 001-09585)	August 9, 2004	10.10

Exhibit No.	Description	Filed with this Form 10-K	Incorporated by Reference		Exhibit No.
			Form	Filing Date	
	Agreement).				
10.22*	Amendment to Employment Agreement with Michael R. Minogue dated December 31, 2008.		10-Q (File No. 001-09585)	February 9, 2009	10.1
10.23*	Amendment to Employment Agreement with Michael R. Minogue dated December 31, 2008.		10-Q (File No. 001-09585)	February 9, 2009	10.1
10.24*	Change in Control Severance Agreement with Michael J. Tomsicek dated September 27, 2016.		10-Q (File No. 001-09585)	November 4, 2016	10.2
10.25*	Inducement stock option granted to Michael R. Minogue dated April 5, 2004.		10-Q (File No. 001-09585)	August 9, 2004	10.11
10.26*	Restricted Stock Agreement between Abiomed, Inc. and Michael R. Minogue.		10-Q (File No. 001-09585)	October 9, 2005	10.15
10.27*	Offer Letter with Robert L. Bowen dated December 15, 2008.		8-K (File No. 001-09585)	December 22, 2008	99.2
10.28*	Offer letter with David Weber dated April 23, 2007.		10-Q (File No. 001-09585)	August 9, 2007	10.1
10.29*	Offer letter with Michael J. Tomsicek dated May 26, 2015.		10-Q (File No. 001-09585)	August 6, 2015	10.2
10.30*	Retirement Agreement with Robert L. Bowen dated May 26, 2015.		10-Q (File No. 001-09585)	August 6, 2015	10.3
10.31*	Summary of Executive Compensation.	X			
10.32*	Form of Employment, Nondisclosure and Non-Competition Agreement.		10-K (File No. 001-09585)	June 14, 2006	10.20
10.33	Lease agreement dated July 29, 2013 for the facility located in Aachen, Germany.		10-Q (File No. 001-09585)	November 8, 2013	10.1
10.34	Lease agreement for additional commercial space dated October 19, 2015 for the facility located in Aachen, Germany.		10-Q (File No. 001-09585)	November 4, 2015	10.1
10.35	Supplemental contract no. 1 dated October 19, 2015, to the lease agreement dated July 29, 2013 for the facility located in Aachen, Germany.		10-Q (File No. 001-09585)	November 4, 2015	10.2
10.36	Amended and Restated Lease dated as of February 24, 2014 between Abiomed, Inc. and Leo C. Thibeault, Jr., Trustee of The Thibeault Nominee Trust.		10-K (File No. 001-09585)	May 28, 2014	10.27
10.37	Amended Lease dated as of April 30, 2015 between Abiomed, Inc. and Leo C. Thibeault, Jr., Trustee of The Thibeault Nominee Trust.		10-K (File No. 001-09585)	May 28, 2015	10.29
10.38*	Form of Change of Control Agreement.		8-K (File No. 001-09585)	August 18, 2008	10.4
10.39	Purchase and Sale Agreement dated as of December 9, 2015 between Abiomed, Inc. and Thibeault Nominee Trust.		10-Q (File No. 001-09585)	February 5, 2016	10.1

Exhibit No.	Description	Filed with this Form 10-K	Incorporated by Reference		Exhibit No.
			Form	Filing Date	
10.40	First Amendment to Purchase and Sale Agreement dated as of January 19, 2016 between Abiomed, Inc. and Thibeault Nominee Trust.		10-Q (File No. 001-09585)	February 5, 2016	10.2
10.41	Lease Agreement dated August 12, 2016 between Abiomed, Inc. and Leo C. Thibeault, Jr., Trustee of the Thibeault Nominee Trust.		10-Q (File No. 001-09585)	November 4, 2016	10.1
10.42	Purchase and Sale Agreement dated as of December 16, 2016 between Abiomed, Inc. and gewoge AG and Thibeault Nominee Trust for the facility located in Aachen, Germany	X			
10.43*	Form of Employee Time-Based Option Agreement under the 2015 Omnibus Incentive Plan.	X			
11.1	Statement regarding computation of Per Share Earnings (see Note 2, Notes to Consolidated Financial Statements).	X			
21.1	Subsidiaries of the Registrant.	X			
23.1	Consent of Deloitte & Touche LLP, independent registered public accounting firm.	X			
31.1	Rule 13a—14(a)/15d—14(a) certification of principal executive officer.	X			
31.2	Rule 13a—14(a)/15d—14(a) certification of principal accounting officer.	X			
32.1	Section 1350 certification.	X			
101	The following financial information from the ABIOMED, Inc. Annual Report on Form 10-K for the fiscal year ended March 31, 2017, formatted in Extensible Business Reporting Language (XBRL): (i) Consolidated Balance Sheets as of March 31, 2017 and 2016; (ii) Consolidated Statements of Operations for the fiscal years ended March 31, 2017, 2016 and 2015; (iii) Consolidated Statements of Comprehensive Income for the fiscal years ended March 31, 2017, 2016 and 2015; (iv) Consolidated Statements of Stockholders' Equity for the fiscal years ended March 2017, 2016 and 2015; (v) Consolidated Statements of Cash Flows for the fiscal years ended March 31, 2017, 2016 and 2015; and (vi) Notes to Consolidated Financial Statements.	X			

* Management contract or compensatory plan.

Item 16. Form 10-K Summary.

None.

SIGNATURES

Pursuant to the requirements 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.

ABIOMED, Inc.

Dated: May 25, 2017

By /s/ MICHAEL J. TOMSICEK

Michael J. Tomsicek
Vice President, Chief Financial Officer
(Principal Financial Officer and
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.

<u>SIGNATURE</u>	<u>TITLE</u>	<u>DATE</u>
<u>/s/ MICHAEL R. MINOGUE</u> Michael R. Minogue	President, Chief Executive Officer, President and Chairman (Principal Executive Officer)	May 25, 2017
<u>/s/ MICHAEL J. TOMSICEK</u> Michael J. Tomsicek	Vice President, Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	May 25, 2017
<u>/s/ DOROTHY E. PUHY</u> Dorothy E. Puhly	Director	May 25, 2017
<u>/s/ JEANNINE M. RIVET</u> Jeannine M. Rivet	Director	May 25, 2017
<u>/s/ ERIC A. ROSE, M.D.</u> Eric A. Rose, M.D.	Director	May 25, 2017
<u>/s/ MARTIN P. SUTTER</u> Martin P. Sutter	Director	May 25, 2017
<u>/s/ PAUL G. THOMAS</u> Paul G. Thomas	Director	May 25, 2017
<u>/s/ CHRIS D. VAN GORDER</u> Chris D. Van Gorder	Director	May 25, 2017

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of
ABIOMED, Inc.
Danvers, Massachusetts

We have audited the accompanying consolidated balance sheets of ABIOMED, Inc. and subsidiaries (the “Company”) as of March 31, 2017 and 2016, and the related consolidated statements of operations, comprehensive income, stockholders’ equity, and cash flows for each of the three years in the period ended March 31, 2017. These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits 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. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of ABIOMED, Inc. and subsidiaries as of March 31, 2017 and 2016, and the results of their operations and their cash flows for each of the three years in the period ended March 31, 2017, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company’s internal control over financial reporting as of March 31, 2017, based on the criteria established in *Internal Control—Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated May 25, 2017 expressed an unqualified opinion on the Company’s internal control over financial reporting.

/s/ DELOITTE & TOUCHE LLP

Boston, Massachusetts
May 25, 2017

ABIOMED, INC. AND SUBSIDIARIES

**Consolidated Balance Sheets
(in thousands, except share data)**

	March 31, 2017	March 31, 2016
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 39,040	\$ 48,231
Short-term marketable securities	190,908	163,822
Accounts receivable, net	54,055	42,821
Inventories	34,931	26,740
Prepaid expenses and other current assets	8,024	6,778
Total current assets	326,958	288,392
Long-term marketable securities	47,143	1,000
Property and equipment, net	87,777	23,184
Goodwill	31,045	33,003
In-process research and development	14,482	15,396
Long-term deferred tax assets, net	34,723	58,534
Other assets	8,286	4,422
Total assets	<u>\$ 550,414</u>	<u>\$ 423,931</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 20,620	\$ 9,381
Accrued expenses and other liabilities	37,703	28,382
Deferred revenue	10,495	8,778
Current portion of capital lease obligation	799	—
Total current liabilities	69,617	46,541
Other long-term liabilities	3,251	220
Contingent consideration	9,153	7,563
Long-term deferred tax liabilities	783	832
Capital lease obligation, net of current portion	15,539	—
Total liabilities	<u>98,343</u>	<u>55,156</u>
Commitments and contingencies (Note 11)		
Stockholders' equity:		
Class B Preferred Stock, \$.01 par value	—	—
Authorized - 1,000,000 shares; Issued and outstanding - none		
Common stock, \$.01 par value	437	426
Authorized - 100,000,000 shares; Issued - 45,249,281 shares at March 31, 2017 and 43,973,119 shares at March 31, 2016;		
Outstanding - 43,673,286 shares at March 31, 2017 and 42,596,228 shares at March 31, 2016		
Additional paid in capital	565,962	508,624
Accumulated deficit	(46,959)	(99,075)
Treasury stock at cost - 1,575,995 shares at March 31, 2017 and 1,376,891 shares at March 31, 2016	(46,763)	(26,660)
Accumulated other comprehensive loss	(20,606)	(14,540)
Total stockholders' equity	<u>452,071</u>	<u>368,775</u>
Total liabilities and stockholders' equity	<u>\$ 550,414</u>	<u>\$ 423,931</u>

The accompanying notes are an integral part of the consolidated financial statements.

ABIOMED, INC. AND SUBSIDIARIES

Consolidated Statements of Operations
(in thousands, except per share data)

	Fiscal Years Ended March 31,		
	2017	2016	2015
Revenue:			
Product revenue	\$ 445,195	\$ 329,520	\$ 229,950
Funded research and development	109	23	361
	<u>445,304</u>	<u>329,543</u>	<u>230,311</u>
Costs and expenses:			
Cost of product revenue	70,627	50,419	39,945
Research and development	66,386	49,759	35,973
Selling, general and administrative	218,153	164,261	125,727
	<u>355,166</u>	<u>264,439</u>	<u>201,645</u>
Income from operations	<u>90,138</u>	<u>65,104</u>	<u>28,666</u>
Other income:			
Investment income, net	1,554	395	196
Other (expense) income, net	(349)	339	(97)
	<u>1,205</u>	<u>734</u>	<u>99</u>
Income before income taxes	<u>91,343</u>	<u>65,838</u>	<u>28,765</u>
Income tax provision (benefit)	<u>39,227</u>	<u>27,691</u>	<u>(84,923)</u>
Net income	<u>\$ 52,116</u>	<u>\$ 38,147</u>	<u>\$ 113,688</u>
Basic net income per share	\$ 1.21	\$ 0.90	\$ 2.80
Basic weighted average shares outstanding	43,238	42,204	40,632
Diluted net income per share	\$ 1.17	\$ 0.85	\$ 2.65
Diluted weighted average shares outstanding	44,658	44,895	42,858

The accompanying notes are an integral part of the consolidated financial statements.

