ABIOMED INC
Form 424B3
March 13, 2007
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The information in this prospectus supplement and the accompanying prospectus is not complete and may be changed without notice. A registration statement has been filed with the Securities and Exchange Commission and has been declared effective. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell these securities, and are not soliciting an offer to buy these securities, in any jurisdiction where the offer or sale is not permitted.

Filed pursuant to Rule 424(b)(3)

Registration No. 333-137746

PRELIMINARY PROSPECTUS SUPPLEMENT

(To Prospectus Dated October 17, 2006)

Subject to Completion, Dated March 12, 2007

5,000,000 Shares

COMMON STOCK

ABIOMED, Inc. is offering 5,000,000 shares of its common stock.

Our common stock is quoted on the Nasdaq Global Market under the symbol ABMD. The last reported sale price of our common stock on the Nasdaq Global Market on March 9, 2007 was $13.46 per share.

Investing in our common stock involves a high degree of risk. See Risk Factors beginning on page S-9.

PRICE $ A SHARE

	Price to Public	Underwriting Discounts and Commissions	Proceeds to Abiomed
Per Share	*$*	*$*	*$*
Total	*$*	*$*	*$*

We have granted the underwriters the right to purchase up to an additional 750,000 shares of common stock to cover over-allotments.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The underwriters expect to deliver the shares to purchasers on , 2007.

MORGAN STANLEY *UBS Investment Bank*

March , 2007

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ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying prospectus are part of a shelf registration statement on Form S-3 that we filed with the Securities and Exchange Commission, or the SEC. This prospectus supplement describes the specific details regarding this offering, including the price, the amount of common stock being offered and the risks of investing in our common stock. The accompanying prospectus provides more general information. To the extent information in this prospectus supplement is inconsistent with the accompanying prospectus or any of the documents incorporated by reference into the accompanying prospectus, you should rely on this prospectus supplement. You should read both this prospectus supplement and the accompanying prospectus together with the additional information about us described in the accompanying prospectus in the section entitled Where You Can Find More Information.

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PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights only some of the information included or incorporated by reference in this prospectus supplement and the accompanying prospectus. You should read the entire prospectus carefully, including the section entitled Risk Factors beginning on page S-9 regarding our company and the common stock being sold in this offering. Unless otherwise indicated, the information in this prospectus supplement assumes that the underwriters will not exercise their over-allotment option.

Overview

We are a leading provider of medical devices that provide circulatory support to acute heart failure patients across the continuum of care in heart recovery. Our products are designed to enable the heart to rest, heal and recover by improving blood flow and/or performing the pumping function of the heart. We believe we are currently the only company with commercially available cardiac assist devices approved for heart recovery by the Food and Drug Administration, or FDA, and our products have been used to treat thousands of patients to date. Our products can be used in a broad range of clinical settings, including by heart surgeons for patients in profound shock and by interventional cardiologists for patients who are pre-shock in the cardiac catheterization lab, or cath lab. We are focused on increasing awareness of heart recovery alternatives and establishing recovery as the standard of care for patients with failing but potentially recoverable hearts. We expect this standard of care to significantly increase the number of patients able to return home from the hospital with their own hearts. Since 2004, our new executive team has focused our efforts on expanding our product portfolio, and we currently have eight disposable products that have either been approved or cleared by the FDA or have received CE mark approval, as well as several additional products in development. In addition, we have significantly expanded our global distribution efforts over the past two years and increased revenue by approximately 70% to $43.7 million in the year ended March 31, 2006 from $25.7 million in the year ended March 31, 2004.

We currently manufacture and sell the AB5000 Circulatory Support System and the BVS 5000 Biventricular Support System for circulatory support of acute heart failure patients in profound shock, including patients suffering from cardiogenic shock after a heart attack or heart surgery, and patients with myocarditis, or a virus in the heart. These devices, which are used in the surgery suite, can assume the pumping function of the heart, allowing the patient s heart to rest, heal and potentially recover. We began offering the BVS 5000 for post-cardiotomy cardiogenic shock in 1992, and we introduced the AB5000, our next-generation heart recovery system, in 2004. Unlike destination therapy and bridge-to-transplant devices, which are designed for heart patients with irreversible heart damage, our AB5000 and BVS 5000 systems are designed for heart recovery, requiring only a minimal incision in the left ventricle of the heart. We believe these two systems are currently the only commercially available cardiac assist devices approved by the FDA for heart recovery. The AB5000 has several clinical advantages over the BVS 5000, including a higher pulsatile blood flow of up to six liters per minute, the ability to provide a longer duration of support and the facilitation of patient mobility within the hospital. These advantages enable us to offer our heart recovery solution to a broader range of patients, including patients who have had an acute myocardial infarction or are suffering from myocarditis. In addition, we believe these advantages, combined with the AB5000 s ease of implant and historically low incidence of adverse events, facilitate heart recovery, potentially avoiding the need for heart transplantation and improving patient outcomes.