ABIOMED, INC. AND SUBSIDIARIES
Consolidated Statements of Comprehensive Income
(in thousands)

	Fiscal Years Ended March 31,		
	2017	2016	2015
Net income	\$ 52,116	\$ 38,147	\$ 113,688
Other comprehensive (loss) income:			
Foreign currency translation (losses) gains	(5,855)	2,724	(16,613)
Net unrealized (losses) gain on marketable securities	(211)	66	13
Other comprehensive (loss) income	(6,066)	2,790	(16,600)
Comprehensive income	<u>\$ 46,050</u>	<u>\$ 40,937</u>	<u>\$ 97,088</u>

The accompanying notes are an integral part of the consolidated financial statements.

ABIOMED, INC. AND SUBSIDIARIES
Consolidated Statements of Stockholders' Equity
(dollars in thousands)

	Common Stock			Treasury Stock			Additional Paid in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity
	Number of shares	Par value	Number of shares	Amount	Number of shares	Amount				
Balance, March 31, 2014	39,916,328	\$ 411	1,206,367	\$ (16,554)	-	\$ 436,136	\$ (250,910)	\$ (730)	\$ 168,353	
Restricted stock units issued	543,420	5	-	-	-	(5)	-	-	-	
Stock options exercised	911,553	9	-	-	-	10,918	-	-	10,927	
Stock issued under employee stock purchase plan	39,095	-	-	-	-	795	-	-	795	
Stock issued to directors	1,954	-	-	-	-	76	-	-	76	
Return of common stock to pay withholding taxes on restricted stock	(76,577)	(12)	76,577	(2,793)	-	-	-	-	(2,805)	
Stock compensation expense	-	-	-	-	-	16,520	-	-	16,520	
Excess tax benefit from stock-based awards	-	-	-	-	-	606	-	-	606	
Other comprehensive loss	-	-	-	-	-	-	-	(16,600)	(16,600)	
Net income	-	-	-	-	-	-	113,688	-	113,688	
Balance, March 31, 2015	41,335,773	\$ 413	1,282,944	\$ (19,347)	-	\$ 465,046	\$ (137,222)	\$ (17,330)	\$ 291,560	
Restricted stock units issued	507,471	5	-	-	-	(5)	-	-	-	
Stock options exercised	829,385	8	-	-	-	9,763	-	-	9,771	
Stock issued under employee stock purchase plan	16,772	-	-	-	-	1,135	-	-	1,135	
Stock issued to directors	774	-	-	-	-	65	-	-	65	
Return of common stock to pay withholding taxes on restricted stock	(93,947)	-	93,947	(7,313)	-	-	-	-	(7,313)	
Stock compensation expense	-	-	-	-	-	29,053	-	-	29,053	
Excess tax benefit from stock-based awards	-	-	-	-	-	3,567	-	-	3,567	
Other comprehensive income	-	-	-	-	-	-	-	2,790	2,790	
Net income	-	-	-	-	-	-	38,147	-	38,147	
Balance, March 31, 2016	42,596,228	\$ 426	1,376,891	\$ (26,660)	-	\$ 508,624	\$ (99,075)	\$ (14,540)	\$ 368,775	
Restricted stock units issued	502,417	5	-	-	-	(5)	-	-	-	
Stock options exercised	754,893	8	-	-	-	10,652	-	-	10,660	
Stock issued under employee stock purchase plan	18,288	-	-	-	-	1,720	-	-	1,720	
Stock issued to directors	564	-	-	-	-	67	-	-	67	
Return of common stock to pay withholding taxes on restricted stock	(199,104)	(2)	199,104	(20,103)	-	-	-	-	(20,105)	
Stock compensation expense	-	-	-	-	-	32,866	-	-	32,866	
Excess tax benefit from stock-based awards	-	-	-	-	-	12,038	-	-	12,038	
Other comprehensive loss	-	-	-	-	-	-	-	(6,066)	(6,066)	
Net income	-	-	-	-	-	-	52,116	-	52,116	
Balance, March 31, 2017	43,673,286	\$ 437	1,575,995	\$ (46,763)	-	\$ 565,962	\$ (46,959)	\$ (20,606)	\$ 452,071	

The accompanying notes are an integral part of the consolidated financial statements.

ABIOMED, INC. AND SUBSIDIARIES

**Consolidated Statements of Cash Flows
(in thousands)**

	Fiscal Years Ended March 31,		
	2017	2016	2015
Operating activities:			
Net income	\$ 52,116	\$ 38,147	\$ 113,688
Adjustments required to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	6,202	3,277	2,770
Bad debt expense	159	42	(5)
Stock-based compensation	32,866	29,053	16,520
Write-down of inventory	3,085	2,094	2,231
Excess tax benefit from stock-based awards	(12,038)	(3,567)	(606)
Deferred tax provision (benefit)	25,803	22,296	(87,094)
Change in fair value of contingent consideration	1,590	1,053	510
Changes in assets and liabilities:			
Accounts receivable	(11,550)	(10,930)	(7,970)
Inventories	(12,284)	(11,473)	(6,967)
Prepaid expenses and other assets	(2,366)	(2,290)	(1,479)
Accounts payable	7,565	(2,645)	3,372
Accrued expenses and other liabilities	22,223	10,020	6,011
Deferred revenue	1,745	1,718	2,309
Net cash provided by operating activities	115,116	76,795	43,290
Investing activities:			
Purchases of marketable securities	(278,501)	(260,975)	(97,658)
Proceeds from the sale and maturity of marketable securities	205,482	219,639	71,530
Acquisition of ECP and AIS, net of cash assumed	—	—	(15,697)
Purchase of other investment	(2,899)	(750)	(2,850)
Purchases of property and equipment	(50,415)	(15,624)	(5,188)
Net cash used for investing activities	(126,333)	(57,710)	(49,863)
Financing activities:			
Proceeds from the exercise of stock options	10,660	9,771	10,927
Excess tax benefit from stock-based awards	12,038	3,567	606
Taxes paid related to net share settlement upon vesting of stock awards	(20,105)	(7,313)	(2,805)
Proceeds from the issuance of stock under employee stock purchase plan	1,720	1,135	795
Principal payments on capital lease obligation	(446)	—	—
Net cash provided by financing activities	3,867	7,160	9,523
Effect of exchange rate changes on cash	(1,841)	(415)	(1,465)
Net increase in cash and cash equivalents	(9,191)	25,830	1,485
Cash and cash equivalents at beginning of year	48,231	22,401	20,916
Cash and cash equivalents at end of year	\$ 39,040	\$ 48,231	\$ 22,401
Supplemental disclosure of cash flow information:			
Cash paid for income taxes	\$ 1,405	\$ 848	\$ 1,215
Cash paid for interest on capital lease obligation	354	—	—
Supplemental disclosure of non-cash investing and financing activities:			
Property and equipment under capital lease obligation	16,784	—	—
Property and equipment in accounts payable and accrued expenses	5,692	1,797	193

The accompanying notes are an integral part of the consolidated financial statements.

ABIOMED, INC. AND SUBSIDIARIES
Notes to Consolidated Financial Statements
(Dollars in thousands, except per share data)

Note 1. Nature of Operations

Abiomed, Inc. (the “Company” or “Abiomed”) is a provider of mechanical circulatory support devices and offers a continuum of care to heart failure patients. The Company develops, manufactures and markets proprietary products that are designed to enable the heart to rest, heal and recover by improving blood flow and/or performing the pumping function of the heart. The Company’s products are used in the cardiac catheterization lab, or cath lab, by interventional cardiologists and in the heart surgery suite by heart surgeons for patients who are in need of hemodynamic support prophylactically or emergently before, during or after angioplasty or heart surgery procedures.

Note 2. Summary of Significant Accounting Policies

The accompanying consolidated financial statements reflect the application of significant accounting policies described below.

Principles of Consolidation

The accompanying consolidated financial statements include the accounts of the Company and its wholly owned subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles of the United States of America, or GAAP, requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. The Company bases its estimates on historical experience and various other factors believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. On an ongoing basis, the Company evaluates its estimates, including those related to revenue recognition, collectability of receivables, realizability of inventory, property and equipment, goodwill, intangible and other long-lived assets, accrued expenses, stock-based compensation, income taxes including deferred tax assets and liabilities, contingencies and litigation. Provisions for depreciation are based on their estimated useful lives using the straight-line method. Some of these estimates can be subjective and complex and, consequently, actual results may differ from these estimates under different assumptions or conditions.

Cash Equivalents and Marketable Securities

The Company classifies any marketable security with a maturity date of 90 days or less at the time of purchase as a cash equivalent. Cash equivalents are carried on the balance sheet at fair market value.

The Company classifies any marketable security with a maturity date of greater than 90 days at the time of purchase as marketable securities and classifies marketable securities with a maturity date of greater than one year from the balance sheet date as long-term marketable securities. Marketable securities that the Company has the positive intent and ability to hold to maturity are reported at amortized cost and classified as held-to-maturity marketable securities. If the Company does not have the intent and ability to hold a marketable security to maturity, it reports the investment as available-for-sale marketable securities. The Company reports available-for-sale marketable securities at fair value, and includes unrealized gains and, to the extent deemed temporary, unrealized losses in stockholders’ equity. If any adjustment to fair value reflects a decline in the value of the investment, the Company considers available evidence to evaluate whether the decline is “other than temporary” and, if so, marks the marketable security to market through a charge to unrealized loss on short-term marketable securities in the consolidated statements of operations.

Major Customers and Concentrations of Credit Risk

The Company primarily sells its products to hospitals and distributors. No customer accounted for more than 10% of total product revenues in fiscal years ended March 31, 2017, 2016 or 2015. No individual customer had an accounts receivable balance greater than 10% of total accounts receivable at March 31, 2017 and 2016.

Credit is extended based on an evaluation of a customer's historical financial condition and generally collateral is not required. To date, credit losses have not been significant and the Company maintains an allowance for doubtful accounts based on its assessment of the collectability of accounts receivable. Accounts receivables are geographically dispersed, primarily throughout the U.S., as well as in Europe and other foreign countries where formal distributor agreements exist in certain countries.

Financial instruments which potentially subject the Company to a concentration of credit risk consist of cash, cash equivalents, marketable securities, short and long-term marketable securities and accounts receivable. Management mitigates credit risk by limiting the investment type and maturity to securities that preserve capital, maintain liquidity and have a high credit quality.

Financial Instruments

The Company's financial instruments are comprised of cash and cash equivalents, accounts receivable, accounts payable and accrued expenses, the carrying amounts of which approximate fair market value as they are highly liquid and primarily short term in nature.

Inventories

Inventories are stated at the lower of cost or market. Cost is based on the first in, first out method. The Company regularly reviews inventory quantities on hand and writes down to its net realizable value any inventory that it believes to be impaired. Management considers forecast demand in relation to the inventory on hand, competitiveness of product offerings, market conditions and product life cycles when determining excess and obsolescence and net realizable value adjustments. Once inventory is written down and a new cost basis is established, it is not written back up if demand increases.

Property and Equipment

Property and equipment is recorded at cost less accumulated depreciation. Land is carried at cost. Depreciation is computed using the straight line method based on estimated useful lives of three to five years for machinery and equipment, computer software, and furniture and fixtures. Building and building improvements are depreciated using the straight-line method over estimated useful lives of seven to thirty-three years. Leasehold improvements are amortized using the straight-line method over the shorter of the lease term or the estimated useful lives of the related assets. Expenditures for maintenance and repairs are expensed as incurred. Upon retirement or other disposition of assets, the costs and related accumulated depreciation are eliminated from the accounts and the resulting gain or loss is reflected in operating expenses.

Property and equipment is reviewed for impairment losses whenever events or changes in circumstances indicate the carrying amount may not be recoverable. An impairment loss would be recognized based on the amount by which the carrying value of the asset or asset group exceeds its fair value. Fair value is determined primarily using the estimated future cash flows associated with the asset or asset group under review discounted at a rate commensurate with the risk involved and other valuation techniques.

Leases

Lease agreements are evaluated to determine whether they are capital or operating leases in accordance with Financial Accounting Standards Board ("ASC") 840, *Leases*. When any one of the four test criteria in ASC 840 is met, the lease then qualifies as a capital lease. Capital leases are capitalized at the lower of the net present value of the total amount payable under the leasing agreement (excluding finance charges) or the fair market value of the leased asset. Capital lease assets are depreciated on a straight-line basis, over a period consistent with the Company's normal depreciation policy for tangible fixed assets. Interest charges are expensed over the period of the term of the capital lease obligation in relation to the carrying value of the capital lease.

Rent expense for operating leases, which may include free rent or fixed escalation amounts in addition to minimum lease payments, is recognized on a straight-line basis over the duration of each lease term.

Goodwill

Goodwill is recorded when consideration for an acquisition exceeds the fair value of the net tangible and intangible assets acquired. Goodwill is not amortized, instead the Company evaluates goodwill for impairment at least annually at October 31, as well as whenever events or changes in circumstances suggest that the carrying amount may not be recoverable.

Goodwill impairment assessments are performed at the reporting unit level. The goodwill test involves a two-step process. The first step is a comparison of the reporting unit's fair value to its carrying value. If the reporting unit's fair value exceeds its carrying

value, no further procedures are required. However, if the reporting unit's fair value is less than the carrying value, an impairment of goodwill may exist, requiring a second step to measure the amount of impairment loss. If the implied fair value of goodwill is less than the recorded goodwill, an impairment charge is recorded for the difference.

In applying the goodwill impairment test, the Company may assess qualitative factors to determine whether it is more likely than not that the fair value of the reporting unit is less than its carrying value. Qualitative factors may include, but are not limited to, macroeconomic conditions, industry conditions, the competitive environment, changes in the market for our products and services, regulatory and political developments, cost factors, and entity specific factors such as strategies and overall financial performance. If, after assessing these qualitative factors, the Company determines it is not more likely than not that the fair value of a reporting unit is less than its carrying value, then performing the two-step impairment test is unnecessary.

The goodwill impairment test is performed at the reporting unit level by comparing the reporting unit's carrying value, including goodwill, to the fair value of the reporting unit. The Company estimates the fair value of its single reporting unit using a combination of the income approach and the market approach. The income approach incorporates the use of a discounted cash flow method in which the estimated future cash flows and terminal values for the reporting unit is discounted to a present value using an appropriate discount rate. Cash flow projections are based on management's estimates of economic and market conditions which drive key assumptions of revenue growth rates, operating margins, cash flows, capital expenditures and working capital requirements. The discount rate is based on the specific risk characteristics of the reporting unit and its underlying forecast. The market approach estimates fair value by comparing publicly traded companies with similar operating and investment characteristics as the reporting unit. The fair values determined by the market approach and income approach, are weighted to determine the fair value for the reporting unit based primarily on the similarity of the operating and investment characteristics of the reporting unit to the comparable publicly traded companies used in the market approach.

In-Process Research and Development

In-process research and development, or IPR&D, assets are considered to be indefinite-lived until the completion or abandonment of the associated research and development projects. IPR&D assets represent the fair value assigned to technologies that are acquired, which at the time of acquisition have not reached technological feasibility and have no alternative future use. During the period that the IPR&D assets are considered indefinite-lived, they are tested for impairment on an annual basis on October 31, or more frequently if the Company becomes aware of any events occurring or changes in circumstances that indicate that the fair value of the IPR&D assets are less than their carrying values. If and when development is complete, which generally occurs upon regulatory approval and the Company is able to commercialize products associated with the IPR&D assets, these assets are then deemed definite-lived and are amortized based on their estimated useful lives at that point in time. If development is terminated or abandoned, the Company may have a full or partial impairment charge related to the IPR&D assets, calculated as the excess of carrying value of the IPR&D assets over fair value.

Contingent Consideration

Contingent consideration represents potential milestones that the Company could pay additional consideration for associated with an acquisition and is recorded as a liability and is measured at fair value using a combination of 1) an income approach, based on various revenue and cost assumptions and applying a probability to each outcome and 2) a Monte-Carlo valuation model that simulates outcomes based on management estimates. For the clinical and regulatory milestone, probabilities were applied to each potential scenario and the resulting values were discounted using a rate that considers the weighted average cost of capital, the related projections, and the overall business. The revenue-based milestone is valued using a Monte-Carlo valuation model, which simulates estimated future revenues during the earn out-period using management's best estimates. During the quarter ended December 31, 2016, the Company revised the valuation method used to value the revenue-based milestone from a probability-weighted income approach to a Monte-Carlo valuation method as it believes that this method provides a more refined estimate of the contingent consideration related to this milestone based on the facts and circumstances at this time. The revision did not have a material impact on the Company's consolidated financial statements for any period. Significant increases or decreases in any of the probabilities of success or changes in expected timelines for achievement of any of these milestones could result in a significantly higher or lower fair value of the contingent consideration liability. The fair value of the contingent consideration at each reporting date is updated by reflecting the changes in fair value reflected within research and development expenses in the Company's consolidated statement of operations.

Accrued Expenses

As part of the process of preparing its financial statements, the Company is required to estimate accrued expenses. This process includes identifying services that third parties have performed and estimating the level of service performed and the associated cost incurred on these services as of each balance sheet date in its financial statements. Examples of estimated accrued expenses include

contract service fees, such as amounts due to clinical research organizations, investigators in conjunction with clinical trials, professional service fees, such as attorneys and accountants, and third party expenses relating to marketing efforts associated with commercialization of the Company's product and product candidates. Accrued expenses also include estimates for payroll costs, such as bonuses and commissions. In the event that the Company does not identify certain costs that have been incurred or it under or over-estimates the level of services or the costs of such services, reported expenses for a reporting period could be overstated or understated. The dates in which certain services commence and end, the level of services performed on or before a given date and the cost of services is often subject to the Company's judgment. The Company makes these judgments and estimates based upon known facts and circumstances.

Revenue Recognition

The Company recognizes revenue when evidence of an arrangement exists, title has passed or services have been rendered, the selling price is fixed or determinable and collectability is reasonably assured.

Revenue from product sales to customers is recognized when delivery has occurred. All costs related to product sales are recognized at time of delivery. The Company does not provide for rights of return to customers on product sales and therefore does not record a provision for returns.

Maintenance and service support contract revenues are included in product revenue and are recognized ratably over the term of the service contracts. Revenue is recognized as earned in limited instances where the Company rents its console medical devices on a month-to-month basis or for a longer specified period of time to customers.

Government-sponsored research and development contracts and grants generally provide for payment on a cost-plus-fixed-fee basis. Revenues from these contracts and grants are recognized as work is performed, provided the government has appropriated sufficient funds for the work. Under contracts in which the Company elects to spend significantly more on the development project during the term of the contract than the total contract amount, the Company prospectively recognizes revenue on such contracts ratably over the term of the contract as related research and development costs are incurred.

Product Warranty

The Company generally provides a one-year warranty for certain products sold in which estimated contractual warranty obligations are recorded as an expense at the time of shipment. The Company's products are subject to regulatory and quality standards. Future warranty costs are estimated based on historical product performance rates and related costs to repair given products. The accounting estimate related to product warranty expense involves judgment in determining future estimated warranty costs. Should actual performance rates or repair costs differ from estimates, revisions to the estimated warranty liability would be required.

Accumulated Other Comprehensive Income (Loss)

Comprehensive income (loss) is comprised of net income, plus all changes in equity of a business enterprise during a period from transactions and other events and circumstances from non-owner sources, including any foreign currency translation adjustments. These changes in equity are recorded as adjustments to accumulated other comprehensive income (loss) in the Company's consolidated balance sheet. The components of accumulated other comprehensive income (loss) consist primarily of foreign currency translation adjustments. There were no reclassifications out of accumulated other comprehensive income (loss) during the fiscal years ended March 31, 2017, 2016 and 2015.

Translation of Foreign Currencies

The functional currency of the Company's foreign subsidiaries is their local currency. The assets and liabilities of the Company's foreign subsidiaries are translated into U.S. dollars at exchange rates in effect at the balance sheet date. Income and expense items are translated at the average exchange rates prevailing during the period. The cumulative translation effect for subsidiaries using a functional currency other than the U.S. dollar is included in accumulated other comprehensive income or loss as a separate component of stockholders' equity.

The Company's intercompany accounts are denominated in the functional currency of the foreign subsidiary. Gains and losses resulting from the remeasurement of intercompany receivables that the Company considers to be of a long-term investment nature are recorded in accumulated other comprehensive income or loss as a separate component of stockholders' equity, while gains and losses resulting from the remeasurement of intercompany receivables from those foreign subsidiaries for which the Company anticipates settlement in the foreseeable future are recorded in the consolidated statement of operations. The net foreign currency translation gains

and losses recorded in the consolidated statements of operations for the fiscal years ended March 31, 2017, 2016 and 2015 were not significant.

Net Income Per Share

Basic net income per share is computed by dividing net income by the weighted average number of common shares outstanding during the fiscal year. Diluted net income per share is computed using the treasury stock method by dividing net income by the weighted average number of dilutive common shares outstanding during the fiscal year. Diluted shares outstanding is calculated by adding to the weighted average shares outstanding any potential dilutive securities outstanding for the fiscal year. Potential dilutive securities include stock options, restricted stock awards, restricted stock units, performance-based stock awards and shares to be purchased under the employee stock purchase plan. In fiscal years when a net loss is reported, all common stock equivalents are excluded from the calculation because they would have an anti-dilutive effect, meaning the loss per share would be reduced. Therefore, in periods when a loss is reported basic and dilutive loss per share are the same.

	Fiscal Years Ended March 31,		
	2017	2016	2015
Basic Net Income Per Share			
Net income	\$ 52,116	\$ 38,147	\$ 113,688
Weighted average shares used in computing basic net income per share	43,238	42,204	40,632
Net income per share - basic	<u>\$ 1.21</u>	<u>\$ 0.90</u>	<u>\$ 2.80</u>
Diluted Net Income Per Share			
Net income	\$ 52,116	\$ 38,147	\$ 113,688
Weighted average shares used in computing basic net income per share	43,238	42,204	40,632
Effect of dilutive securities	1,420	2,691	2,226
Weighted average shares used in computing diluted net income per share	44,658	44,895	42,858
Net income per share - diluted	<u>\$ 1.17</u>	<u>\$ 0.85</u>	<u>\$ 2.65</u>

For the fiscal years ended March 31, 2017, 2016 and 2015, approximately 24,000, 62,000 and 2,000 shares of common stock underlying outstanding securities primarily related to out-of-the-money stock options and performance-based awards where milestones were not met were not included in the computation of diluted earnings per share because their inclusion would be anti-dilutive.

Stock-Based Compensation

The Company's stock-based compensation cost is measured at the grant date based on the fair value of the award and is recognized as an expense over the requisite service period, and includes an estimate of awards that will be forfeited.