In addition to our products for the surgery suite, we offer other circulatory assist devices that can be used in cath labs, where interventional cardiologists treat a larger percentage of heart attack patients and also perform angioplasty and high-risk angioplasty procedures. Our devices designed primarily for pre-shock patients in the cath lab are our Impella 2.5 and Impella 5.0 catheters, which are percutaneous micro heart pumps, providing up to 2.5 and 5.0 liters of blood flow per minute, respectively. These catheters can be quickly inserted through the femoral artery over a guide wire to reach the left ventricle of the heart. Our Impella devices have CE mark

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approval and have been used to treat more than 850 patients in Europe. These devices are not approved for commercial sale in the United States, but we plan to apply for premarket approval, or PMA, of the Impella 2.5 and 5.0 catheters. Since mid-2006, we have been conducting pilot clinical trials in the U.S. for both the Impella 2.5 and 5.0 to support these planned applications for premarket approval from the FDA. The Impella 2.5 trial is designed to study the use of the Impella 2.5 to support high-risk angioplasty. The Impella 5.0 trial will include post-cardiotomy patients who have been weaned from the heart-lung machine. In addition, we are also seeking 510(k) clearance from the FDA of our Impella 2.5 catheter for short duration use. We cannot assure you that we will receive PMA approval or 510(k) clearance for any intended use of the Impella 2.5 or PMA approval for any intended use of the Impella 5.0.

Our other product for the cath lab is our recently introduced percutaneous intra-aortic balloon, or IAB. An IAB is typically used as an initial line of therapy for patients with diminished heart function. To support our IAB, we developed our iPulse combination console, which is also designed to support our AB5000 and BVS 5000 systems, as well as other products we may offer in the future. We believe the iPulse s ability to support multiple devices, including IABs made by other manufacturers, will make it more attractive than consoles designed to operate a single device. In addition, we believe the iPulse will provide our customers additional flexibility in allocating resources between the surgery suite and the cath lab. The iPulse console has CE mark approval in Europe, and we have filed a PMA supplement to obtain FDA approval in the U.S.

Since March 31, 2004, we have increased the number of our direct sales and clinical personnel from 17 to 69 employees covering the U.S., France and Germany. In addition, we use distributors to sell our products in other international markets. We plan to continue to expand our global sales force and increase the number of our distributors over the next few years. We have historically focused our efforts on selling our AB5000 and BVS 5000 systems to cardiac surgeons in open heart centers and transplant centers, of which there are approximately 1,000 in the U.S. However, our recently FDA-cleared IAB product and, if approved by the FDA, our Impella products, will expand our potential target customer base to include interventional cardiologists in the approximately 1,750 U.S. hospitals with cath labs. We estimate that there are approximately 14,000 interventional cardiologists in the U.S.

Industry Background

According to the American Heart Association, or AHA, coronary heart disease is the leading cause of death in the U.S. The AHA estimates that in the United States in 2004 there were approximately two million hospital visits with coronary heart disease as the first-listed diagnosis and approximately 1.1 million hospital visits with congestive heart failure as the first-listed diagnosis. The number of hospital visits with acute myocardial infarction, or heart attack, as the first or second-listed diagnosis was approximately 896,000. Many heart failure patients are sent to the cath lab for treatments such as the implantation of defibrillators or pacemakers, angioplasty procedures and stenting procedures. In more severe cases, patients are sent directly to the surgery suite for coronary bypass or valve replacement surgery. The most severe heart failure patients are patients in profound shock, including those suffering from myocarditis or suffering from cardiogenic shock, or the impaired ability of the heart to pump blood, after a heart attack or heart surgery. For example, according to The New England Journal of Medicine, approximately 7 to 10% of the patients who are hospitalized for a heart attack suffer from cardiogenic shock and 60 to 80% of those patients die. These patients typically require treatments in the surgery suite involving the use of mechanical circulatory support devices that provide increased blood flow and reduce the strain on the heart. However, many less severe patients in the cath lab could also benefit from circulatory support devices, which could potentially prevent them from entering into profound shock.