The fair value of stock option grants is estimated using the Black-Scholes option pricing model. Use of the valuation model requires management to make certain assumptions with respect to selected model inputs. The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the time of grant for a term consistent with the expected life of the stock options. Volatility assumptions are calculated based on historical volatility of the Company's stock. The Company estimates the expected term of options based on historical exercise experience and estimates of future exercises of unexercised options. In addition, an expected dividend yield of zero is used in the option valuation model because the Company does not pay cash dividends and does not expect to pay any cash dividends in the foreseeable future. Forfeitures are estimated based on an analysis of actual forfeitures, adjusted to the extent historical forfeitures may not be indicative of expected forfeitures in the future.

For awards with service conditions only, the Company recognizes stock-based compensation expense on a straight-line basis over the requisite service period. For awards with service and performance conditions, the Company recognizes stock-based compensation expense using the graded vesting method over the requisite service period. Estimates of stock-based compensation expense for an award with performance conditions are based on the probable outcome of the performance conditions. The cumulative effect of changes in the probability outcomes are recorded in the period in which the changes occur. For awards with market-based conditions, the Company uses a Monte Carlo simulation model to estimate that the grant-date fair value. The fair value related to market-based awards is recorded as stock-based compensation expense over the vesting period regardless of whether the market condition is achieved or not.

Income Taxes

The Company's provision for income taxes is comprised of a current and a deferred provision. The current income tax provision is calculated as the estimated taxes payable or refundable on income tax returns for the current fiscal year. The deferred income tax provision is calculated for the estimated future income tax effects attributable to temporary differences and carryforwards using expected tax rates in effect in the years during which the differences are expected to reverse.

Deferred income taxes are recognized for the tax consequences in future years as the differences between the tax bases of assets and liabilities and their financial reporting amounts at each fiscal year end based on enacted tax laws and statutory tax rates applicable to the periods in which the differences are expected to impact taxable income.

The Company regularly assesses its ability to realize its deferred tax assets. Assessing the realization of deferred tax assets requires significant management judgment. Valuation allowances are established when necessary to reduce net deferred tax assets to the amount that is more likely than not to be realized.

The Company recognizes and measures uncertain tax positions using a two-step approach. The first step is to evaluate the tax position for recognition by determining if, based on the technical merits, it is more likely than not that the position will be sustained upon audit, including resolution of related appeals or litigation processes, if any. The second step is to measure the tax benefit at the largest amount that is more likely than not of being realized upon ultimate settlement. The Company reevaluates these uncertain tax positions on an ongoing basis, when applicable. This evaluation is based on factors including, but not limited to, changes in facts or circumstances, new information and technical insights, and changes in tax laws. Any changes in these factors could result in the recognition of a tax benefit or an additional charge to the tax provision. When applicable, the Company accrues for the effects of uncertain tax positions and the related potential penalties and interest through income tax expense.

Recent Accounting Pronouncements

In March 2016, the FASB issued ASU 2016-09, *Compensation-Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting*, which is intended to simplify several aspects of the accounting for share-based payment transactions, including the accounting for income taxes, forfeitures, and statutory tax withholding requirements, as well as classification in the statement of cash flows. The Company is currently evaluating the impact of adopting ASU 2016-09 on its consolidated financial statements and disclosures. The Company believes that the adoption of ASU 2016-09 will have a significant impact on the Company's consolidated financial statements, most notably, the requirement to recognize certain tax benefits or shortfalls upon a restricted stock unit vesting or stock option exercises in the income tax provision in the consolidated statement of operations. In addition, upon adoption in the first quarter of fiscal 2018, the Company expects to record a cumulative-effect adjustment, on a modified-retrospective basis, within retained earnings for excess tax benefits not previously recognized as net deferred tax assets. ASU 2016-09 will also impact the calculation of diluted shares outstanding under the treasury method which will no longer assume that tax benefits related to share-based payments are used to repurchase common stock and will impact the consolidated statements of cash flows since tax benefits related to share-based payments at settlement will be classified as operating cash flows instead of financing cash flows. Additionally, under the ASU 2016-09, an election can be made to reduce share-based compensation expense for forfeitures as they occur instead of estimating forfeitures that are expected to occur. In addition to the aforementioned items, the Company anticipates that ASU 2016-09 will introduce more volatility to its effective income tax rate, net income and earnings per share due to the effect of tax benefits or shortfalls related to restricted stock unit vestings or stock option exercises. The Company will adopt ASU 2016-09 during the first quarter of fiscal 2018.

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers* to provide updated guidance on revenue recognition. This new standard will replace most of the existing revenue recognition guidance in U.S. GAAP when it becomes effective and permits the use of either the retrospective or cumulative effect transition method. ASU 2014-09 requires a company to recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods or services. In doing so, companies may need to use more judgment and

make more estimates than under today's guidance. These may include identifying performance obligations in the contract, estimating the amount of variable consideration to include in the transaction price and allocating the transaction price to each separate performance obligation. The guidance also requires expanded disclosures relating to the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers. Additionally, qualitative and quantitative disclosures are required about customer contracts, significant judgments and changes in judgments, and assets recognized from the costs to obtain or fulfill a contract. The Company is assessing all of the potential impacts of the revenue recognition guidance. Although the Company has not yet completed its assessment of the new revenue recognition guidance, the Company believes that the new revenue recognition guidance generally supports the recognition of revenue at a point-in-time for product sales and over an extended period of time for preventative maintenance service agreements, which is consistent with its current revenue recognition model. The Company does anticipate that the new revenue standard will result in expanded financial statement disclosures relating to the nature, amount, timing, and uncertainty of revenue and cash flows arising from contracts with customers. As the Company completes its evaluation of this new standard, new information may arise that could change the Company's current understanding of the impact to revenue and expense recognized and financial statement disclosures. Additionally, the Company will continue to monitor industry activities and any additional guidance provided by regulators, standards setters, or the accounting profession and adjust the Company's assessment and implementation plans accordingly. ASU 2014-09 will become effective for the Company beginning in fiscal 2019.

In February 2016, the FASB issued ASU 2016-02, *Leases*. This guidance requires an entity to recognize lease liabilities and a right-of-use asset for all leases on the balance sheet and to disclose key information about the entity's leasing arrangements. ASU 2016-02 is effective for annual reporting periods beginning after December 15, 2018, including interim periods within that reporting period, with earlier adoption permitted. ASU 2016-02 must be adopted using a modified retrospective approach for all leases existing at, or entered into after the date of initial adoption, with an option to elect to use certain transition relief. The Company is currently in the process of evaluating its lessee arrangements to determine the impact of ASU 2016-02 amendment on its consolidated financial statements. This evaluation includes a review of the Company's existing leasing arrangements on its facilities. ASU 2016-02 will become effective for the Company beginning in fiscal 2020.

Note 3. Marketable Securities and Fair Value Measurements

Marketable Securities

The Company's marketable securities are classified as available-for-sale securities and, accordingly, are recorded at fair value. The difference between amortized cost and fair value is reported as a component of other comprehensive income (loss).

The Company's marketable securities at March 31, 2017 and 2016 are classified on the balance sheet as follows:

	<u>March 31, 2017</u>	<u>March 31, 2016</u>
	(in \$000's)	
Short-term marketable securities (within one year to maturity)	\$ 190,908	\$ 163,822
Long-term marketable securities (one to two years to maturity)	47,143	1,000
	<u>\$ 238,051</u>	<u>\$ 164,822</u>

The Company's marketable securities at March 31, 2017 and 2016 are invested in the following:

	<u>Amortized Cost</u>	<u>Gross Unrealized Gains</u>	<u>Gross Unrealized Losses</u>	<u>Fair Market Value</u>
	(in \$000's)			
March 31, 2017:				
Short-term U.S. Treasury mutual fund securities	\$ 45,199	\$ —	\$ (13)	\$ 45,186
Short-term government-backed securities	90,199	1	(87)	90,113
Short-term corporate debt securities	55,465	—	(31)	55,434
Long-term U.S. Treasury mutual fund securities	1,998	—	(3)	1,995
Long-term government-backed securities	43,484	5	(18)	43,471
Long-term corporate debt securities	1,853	—	(1)	1,852
	<u>\$ 238,198</u>	<u>\$ 6</u>	<u>\$ (153)</u>	<u>\$ 238,051</u>

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Market Value
	(in \$000's)			
March 31, 2016:				
U.S. Treasury mutual fund securities	\$ 45,635	\$ 21	\$ —	\$ 45,656
Short-term government-backed securities	118,125	45	(4)	118,166
Long-term government-backed securities	999	1	—	1,000
	<u>\$ 164,759</u>	<u>\$ 67</u>	<u>\$ (4)</u>	<u>\$ 164,822</u>

Fair Value Hierarchy

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Financial assets and liabilities carried at fair value are to be classified and disclosed in one of the following three categories:

Level 1: Quoted market prices in active markets for identical assets or liabilities.

Level 2: Observable market based inputs or unobservable inputs that are corroborated by market data.

Level 3: Unobservable inputs that are not corroborated by market data.

Level 1 primarily consists of financial instruments whose value is based on quoted market prices such as exchange-traded instruments and listed equities.

Level 2 includes financial instruments that are valued using models or other valuation methodologies. These models are primarily industry-standard models that consider various assumptions, including time value, yield curve, volatility factors, prepayment speeds, default rates, loss severity, current market and contractual prices for the underlying financial instruments, as well as other relevant economic measures. Substantially all of these assumptions are observable in the marketplace, can be derived from observable data or are supported by observable levels at which transactions are executed in the marketplace.

Level 3 is comprised of unobservable inputs that are supported by little or no market activity. Financial assets are considered Level 3 when their fair values are determined using pricing models, discounted cash flows or similar techniques and at least one significant model assumption or input is unobservable.

The following table presents the Company's fair value hierarchy for its financial instruments measured at fair value as of March 31, 2017 and 2016:

	Level 1	Level 2	Level 3	Total
	(in \$000's)			
March 31, 2017:				
Assets				
Short-term U.S. Treasury mutual fund securities	\$ —	\$ 45,186	\$ —	\$ 45,186
Short-term government-backed securities	—	90,113	—	90,113
Short-term corporate debt securities	—	55,434	—	55,434
Long-term U.S. Treasury mutual fund securities	—	1,995	—	1,995
Long-term government-backed securities	—	43,471	—	43,471
Long-term corporate debt securities	—	1,852	—	1,852
Liabilities				
Contingent consideration	—	—	9,153	9,153
March 31, 2016:				
Assets				
U.S. Treasury mutual fund securities	\$ —	\$ 45,656	\$ —	\$ 45,656
Short-term government-backed securities	—	118,166	—	118,166
Long-term government-backed securities	—	1,000	—	1,000
Liabilities				
Contingent consideration	—	—	7,563	7,563

The Company has determined that the estimated fair value of its investments in U.S. Treasury mutual fund securities, government-backed securities, and corporate debt securities are reported as Level 2 financial assets as they are not exchange-traded instruments.

The Company's financial liabilities consisted of contingent consideration potentially payable related to the acquisition of ECP Entwicklungsgesellschaft mbH ("ECP") and AIS GmbH Aachen Innovative Solutions ("AIS"), in July 2014. The Company acquired ECP for \$13.0 million in cash, with additional potential payouts totaling \$15.0 million based on the achievement of certain clinical and regulatory and revenue-based milestones. These potential milestone payments may be made, at the Company's option, by a combination of cash or Abiomed common stock. As of March 31, 2017, the Company used a combination of an income approach, based on various revenue and cost assumptions and applying a probability to each outcome and a Monte-Carlo valuation model. For the clinical and regulatory milestone, probabilities were applied to each potential scenario and the resulting values were discounted using a rate that considers weighted average cost of capital as well as a specific risk premium associated with the riskiness of the earn out itself, the related projections, and the overall business. The revenue-based milestone is valued using a Monte-Carlo valuation model, which simulates estimated future revenues during the earn out-period using management's best estimates. Projected revenues are based on our most recent internal operational budgets and long-range strategic plans.

This liability is reported as Level 3 as the estimated fair value of the contingent consideration related to the acquisition of the ECP requires significant management judgment or estimation and is calculated using the following valuation methods:

	Fair Value at March 31, 2017 (in \$000's)	Valuation Methodology	Significant Unobservable Input	Weighted Average (range, if applicable)
Clinical and regulatory milestone	\$ 5,395	Probability weighted income approach	Projected fiscal year of milestone payments	2019 to 2022
			Discount rate	2.6% to 3.3%
			Probability of occurrence	Probability adjusted level of 40% for the base case scenario and 5% to 20% for various upside and downside scenarios
Revenue-based milestone	3,758	Monte Carlo simulation model	Projected fiscal year of milestone payments	2023 to 2035
			Discount rate	18%
			Expected volatility for forecasted revenues	50%
	<u>\$ 9,153</u>			

The following table summarizes the change in fair value, as determined by Level 3 inputs, of the contingent consideration for the fiscal years ended March 31, 2017, 2016 and 2015:

	Fiscal Years Ended March 31,		
	2017	2016	2015
	(in \$000's)		
Level 3 liabilities, beginning balance	\$ 7,563	\$ 6,510	\$ —
Additions	—	—	6,000
Payments	—	—	—
Change in fair value	1,590	1,053	510
Level 3 liabilities, ending balance	<u>\$ 9,153</u>	<u>\$ 7,563</u>	<u>\$ 6,510</u>

The changes in fair value of the contingent consideration were primarily due to the passage of time on the fair value measurement of milestones related to the ECP acquisition. Adjustments associated with the change in fair value of contingent consideration are included in research and development expenses in the Company's condensed consolidated statements of operations. Significant increases or decreases in any of the probabilities of success or changes in expected timelines for achievement of any of these milestones could result in a significantly higher or lower fair value of the liability. The fair value of the contingent consideration

at each reporting date is updated by reflecting the changes in fair value reflected in the Company's statement of operations. There is no assurance that any of the conditions for the milestone payments will be met.

Other Investments

The Company periodically makes investments in private medical device companies that focus on heart failure and heart pump technologies. The aggregate carrying amount of the Company's portfolio of other investments was \$7.2 million and \$4.4 million at March 31, 2017 and 2016, respectively, and is classified within other assets in the consolidated balance sheets. Each of these individual investments are accounted for using the cost method and are measured at fair value only if there are identified events or changes in circumstances that may have a significant adverse effect on the fair value of these investments.

Note 4. Accounts Receivable

The components of accounts receivable are as follows:

	<u>March 31, 2017</u>	<u>March 31, 2016</u>
	(in \$000's)	
Trade receivables	\$ 54,337	\$ 42,945
Allowance for doubtful accounts	(282)	(124)
	<u>\$ 54,055</u>	<u>\$ 42,821</u>

The following table summarizes activity in the Company's allowance for doubtful accounts:

	<u>Fiscal Years Ended March 31,</u>		
	<u>2017</u>	<u>2016</u>	<u>2015</u>
	(in \$000's)		
Balance at beginning of year	\$ 124	\$ 177	\$ 185
Additions	159	42	115
Write-offs	(1)	(95)	(123)
Balance at end of year	<u>\$ 282</u>	<u>\$ 124</u>	<u>\$ 177</u>

Note 5. Inventories

The components of inventories are as follows:

	<u>March 31, 2017</u>	<u>March 31, 2016</u>
	(in \$000's)	
Raw materials and supplies	\$ 9,784	\$ 7,993
Work-in-progress	16,504	13,147
Finished goods	8,643	5,600
	<u>\$ 34,931</u>	<u>\$ 26,740</u>

The Company's inventories relate to its circulatory care product lines, primarily the Impella® product platform. Finished goods and work-in-process inventories consist of direct material, labor and overhead.

Note 6. Property and Equipment

The components of property and equipment are as follows:

	<u>March 31, 2017</u>	<u>March 31, 2016</u>
	(in \$000's)	
Land	\$ 4,046	\$ -
Building and building improvements	10,900	-
Capital lease asset	16,784	-
Leasehold improvements	34,854	11,833
Machinery and equipment	27,989	25,211
Furniture and fixtures	3,899	1,510
Construction in progress	9,257	3,712
Total cost	107,729	42,266
Less accumulated depreciation	(19,952)	(19,082)
	<u>\$ 87,777</u>	<u>\$ 23,184</u>

In August 2016, the Company entered into an amended lease agreement for its existing corporate headquarters in Danvers, Massachusetts (see Note 11). The Company recorded \$16.8 million for this lease as a capital lease asset with depreciation expense being recorded on a straight line basis over 15 years.

In December 2016, the Company entered into a purchase and sale agreement to acquire its existing European headquarters in Aachen, Germany, consisting of 33,000 square feet of space. Pursuant to the purchase and sale agreement, the Company acquired the property in February 2017. The acquisition cost for the land and building was approximately \$12.6 million, with \$4.0 million being recorded to land and \$8.6 million being recorded to the building and building improvements.

Depreciation expense related to property and equipment was \$6.2 million, \$3.3 million, and \$2.7 million for the fiscal years ending March 31, 2017, 2016 and 2015, respectively.

Note 7. Goodwill and In-Process Research and Development

The carrying amount of goodwill at March 31, 2017 and 2016 was \$31.0 million and \$33.0 million, respectively, and has been recorded in connection with the Company's acquisition of Impella Cardiosystems AG, or Impella, in May 2005 and ECP and AIS in July 2014. The goodwill activity is as follows:

	(in \$000's)
Balance at March 31, 2015	\$ 31,534
Foreign currency translation impact	1,469
Balance at March 31, 2016	\$ 33,003
Foreign currency translation impact	(1,958)
Balance at March 31, 2017	<u>\$ 31,045</u>

The Company has no accumulated impairment losses on goodwill. The Company performed a qualitative assessment during the annual impairment review for fiscal 2017 as of October 31, 2016 and concluded that it is not more likely than not that the fair value of the Company's single reporting unit is less than its carrying amount. Therefore, the two-step goodwill impairment test for the reporting unit was not necessary in fiscal 2017.

In July 2014, the Company acquired ECP and AIS and recorded \$18.5 million of IPR&D assets. The estimated fair value of the IPR&D assets was determined using a probability-weighted income approach, which discounts expected future cash flows to present value. The projected cash flows from the expandable catheter pump technology were based on certain key assumptions, including estimates of future revenue and expenses, taking into account the stage of development of the technology at the acquisition date and the time and resources needed to complete development. The Company used a discount rate of 21.5% and cash flows that have been probability adjusted to reflect the risks of product commercialization, which the Company believes are appropriate and representative of market participant assumptions.

The carrying value of the Company's IPR&D assets and the change in the balance for the fiscal years ended March 31, 2017 and 2016 is as follows:

	<u>(in \$000's)</u>
Balance at March 31, 2015	\$ 14,711
Foreign currency translation impact	685
Balance at March 31, 2016	\$ 15,396
Foreign currency translation impact	(914)
Balance at March 31, 2017	<u>\$ 14,482</u>

The Company tests IPR&D assets for impairment at least annually, or more frequently if impairment indicators exist, by first assessing qualitative factors to determine whether it is more likely than not that the fair value of the IPR&D assets is less than its carrying amount. The Company performed its annual impairment review for fiscal 2017 as of October 31, 2016 and concluded that it is not more likely than not that the fair value of the IPR&D assets is less than its carrying amount.

Note 8. Stockholders' Equity

Class B Preferred Stock

The Company has authorized 1,000,000 shares of Class B Preferred Stock, \$.01 par value, of which the Board of Directors can set the designation, rights and privileges. No shares of Class B Preferred Stock have been issued or are outstanding.

Note 9. Stock Award Plans and Stock-Based Compensation

Stock Award Plans

The Company grants stock options and restricted stock awards to employees and others. All outstanding stock options of the Company as of March 31, 2017 were granted with an exercise price equal to the fair market value on the date of grant. Outstanding stock options, if not exercised, expire 10 years from the date of grant.

2015 Stock Incentive Plan

The Company's 2015 Stock Incentive Plan (the "2015 Plan") authorizes the grant of a variety of equity awards to the Company's officers, directors, employees, consultants and advisers, including awards of unrestricted and restricted stock, restricted stock units, incentive and nonqualified stock options to purchase shares of common stock, performance share awards and stock appreciation rights. The 2015 Plan provides that options may only be granted at the current market value on the date of grant. Each share of stock issued pursuant to a stock option or stock appreciation right counts as one share against the maximum number of shares issuable under the 2015 Plan, while each share of stock issued pursuant to any other type of award counts as 1.8 shares against the maximum number of shares issuable under the 2015 Plan. The Company's policy for issuing shares upon exercise of stock options or the vesting of its restricted stock awards and restricted stock units is to issue shares of common stock at the time of exercise or conversion. At March 31, 2017, a total of approximately 3,118,000 shares were available for future issuance under the 2015 Plan.

2008 Stock Incentive Plan

The Company's 2008 Stock Incentive Plan (the "2008 Plan") authorizes the grant of a variety of equity awards to the Company's officers, directors, employees, consultants and advisers, including awards of unrestricted and restricted stock, restricted stock units, incentive and nonqualified stock options to purchase shares of common stock, performance share awards and stock appreciation rights. The 2008 Plan provides that options may only be granted at the current market value on the date of grant. Each share of stock issued pursuant to a stock option or stock appreciation right counts as one share against the maximum number of shares issuable under the 2008 Plan, while each share of stock currently issued pursuant to any other type of award counts as 1.58 shares against the maximum number of shares issuable under the 2008 Plan. The Company's policy for issuing shares upon exercise of stock options or the vesting of its restricted stock awards and restricted stock units is to issue shares of common stock at the time of exercise or conversion. At March 31, 2017, a total of approximately 159,000 shares were available for future issuance under the 2008 Plan.