There are two primary types of devices used in the cath lab and surgery suite for circulatory support for pre-shock and profound shock patients: intra-aortic balloons, or IABs, and ventricular assist devices, or VADs. An IAB is an inflatable balloon inserted by a catheter that 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 support

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and depend on the patient s own heart to generate the majority of the patient s blood flow. In addition, IABs are often used in conjunction with inotropes or other drugs that improve heart muscle ejection but significantly increase the risk of mortality. Moreover, IABs can also require significant time to put in place.

Ventricular assist devices are mechanical devices that help the failing heart pump blood. Historically, VADs have been highly invasive and require implantation in the surgery suite. The use of VADs generally falls into three sub-categories: destination therapy, bridge-to-transplant and recovery. Destination therapy generally involves the implantation of a mechanical support device as the last clinical alternative for a chronic patient with end-stage heart failure who is not eligible for transplantation. Destination therapy only prolongs the end-stage disease, as the patient s condition is terminal and the patient s heart is not expected to recover. In addition, a number of companies have been developing artificial replacement hearts, which are a form of destination therapy.

Bridge-to-transplant VADs are primarily used to support chronic patients eligible to receive a heart transplant. According to the United Network for Organ Sharing, in 2006 there were only approximately 1,850 heart transplants in the U.S. As a result, many patients eligible for transplant must rely on bridge-to-transplant devices for an extended period while waiting for a heart transplant. During this time, these patients frequently experience significant medical complications, such as infection. Moreover, these devices generally require the removal of a portion of the patient s heart tissue, significantly limiting the chance of recovery of the patient s heart.

Recovery VADs are designed to enable the patient s heart to 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 be removed once the heart has recovered. If possible, recovery of one s own heart is generally preferred to transplantation or prolonged device implantation, both of which have significant side effects and increase the risk of mortality. Historically, however, recovery devices have not been widely available.

Our Solution

Our product portfolio is designed to provide heart recovery as an option across the continuum of care for acute heart failure patients. We believe our AB5000 and BVS 5000 products are currently the only commercially available cardiac assist devices approved by the FDA for heart recovery. In addition, if approved by the FDA, our Impella products and our iPulse console, together with our recently FDA-cleared IAB, will expand our heart recovery devices beyond the surgery suite by providing circulatory support for pre-shock heart failure patients in the cath lab. This expansion into the cath lab will significantly increase our target market opportunity and will enable us to offer products to interventional cardiologists in the approximately 1,750 U.S. hospitals with cath labs. We estimate that there are approximately 14,000 interventional cardiologists in the U.S. The new target patient population in the cath lab for our Impella and IAB devices includes approximately one million U.S. patients annually who enter the hospital for heart attacks and high-risk angioplasty procedures. This target patient base is in addition to our existing target population of approximately 75,000 patients suffering from cardiogenic shock after a heart attack or heart surgery, or suffering from myocarditis. Our existing target patients are those in the approximately 1,000 open heart centers and transplant centers in the U.S., which continue to represent a significant opportunity for growth as well.

We developed our first heart recovery products for use in open heart centers and transplant centers. Our AB5000 and BVS 5000 are capable of assuming the pumping function of the heart. Unlike destination therapy and bridge-to-transplant devices, which are designed for heart patients with irreversible heart damage, our AB5000 and BVS 5000 systems are designed for heart recovery, requiring only a minimal incision in the left ventricle of the heart. We believe the AB5000 s high flow rates, ease of implant, facilitation of patient mobility in the hospital and historically low incidence of adverse events facilitate heart recovery, potentially avoiding the need for heart transplantation and improving patient outcomes. In October 2005, the Centers for Medicare & Medicaid Services, or CMS, increased reimbursement for our AB5000 and BVS 5000 products for patients that

recover using our devices to levels similar to those for patients who undergo heart transplants. Since its introduction, the BVS 5000 has supported thousands of patients in hundreds of medical centers around the world. The AB5000, our next-generation heart recovery device introduced in 2004, has already supported more than 500 patients globally.