Stock-Based Compensation

The following table summarizes stock-based compensation expense by financial statement line item in the Company's consolidated statements of operations for the fiscal years ended March 31, 2017, 2016 and 2015:

	Fiscal Years Ended March 31,		
	2017	2016	2015
	(in \$000's)		
Cost of product revenue	\$ 1,061	\$ 895	\$ 665
Research and development	6,050	3,950	3,205
Selling, general and administrative	25,755	24,208	12,650
	<u>\$ 32,866</u>	<u>\$ 29,053</u>	<u>\$ 16,520</u>

The components of stock-based compensation for the fiscal years ended March 31, 2017, 2016 and 2015 were as follows:

	Fiscal Years Ended March 31,		
	2017	2016	2015
	(in \$000's)		
Restricted stock units	\$ 26,570	\$ 23,708	\$ 13,539
Stock options	5,829	4,866	2,708
Employee stock purchase plan	467	479	273
	<u>\$ 32,866</u>	<u>\$ 29,053</u>	<u>\$ 16,520</u>

Stock Options

The following table summarized stock option activity for the year ended March 31, 2017:

	Options (in thousands)	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value (in thousands)
Outstanding at beginning of period	2,244	\$ 20.55	5.19	
Granted	180	106.10		
Exercised	(755)	14.12		
Cancelled and expired	(23)	73.50		
Outstanding at end of period	<u>1,646</u>	<u>\$ 32.09</u>	5.46	\$ 153,254
Exercisable at end of period	<u>1,156</u>	<u>\$ 18.26</u>	4.36	\$ 123,592
Options vested and expected to vest at end of period	<u>1,594</u>	<u>\$ 31.06</u>	5.37	\$ 150,056

The remaining unrecognized stock-based compensation expense for unvested stock option awards at March 31, 2017 was approximately \$7.7 million, net of forfeitures, and the weighted-average period over which this cost will be recognized is 2.5 years.

The aggregate intrinsic value of options exercised for fiscal years 2017, 2016 and 2015 was \$74.8 million, \$58.6 million and \$20.0 million, respectively. The total cash received as a result of employee stock option exercises during the fiscal years ended March 31, 2017, 2016 and 2015 was approximately \$10.7 million, \$9.8 million and \$10.9 million, respectively. The total fair value of options vested in fiscal years 2017, 2016 and 2015 was \$4.0 million, \$2.6 million and \$2.6 million, respectively.

The Company estimates the fair value of each stock option granted at the grant date using the Black-Scholes option valuation model. The weighted average grant-date fair values and weighted average assumptions used in the calculation of fair value of options granted during the fiscal years ended March 31, 2017, 2016 and 2015 was as follows:

	Fiscal Years Ended March 31,		
	2017	2016	2015
Valuation assumptions:			
Weighted average grant-date fair value	\$ 42.40	\$ 29.57	\$ 9.29
Risk-free interest rate	1.41%	1.55%	1.60%
Expected option life (years)	4.14	4.15	4.19
Expected volatility	48.9%	49.7%	49.3%

The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the time of grant for a term consistent with the expected life of the stock options. Volatility assumptions are calculated based on the historical volatility of the Company's stock. The Company estimates the expected term of options based on historical exercise experience and estimates of future exercises of unexercised options. An expected dividend yield of zero is used in the option valuation model because the Company does not pay cash dividends and does not expect to pay any cash dividends in the foreseeable future. The Company estimates forfeitures based on an analysis of actual historical forfeitures, adjusted to the extent historic forfeitures may not be indicative of expected forfeitures in the future.

Restricted Stock Units

The following table summarizes restricted stock unit activity for the fiscal year ended March 31, 2017:

	Number of Shares (in thousands)	Weighted Average Grant Date Fair Value (per share)
Restricted stock units at beginning of period	1,263	\$ 57.95
Granted	366	\$ 97.43
Vested	(502)	\$ 35.05
Forfeited	(71)	\$ 91.39
Restricted stock units at end of period	<u>1,056</u>	<u>\$ 80.50</u>

The remaining unrecognized compensation expense for outstanding restricted stock units, including performance-based awards, as of March 31, 2017 was \$27.4 million and the weighted-average period over which this cost will be recognized is 2.0 years.

The weighted average grant-date fair value for restricted stock units granted during the fiscal years ended March 31, 2017, 2016 and 2015 was \$97.43, \$87.45 and \$22.07 per share, respectively. The total fair value of restricted stock units vested in fiscal years 2017, 2016 and 2015 was \$51.3 million, \$39.6 million and \$11.2 million, respectively.

Performance and Market-Based Awards

Restricted stock units include certain awards that vest subject to certain performance and market-based criteria. The remaining unrecognized compensation expense for outstanding performance and market-based restricted stock units as of March 31, 2017 was \$15.5 million and the weighted-average period over which this cost will be recognized is 2.1 years.

Performance-Based Awards

In May 2016, performance-based awards of restricted stock units for the potential issuance of up to 190,890 shares of common stock were issued to certain executive officers and employees, all of which vest upon achievement of prescribed service milestones by the award recipients and performance milestones by the Company. The Company met a portion of the prescribed performance milestones in fiscal 2017 such that the remaining outstanding 132,000 shares of common stock as of March 31, 2017 will vest subject to service requirements for vesting for these employees and stock-based compensation expense is being recognized accordingly over

the employee's service term. As of March 31, 2017, the Company is recognizing compensation expense based on the probable outcome related to the prescribed performance targets on the outstanding awards.

In May 2015, performance-based awards of restricted stock units for the potential issuance of 183,940 shares of common stock were issued to certain executive officers and employees, all of which vest upon achievement of prescribed service milestones by the award recipients and performance milestones by the Company. The Company met the prescribed performance milestones in fiscal 2016 such that the remaining outstanding 120,000 shares of common stock as of March 31, 2017 will vest subject to service requirements for vesting for these employees and stock-based compensation expense is being recognized accordingly over the employee's service term.

In May 2014, performance-based awards of restricted stock units for the potential issuance of 379,752 shares of common stock were issued to certain executive officers and employees, all of which vest upon achievement of prescribed service milestones by the award recipients and performance milestones by the Company. The Company met the prescribed performance milestones in fiscal 2015. As of March 31, 2017, approximately 74,000 shares of common stock underlying restricted stock units remain unvested and such restricted stock units will vest subject to service requirements for vesting for these employees.

In June 2011, performance-based awards of restricted stock units for the potential issuance of 100,000 shares of common stock was issued to a certain senior executive officer of the Company that would vest upon achievement of prescribed service milestones by the award recipient and performance milestones by the Company. As of March 31, 2017, the Company has met the prescribed milestones for all 100,000 shares of this award and stock-based compensation expense has been fully recognized.

Market-Based Awards

In June 2015, the Company awarded certain executive officers a total of up to 322,980 market-based restricted share units, of which 281,530 units remain outstanding. These restricted stock units will vest and result in the issuance of common stock based on continuing employment and the relative ranking of the total shareholder return ("TSR") of the Company's common stock in relation to the TSR of the component companies in the S&P Health Care Equipment Select Industry Index over a three-year performance period based on a comparison of average closing stock prices between June 2015 and June 2018. The actual number of market-based restricted stock units that may be earned can range from 0% to 300% of the target number of shares. One-half of the market-based restricted stock units earned will vest in June 2018 and the remaining restricted stock units will vest one year thereafter provided the executive officers are still employed with the Company.

In November 2016, the Company awarded an executive officer a total of up to 41,526 restricted stock units. The restricted stock units are subject to both performance-and time-based vesting. These restricted stock units will vest and result in the issuance of common stock based on continuing employment, the Company achieving positive net profits measured in the aggregate over the first four full fiscal quarters following the grant date and the relative ranking of the TSR of the Company's common stock in relation to the TSR of the component companies in the S&P Health Care Equipment Select Industry Index over a three-year performance period based on a comparison of average closing stock prices in June 2015 and June 2018. The actual number of restricted stock units that may be earned ranges from 0% to 100% of the target number of shares. One-half of the restricted stock units will potentially vest in June 2018 based on performance criteria described above and the remaining half of the restricted stock units will vest one year thereafter.

The Company used a Monte Carlo simulation model to estimate the grant-date fair value of the restricted stock units granted in June 2015 and November 2016. The fair value related to the restricted stock units is being recorded as stock compensation expense over the period from date of grant to June 2019 regardless of the actual TSR outcome achieved.

The table below sets forth the assumptions used to value the market-based awards and the estimated grant-date fair value:

	June 2015 Awards	November 2016 Awards
Risk-free interest rate	1.10%	0.90%
Dividend yield	0%	0%
Remaining performance period (years)	1.21	1.21
Expected volatility	47.2%	50.6%
Estimated grant date fair value (per share)	\$ 107.10	\$ 62.55
Target performance (number of shares)	107,660	41,526

Employee Stock Purchase Plan

The Company has an employee stock purchase plan, or ESPP. Under the ESPP, eligible employees, including officers and directors, who have completed at least three months of employment with the Company or its subsidiaries who elect to participate in the purchase plan instruct the Company to withhold a specified amount of the employee's income each payroll period during a six-month payment period (the periods April 1—September 30 and October 1—March 31). On the last business day of each six-month payment period, the amount withheld is used to purchase shares of the Company's common stock at an exercise price equal to 85% of the lower of its market price on the first business day or the last business day of the payment period. The Company recognized compensation expense of \$0.5 million, \$0.5 million and \$0.3 million for the fiscal years ended March 31, 2017, 2016 and 2015, respectively, related to the ESPP.

Note 10. Income Taxes

The components of the Company's income tax provision (benefit) for the fiscal years ended March 31, 2017, 2016 and 2015 are as follows:

	<u>2017</u>	<u>2016</u>	<u>2015</u>
	(in \$000's)		
Income before provision for income taxes:			
United States	\$ 78,172	\$ 54,406	\$ 22,243
Foreign	13,170	11,432	6,522
Income before income taxes	<u>\$ 91,342</u>	<u>\$ 65,838</u>	<u>\$ 28,765</u>
Current tax expense:			
Federal	\$ 7,313	\$ 1,690	\$ 464
State	5,045	2,113	424
Foreign	1,066	1,592	1,283
	<u>13,424</u>	<u>5,395</u>	<u>2,171</u>
Deferred tax expense (benefit):			
Federal	23,008	18,769	(66,140)
State	(349)	1,284	(13,430)
Foreign	3,144	2,243	(7,524)
	<u>25,803</u>	<u>22,296</u>	<u>(87,094)</u>
Total income tax provision (benefit)	<u>\$ 39,227</u>	<u>\$ 27,691</u>	<u>\$ (84,923)</u>

The components of the Company's net deferred taxes were as follows:

	March 31,	
	2017	2016
	(in \$000's)	
Deferred tax assets		
NOL carryforwards and tax credit carryforwards	\$ 8,814	\$ 34,305
Stock-based compensation	16,560	14,879
Nondeductible reserves and accruals	10,303	8,550
Amortizable intangibles other than goodwill	1,846	2,420
Capitalized research and development	—	442
Foreign NOL carryforwards	13,634	17,635
Deferred revenue	4,308	3,351
Depreciation	289	353
Other, net	1,308	1,802
	<u>57,062</u>	<u>83,737</u>
Deferred tax liabilities		
Indefinite lived intangibles	(9,444)	(8,480)
In-process research and development	(4,374)	(4,649)
Domestic deferred tax liability on foreign NOL carryforwards	(6,836)	(10,488)
	<u>(20,654)</u>	<u>(23,617)</u>
Net deferred tax assets	36,408	60,120
Valuation allowance	(2,468)	(2,418)
Net deferred tax assets	<u>\$ 33,940</u>	<u>\$ 57,702</u>
Reported as:		
Long-term deferred tax assets, net	\$ 34,723	\$ 58,534
Long-term deferred tax liabilities	(783)	(832)
Net deferred tax assets	<u>\$ 33,940</u>	<u>\$ 57,702</u>

A reconciliation of the federal statutory income tax rate to the Company's effective income tax rate is as follows for the fiscal years ended March 31, 2017, 2016, and 2015:

	2017	2016	2015
Statutory income tax rate	35.0 %	35.0 %	35.0 %
Increase (decrease) resulting from:			
Change in valuation allowance	0.2	0.7	(342.8)
Credits	(3.3)	(4.1)	(1.9)
Foreign taxes	2.0	2.5	4.5
State taxes, net	3.8	3.7	4.0
Permanent differences	3.3	3.0	3.9
Stock based compensation	0.2	0.3	0.3
Rate differential on foreign operations	0.1	-	0.2
Other	1.7	1.0	1.6
Effective tax rate	<u>43.0 %</u>	<u>42.1 %</u>	<u>(295.2) %</u>

The Company regularly assesses its ability to realize its deferred tax assets. Assessing the realization of deferred tax assets requires significant management judgment. In determining whether its deferred tax assets are more likely than not realizable, the Company evaluates all available positive and negative evidence, and weights the evidence based on its objectivity.