In 2005, we began to expand our product portfolio to include devices that address the larger population of heart attack and high-risk angioplasty patients treated by interventional cardiologists in the cath lab. This population includes patients whose hearts can potentially recover with assistance but without open heart surgery. Our Impella 2.5 and 5.0 catheters are micro heart pumps that can be quickly inserted percutaneously through the femoral artery over a guide wire to reach the left ventricle of the heart. This rapid procedure time facilitates early patient stabilization, giving an interventional cardiologist additional time to evaluate the most effective and clinically prudent treatment option for the patient. These devices allow the heart to rest, heal and potentially recover without the use of inotropes, drugs commonly used with IABs that increase the risk of mortality. In addition, the higher blood flow rate of our Impella 5.0 enables surgeons to use it to treat more severe heart conditions in the surgery suite. We believe our Impella products can provide solutions to patients with less severe heart disease, enhancing patient outcomes and increasing the number of patients who return home with their own hearts.

We expect that our iPulse console, if approved by the FDA, will further expand our product reach into the cath lab. The iPulse console is designed to support our IAB as well as other manufacturers IABs, which are used primarily in the cath lab. Because our multi-functional console also supports our AB5000 and BVS 5000 blood pumps, we believe the iPulse will provide our customers additional flexibility in allocating console resources between the surgery suite and the cath lab. In addition, because a significant portion of IABs are used in the surgery suite, we believe adoption of our iPulse console will increase utilization of our AB5000 ventricle.

In September 2006, we received Humanitarian Device Exemption, or HDE, approval from the FDA for our AbioCor Implantable Replacement Heart, the first completely self-contained artificial heart. The AbioCor gives chronic patients with biventricular heart failure who are not eligible for a transplant and whose sole alternative is death the opportunity to extend life. The AbioCor has no wires piercing the skin and allows the patient improved quality of life outside the hospital. We currently expect to begin a controlled roll-out of the AbioCor in the quarter ending September 30, 2007 at approximately five heart centers in the U.S. We are also developing our next-generation artificial heart, the AbioCor II, which is approximately 30% smaller than the existing AbioCor and is being designed with a goal of five-year reliability.

Our Strategy

Our strategic objective is to become the global leader in medical devices for heart recovery. To achieve this objective, we intend to:

- Expand our global distribution by hiring additional direct sales and clinical personnel and growing our network of international distributors
- Promote heart recovery as the standard of care through clinical data and published scientific studies
- Enhance our product portfolio to address patients along the entire continuum of care for heart recovery, from the cath lab, to the surgery suite, to the intensive care unit, to home discharge
- Evaluate strategic opportunities to add complementary products and technologies

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Risks Related to Our Business

Our business is subject to a number of risks that you should be aware of before making an investment decision. Some of these risks are:

- Our products are highly regulated medical devices and face substantial uncertainties relating to product development, clinical trials, regulatory approvals or clearances and commercial acceptance. Several of our products, including our Impella products and iPulse console, are not yet approved or cleared by the FDA, and we cannot assure you that they will ever be approved or cleared.

- Historically, we have not been profitable, and we cannot assure you that we will become profitable. Our operating results may continue to fluctuate unpredictably.

- The markets for most of our products are unproven, and we may be unable to successfully commercialize those products. We have limited experience selling our products to cath labs.

- Any failure on our part to manage growth successfully could adversely affect our business and operating results. We currently manufacture each of our products at only one location, and we may encounter difficulties in increasing our manufacturing capacity to meet anticipated demand.

- We may not be successful in expanding our sales activities, developing global distribution of our products, and recruiting and retaining key personnel.

- We may not be successful in defending our intellectual property, and we may face substantial claims for intellectual property infringement and product liability.

These and other risks related to our business and this offering are discussed more fully in the section of this prospectus supplement entitled Risk Factors, beginning on page S-9.

Our Corporate Information

We are a Delaware corporation and commenced operations in 1981. Our principal executive offices are located at 22 Cherry Hill Drive, Danvers, Massachusetts 01923, and our telephone number is (978) 777-5410. Our web address is www.abiomed.com. We make available free of charge through the Investors section of our website all reports that we file with the Securities and Exchange Commission. We do not incorporate the information on our website into this prospectus supplement, and you should not consider it part of this prospectus supplement.