During the fiscal year ended March 31, 2015, the Company determined based on its consideration of the weight of positive and negative evidence that there was sufficient positive evidence that most of its federal, state and certain foreign deferred tax assets were

more likely than not recoverable as of March 31, 2015. Accordingly, the Company recorded a \$101.5 million reversal of the valuation allowance in the year ended March 31, 2015.

As of March 31, 2017 and 2016, respectively, the Company maintained a valuation allowance of \$2.5 million and \$2.4 million for deferred tax assets related to NOL carryforwards in certain foreign jurisdictions in which the Company has had limited or no history of profitability. Based on the review of all available evidence, the Company recorded a valuation allowance to reduce these deferred tax assets to the amount that is more likely than not to be realizable as of March 31, 2017 and 2016.

Changes in the valuation allowance for deferred tax assets during the fiscal years ended March 31, 2017, 2016 and 2015 were as follows:

	<u>2017</u>	<u>2016</u>	<u>2015</u>
	(in \$000's)		
Valuation allowance as of beginning of year	\$ 2,418	\$ 2,912	\$ 102,093
Decreases recorded as benefit to income tax provision	-	(1,171)	(101,468)
Increases due to foreign net operating loss in certain foreign jurisdictions	50	677	2,287
Valuation allowance as of end of year	<u>\$ 2,468</u>	<u>\$ 2,418</u>	<u>\$ 2,912</u>

At March 31, 2017, the Company had federal net operating loss carryforwards, or NOLs, of approximately \$167.3 million which expire in varying years from fiscal 2019 through fiscal 2035. At March 31, 2017, the Company had foreign NOLs of approximately \$46.9 million, primarily in Germany, U.K., and France, which do not expire. In addition, at March 31, 2017, the Company had federal and state research and development credit carryforwards of approximately \$13.7 million and \$7.8 million, respectively, which expire in varying years from fiscal 2017 through fiscal 2036.

The entire amount of federal NOL of \$167.3 million relates to stock-based compensation tax deductions in excess of stock-based compensation expense for financial reporting purposes (“excess tax benefits”). Excess tax benefits are realized when they reduce income taxes payable, as determined using a “with and without” method, and are currently credited to additional paid-in capital rather than as a reduction of the income tax provision. During the year ended March 31, 2017, the Company realized excess tax benefits from federal and state tax deductions of \$12.0 million which were credited to additional paid-in capital.

As described in Note 2 above, the Company will adopt ASU 2016-09 during the first quarter of fiscal 2018. The Company believes that the adoption of ASU 2016-09 will have a significant impact on the Company’s consolidated financial statements, most notably, the requirement to recognize certain tax benefits or shortfalls upon a restricted stock unit vesting or stock option exercises in the income tax provision in the consolidated statement of operations. Upon adoption in the first quarter of fiscal 2018, the Company expects to record a cumulative-effect adjustment, on a modified-retrospective basis, within retained earnings for excess tax benefits not previously recognized as net deferred tax assets. The Company also anticipates that ASU 2016-09 will introduce more volatility to its effective income tax rate, net income and earnings per share due to the effect of tax benefits or shortfalls related to restricted stock unit vestings or stock option exercises.

When applicable, the Company accrues for the effects of uncertain tax positions and the related potential penalties and interest through income tax expense. As of March 31, 2017 and 2016, the Company has no material uncertain tax positions and no interest and penalties were recognized during the years ended March 31, 2017, 2016 and 2015, respectively.

The Company and its subsidiaries are subject to U.S. federal income tax, as well as income tax of multiple state and foreign jurisdictions. Fiscal years 2012 through 2016 remain open to examination in Germany and Abiomed Europe GmbH, the Company’s main operating subsidiary in Germany is currently being audited for those years. All tax years remain subject to examination by the Internal Revenue Service and state tax authorities, because the Company has net operating loss and tax credit carryforwards which may be utilized in future years to offset taxable income, those years may also be subject to review by relevant taxing authorities if the carryforwards are utilized.

Note 11. Commitments and Contingencies

Commitments

Leases

The Company's corporate headquarters is located in Danvers, Massachusetts. This facility encompasses most of the Company's U.S. operations, including research and development, manufacturing, sales and marketing and general and administrative departments. On August 12, 2016, the Company entered into a new lease agreement to expand its existing corporate headquarters which includes 163,560 square feet of space. The initial term of the lease agreement commenced on August 12, 2016 and terminates on August 31, 2026. The Company has options to extend the initial term for three separate periods of five years each. In connection with the entry into this new lease agreement, the Company terminated the previously existing lease for the facility dated February 24, 2014, as amended by the First Amendment to Lease dated April 30, 2015 and the Second Amendment to Lease effective January 1, 2016. The Company also terminated the purchase and sale agreement it had entered into to acquire the facility for \$16.5 million in December 2015 when it entered into this new lease agreement in August 2016.

The lease agreement provides the Company with an exclusive option to purchase the building on or before August 31, 2022, subject to certain conditions set forth therein. In addition, the lease agreement grants the Company a one-time right of first offer to purchase the building from September 1, 2022 until August 31, 2026, if the lessor decides to sell the building or receives an offer to purchase the building from a third-party buyer. The Danvers, Massachusetts building lease is being recorded as a capital lease. The payments under the lease are accounted for as interest and principal payments over 15 years.

Future minimum lease payments under non-cancelable leases as of March 31, 2017 are approximately as follows:

Fiscal Years Ending March 31,	Capital Lease	Operating Leases
	(in \$000s)	
2018	\$ 1,311	\$ 1,670
2019	1,349	1,593
2020	1,349	1,532
2021	1,373	1,542
2022	1,390	1,084
Thereafter	13,746	752
Total minimum lease payments	20,518	\$ 8,173
Less amounts representing interest	(4,180)	
Total capital lease obligation	\$ 16,338	
Less current capital lease obligation	(799)	
Capital lease obligation, net of current portion	\$ 15,539	

In February 2017, the Company entered into a lease agreement for an additional office space in Danvers, Massachusetts which expires in July 2022. The annual rent expense for this lease agreement is estimated to be \$0.2 million.

In September 2016, the Company entered into a lease agreement in Berlin, Germany which commences in May 2017 and expires in May 2024. The annual rent expense for this lease agreement is estimated to be \$0.3 million.

The Company also entered into a lease agreement in October 2016 through September 2021 for an office in Tokyo, Japan which houses regulatory and training personnel as we prepare for commercial launch in Japan. The annual rent expense for this lease agreement is estimated to be \$0.9 million.

In December 2016, the Company entered into a purchase and sale agreement to acquire its existing European headquarters in Aachen, Germany, consisting of 33,000 square feet of space. Pursuant to the purchase and sale agreement, the Company acquired the property for approximately \$12.6 million in February 2017.

License Agreements

In April 2014, the Company entered into an exclusive license agreement for the rights to certain optical sensor technologies in the field of cardio-circulatory assist devices. The Company made a \$1.5 million upfront payment upon execution of the agreement and

could make additional payments of up to \$4.5 million upon the achievement of certain development milestones. The Company paid approximately \$0.8 million in development milestones which are included with research and development expenses for the fiscal year ended March 31, 2017.

Contingencies

From time to time, the Company is involved in legal and administrative proceedings and claims of various types. In some actions, the claimants seek damages, as well as other relief, which, if granted, would require significant expenditures. The Company records a liability in its consolidated financial statements for these matters when a loss is known or considered probable and the amount can be reasonably estimated. The Company reviews these estimates each accounting period as additional information is known and adjusts the loss provision when appropriate. If a matter is both probable to result in liability and the amounts of loss can be reasonably estimated, the Company estimates and discloses the possible loss or range of loss. If the loss is not probable or cannot be reasonably estimated, a liability is not recorded in its consolidated financial statements.

On April 25, 2014, the Company received an administrative subpoena from the Boston regional office of the United States Department of Health and Human Services, or HHS, Office of Inspector General requesting materials relating to the Company's reimbursement of employee expenses and remuneration to healthcare providers from July 2012 through December 2012, in connection with a civil investigation under the False Claims Act (the "FCA Investigation"). Subsequently, the Company received Civil Investigative Demands from the U.S. Attorney's Office for the District of Massachusetts that collectively sought additional information relating to this matter for the time period of January 1, 2011 through September 14, 2016. The Company continues to cooperate fully with the government in this investigation and is exploring various ways to resolve this matter with the government. The Company is not able to predict what action, if any, might be taken in the future as a result of the investigation, or the potential impact on its financial position.

Thoratec Corporation, or Thoratec, has challenged a number of Company owned patents in Europe in connection with the launch of their HeartMate PHP medical device, or PHP, in Europe. These actions all relate to Thoratec's ability to manufacture and sell their PHP product in Europe. These actions do not cover the Company's ability to manufacture or sell its Impella line of devices. Thoratec is currently a subsidiary of Abbott Laboratories since January 2017.

In October 2012, Thoratec filed a notice of opposition in the European Patent Office, or EPO, to a Company owned European patent covering a 'pigtail' feature on a blood pump. In October 2014, the EPO dismissed Thoratec's opposition, and in December 2014, Thoratec filed a notice of appeal. The appeal was heard on January 20, 2017 by the EPO Board of Appeals. The Company prevailed at the EPO Board of Appeals and succeeded in upholding the patent in an amended form. The approved amended claim covers the combination of a blood pump with a pigtail and an expanding suction basket and funnel feature. The Board of Appeals is the highest level at the EPO so there are no further challenges to this patent possible at the EPO by Thoratec.

In December 2014, Thoratec filed a nullity suit in German's Patent Federal Court against a German "pigtail" patent owned by the Company with a flexible extension feature, and auxiliary pigtail, basket and funnel features. The validity hearing was held in November 2016 and the Patent Federal Court found the patent invalid. The Company is appealing this decision.

In August 2015, Thoratec filed a nullity action in German Patent Federal Court against two Company owned patents covering a "magnetic clutch" feature. These magnetic clutch patents were acquired by the Company in July 2014, in connection with its acquisition of ECP and AIS. The validity hearing for the magnetic clutch patents is scheduled for June 2017; the Court's preliminary opinion is that the magnetic clutch claims are invalid.

In September 2015, the Company filed counterclaims in the magnetic clutch action in Germany asserting that the PHP product infringes the two magnetic clutch patents and the two pigtail patents. The infringement trial has been stayed, pending resolution of the German and EPO nullity actions.

In December 2015, the Company received a letter from Maquet Cardiovascular LLC, or Maquet, a subsidiary of the Getinge Group, and maker of the intra-aortic balloon pump, asserting that the Company's Impella devices infringe certain claims having guidewire, lumen and sensor features which were in two Maquet patents and one pending patent application in the U.S. and elsewhere, and attached a draft litigation complaint and encouraged the Company to take a license from Maquet. In January 2016, the Company responded to Maquet stating that it believed that the cited claims were invalid and that its Impella devices did not infringe the cited patents. In May 2016, Maquet sent an additional letter notifying the Company that the pending U.S. patent application had been issued as a U.S. patent and repeated their earlier assertion and encouraged the Company to discuss taking a license from Maquet. The three patents expire September 2020, December 2020 and October 2021. On May 19, 2016, the Company filed suit in U.S. District Court for the District of Massachusetts, or D. Mass., against Maquet seeking a declaratory judgment that the Company's Impella devices do not infringe Maquet's cited patent rights.

On August 24, 2016, Maquet sent another letter to the Company identifying four new U.S. continuation patent filings with claims that Maquet alleges are infringed by the Company's Impella devices. Of the four U.S. continuation applications, one issued as a patent on January 17, 2017, one issued as a patent on February 7, 2017, one issued as a patent on March 21, 2017, and one has not begun substantive prosecution. The three patent issued will expire in September 2020 and if the fourth continuation application issues it will also expire in September 2020. On September 23, 2016, Maquet filed a response to the Company's suit in D. Mass., including various counterclaims alleging that the Company's Impella 2.5, Impella CP, Impella 5.0, and Impella RP heart pumps infringe certain claims of the three original issued U.S. patents. The case is in its early stages and the next hearing on this case is scheduled for November 2017. With regard to the six Maquet patents, in March and April 2017 the Company filed requests for inter partes review, or IPR, at the U.S. Patent & Trademark Office's Patent Trial and Appeals Board, or PTAB, asserting that the claims are invalid in view of prior art blood pump technology. The PTAB's decisions on whether to institute the IPRs are expected beginning September 2017.

On February 9, 2017, Thoratec filed an opposition against a Company patent acquired from ECP and AIS relating to a housing structure for an expandable pump. The deadline for the Company to respond to the opposition is in September 2017.

The Company is unable to estimate a potential liability with respect to the legal matters noted above. There are numerous factors that make it difficult to meaningfully estimate possible loss or range of loss at this stage of the legal proceedings, including that the FCA Investigation and patent disputes with Thoratec and Maquet remain either in relatively early stages, or there are significant factual and legal issues to be resolved and information obtained or rulings made during any lawsuits or investigations that could affect the methodology for calculation.

Note 12. Accrued Expenses

Accrued expenses consisted of the following:

	<u>March 31, 2017</u>	<u>March 31, 2016</u>
	(in \$000's)	
Employee compensation	\$ 23,290	\$ 18,359
Sales and income taxes	3,180	2,527
Research and development	2,349	1,587
Accrued capital expenditures	2,300	-
Professional, legal and accounting fees	2,019	1,764
Marketing	1,827	1,146
Warranty	717	998
Other	2,021	2,001
	<u>\$ 37,703</u>	<u>\$ 28,382</u>

Accrued employee compensation consists primarily of accrued bonuses, accrued commissions and accrued employee benefits at March 31, 2017 and 2016.

Note 13. Segment and Enterprise Wide Disclosures

The Company operates in one business segment—the research, development and sale of medical devices to assist or replace the pumping function of the failing heart. The Company's chief operating decision maker (determined to be the Chief Executive Officer) does not manage any part of the Company separately, and the allocation of resources and assessment of performance are based on the Company's consolidated operating results. International sales (sales outside the U.S. and primarily in Europe) accounted for 9%, 8% and 10% of total product revenue during the fiscal years ended March 31, 2017, 2016 and 2015, respectively. As of March 31, 2017 and 2016, most of the Company's long-lived assets are located in the U.S. except for \$23.2 million and \$5.9 million at March 31, 2017 and 2016, respectively, which are located primarily in Germany. As described in Note 6 above, the Company acquired its European headquarters in Aachen, Germany in February 2017 for \$12.6 million.

Note 14. Quarterly Results of Operation (Unaudited)

The following is a summary of the Company's unaudited quarterly results of operations for the fiscal years ending March 31, 2017 and 2016:

	Fiscal Year Ended March 31, 2017				
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total Year
	(in \$000's)				
Total revenues	\$ 102,995	\$ 102,955	\$ 114,674	\$ 124,680	\$ 445,304
Cost of product revenue	15,070	17,309	18,987	19,261	70,627
Other operating expenses	66,692	71,138	70,284	76,425	284,539
Other income, net	192	228	423	362	1,205
Income before income taxes	21,425	14,736	25,826	29,356	91,343
Income tax provision	8,515	5,861	10,394	14,457	39,227
Net income	<u>\$ 12,910</u>	<u>\$ 8,875</u>	<u>\$ 15,432</u>	<u>\$ 14,899</u>	<u>\$ 52,116</u>
Basic net income per share	\$ 0.30	\$ 0.21	\$ 0.36	\$ 0.34	\$ 1.21
Diluted net income per share	\$ 0.29	\$ 0.20	\$ 0.34	\$ 0.33	\$ 1.17

	Fiscal Year Ended March 31, 2016				
	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Total Year
	(in \$000's)				
Total revenues	\$ 73,432	\$ 76,359	\$ 85,795	\$ 93,957	\$ 329,543
Cost of product revenue	10,868	12,144	12,744	14,663	50,419
Other operating expenses	47,533	51,398	55,608	59,481	214,020
Other income, net	116	149	55	414	734
Income before income taxes	15,147	12,966	17,498	20,227	65,838
Income tax provision	6,288	5,231	6,943	9,229	27,691
Net income	<u>\$ 8,859</u>	<u>\$ 7,735</u>	<u>\$ 10,555</u>	<u>\$ 10,998</u>	<u>\$ 38,147</u>
Basic net income per share	\$ 0.21	\$ 0.18	\$ 0.25	\$ 0.26	\$ 0.90
Diluted net income per share	\$ 0.20	\$ 0.17	\$ 0.23	\$ 0.24	\$ 0.85

OFFICES

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NASDAQ GLOBAL MARKET

Trading symbol: ABMD

DIVIDENDS

The Company has never paid any cash dividends on its capital stock and does not plan to pay any cash dividends in the foreseeable future. The current policy of the Company is to retain its cash flows and any future earnings to finance future growth.

AVAILABLE PUBLICATIONS

The Company's annual report is distributed regularly to stockholders. Additional publications are available to stockholders, including the Company's annual report on Form 10-K, and quarterly reports on Form 10-Q, as filed with the Securities and Exchange Commission; news releases issued by the Company; and brochures on specific products. Such publications are available on our website at www.Abiomed.com or by writing us at:
Abiomed, Inc. 22 Cherry Hill Drive, Danvers, MA 01923, USA

TRANSFER AGENT AND REGISTRAR

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6201 15th Avenue, Brooklyn, NY 11219 USA

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Deloitte & Touche LLP
200 Berkeley Street, Boston, MA 02116, USA

FACTORS THAT MAY AFFECT FUTURE RESULTS

Certain statements in this annual report, including statements made in the letter to the stockholders, employees, customers and their patients; narrative text; captions; and graphics, constitute "forward-looking statements," such as statements regarding the Company's plans, objectives, expectations and intentions. These statements can often be identified by the use of forward-looking terminology such as "may," "will," "should," "expect," "anticipate," "believe," "plan," "intend," "could," "estimates," "is being," "goal," "schedule" or other variations of these terms or comparable terminology. All forward-looking statements involve risks and uncertainties. The Company's actual results may differ materially from those anticipated in these forward-looking statements based upon a number of factors, including uncertainties associated with development, testing and related regulatory approvals, potential future losses, complex manufacturing, high-quality requirements, dependence on limited sources of supply, competition, technological change, government regulation, future capital needs, uncertainty of additional financing, and other risks and challenges detailed in the Company's filings with the Securities and Exchange Commission, including the Annual Report filed on Form 10-K for the Company's fiscal year ended March 31, 2017. Readers are cautioned not to place undue reliance on any forward-looking statements, which speak only as of the date of this annual report. The Company undertakes no obligation to publicly release the results of any revisions to these forward-looking statements that may be made to reflect any changes in the Company's expectations, or events or circumstances that occur after the date of this annual report or to reflect the occurrence of unanticipated events.

SENIOR MANAGEMENT

MICHAEL R. MINOGUE
Chairman, President and Chief Executive Officer

DAVID M. WEBER, PH.D.
Chief Operating Officer

WILLIAM J. BOLT
Senior Vice President, Global Quality, Regulatory and Clinical Operations

MICHAEL J. TOMSICEK
Vice President, Chief Financial Officer

ANDREW J. GREENFIELD
Vice President and General Manager, Global Marketing

MICHAEL G. HOWLEY
Vice President and General Manager, Global Sales

THORSTEN SIESS, PH.D.
Chief Technology Officer

SETH BILAZARIAN, M.D.
Chief Medical Officer

STEPHEN C. MCEVOY
Vice President and General Counsel

KELLEY BOUCHER
Vice President, Human Resources

BOARD OF DIRECTORS

MICHAEL R. MINOGUE (CHAIRMAN)
Abiomed President and Chief Executive Officer

DOROTHY E. PUHY (LEAD DIRECTOR)
Executive Vice President and Chief Operating Officer
Dana-Farber Cancer Institute, Inc.

JEANNINE M. RIVET
Executive Vice President, UnitedHealth Group

ERIC A. ROSE, M.D.
Executive Chairman, SIGA Technologies, Inc.

MARTIN P. SUTTER
Managing Director and Co-Founder of EW Healthcare Partners

PAUL G. THOMAS
President, Chief Executive Officer and Founder, Roka Bioscience
(Retired January 2017)

CHRISTOPHER D. VAN GORDER
President and Chief Executive Officer, Scripps Health

W. GERALD AUSTEN, M.D. (DIRECTOR EMERITUS)
Distinguished Professor of Surgery Harvard Medical School and
the Massachusetts General Hospital

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Nothing in this document shall be construed to encourage or require any health care provider or institution to provide inpatient, outpatient or any other services to patients; to order any goods or services from the Company; or otherwise to generate business for the Company. Customers utilizing this information should not knowingly or intentionally conduct themselves in a manner so as to violate the prohibition against fraud and abuse in connection with federal or state healthcare programs.

RECOVERING HEARTS AND SAVING LIVES

Recovering hearts and saving lives is the founding principle and guiding compass of our organization. This is our highest recognition of success.

Recovering and preserving our patients' hearts enables them to return home to their families and enjoy an improved quality of life.

GROWING SHAREHOLDER VALUE

Growing shareholder value rewards our investors and helps to ensure the company's financial stability, allowing for the continued pursuit of our mission. Shareholder value is driven by executing our goals and achieving positive financial results. For employees, growth of shareholder value provides financial security for our families and the pursuit of happiness for our future.



LEADING IN TECHNOLOGY AND INNOVATION

We are committed to providing patients and health care providers with the highest quality devices and optimal cost-effective solutions.

We accomplish this through the relentless exploration of new ideas and approaches that allow us to address new clinical challenges for our customers and patients.

SUSTAINING A WINNING CULTURE

Patients First. Our patients and customers are the motivation for all that we do and achieving our mission is dependent on their well-being. We must always act with integrity and honor and demand the best of ourselves. We work hard, have faith in each other, and have fun celebrating patient success stories.