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THE OFFERING

Common stock offered by ABIOMED, Inc.:	5,000,000 shares
Common stock to be outstanding after the offering:	32,226,012 shares
Use of Proceeds	We intend to use the net proceeds we receive from this offering to expand our global sales and distribution, to complete clinical studies and regulatory processes, and invest in research and development and for general corporate purposes, including working capital and potential acquisitions.
Nasdaq Global Market symbol:	ABMD

The number of shares of common stock to be outstanding after the offering is based on the number of shares outstanding as of March 9, 2007 and reflects our sale of 5,000,000 shares of common stock in this offering. This number excludes:

- options outstanding on March 9, 2007 to purchase 4,304,245 shares of common stock at a weighted average exercise price of $11.03 per share;
- options and other stock awards with respect to an additional 1,555,450 shares of common stock that may be granted under our stock incentive plans after March 9, 2007;
- 245,544 shares of common stock issuable under our employee stock purchase plan after March 9, 2007; and
- warrants to purchase up to 400,000 shares of common stock issued in connection with the purchase of intellectual property at an exercise price of $0.01 per share.

Unless otherwise noted, the information in this prospectus supplement assumes that the underwriters over-allotment option will not be exercised.

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SUMMARY CONSOLIDATED FINANCIAL DATA

You should read the following summary consolidated financial data together with Management s discussion and analysis of financial condition and results of operations and our financials statements and the related notes included or incorporated by reference in this prospectus supplement and the accompanying prospectus. The consolidated statement of operations data include the results of operations attributable to our acquisition of all of the outstanding stock of Impella CardioSystems AG as of May 10, 2005. Our Impella acquisition was accounted for under the purchase method of accounting.

	Year ended March 31,			Nine months ended December 31,	
	2004	2005	2006	2005	2006
	(in thousands, except per share data)				
Statement of operations data:					
Total revenues	$ 25,739	$ 38,216	$ 43,670	$ 29,874	$ 36,798
Costs and expenses [1]:					
Cost of product revenues excluding amortization[1]	7,591	9,366	11,685	7,851	9,281
Research and development [1]	14,150	13,350	16,739	12,517	16,329
Selling, general and administrative [1]	14,037	18,566	30,923	21,558	31,355
Expensed in-process research and development			13,306	13,306	800
Amortization of intangibles	213	187	1,308	955	1,243
Total costs and expenses [1]	35,991	41,469	73,961	56,187	59,008
Loss from operations	(10,252)	(3,253)	(30,291)	(26,313)	(22,210)
Interest and other income, net	806	911	1,198	799	1,022
Net loss before provision for income taxes	(9,446)	(2,342)	(29,093)	(25,514)	(21,188)
Tax provision			356	253	344
Net loss	$ (9,446)	$ (2,342)	$ (29,449)	$ (25,767)	$ (21,532)
Basic and diluted net loss per share	$ (0.45)	$ (0.11)	$ (1.15)	$ (1.01)	$ (0.81)
Weighted average shares outstanding	21,153	21,845	25,649	25,447	26,602

	December 31, 2006	
	Actual	As adjusted [2]
Balance sheet data:		
Cash, cash equivalents, and short-term marketable securities	$ 17,241	$79,435
Working capital	23,995	86,189
Total assets	74,534	136,728
Long-term liabilities	6,456	6,456
Stockholders equity	57,079	119,273

(1) Costs and expenses for the nine months ended December 31, 2006 include stock-based compensation expense of $4.6 million, or approximately $0.17 per share, as a result of the adoption of SFAS No. 123(R), Share-Based Payment , in fiscal 2007. Approximately $3.1 million of this expense is included in selling, general and administrative expenses, approximately $1.3 million of this expense is included in research and development expenses and approximately $0.2 million of this expense is included in cost of product revenues excluding amortization.

(2) Reflects the sale of 5,000,000 shares of our common stock in this offering at an assumed public offering price of $13.46 per share (based on the last reported sale price on March 9, 2007), after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Each $0.50 increase (decrease) in the assumed public offering price of $13.46 per share would increase (decrease) each of cash, cash equivalents and short-term marketable securities; working capital; total assets; and

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stockholders equity by approximately $2.3 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus supplement, remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. An increase (decrease) of 1,000,000 shares in the number of shares offered by us would increase (decrease) each of cash, cash equivalents and short-term marketable securities; working capital; total assets; and total stockholders equity by approximately $12.6 million. The as adjusted information discussed above is illustrative only and will adjust based on the actual public offering price and other terms of this offering determined at pricing.

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RISK FACTORS

An investment 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 prospectus supplement, including our consolidated financial statements and the related notes. The risks and uncertainties we have described are not the only ones we face. Additional risks and uncertainties of which we are unaware or that we currently deem immaterial may also adversely affect our business. If any of these risks materializes, the trading price of our common stock could fall and you might 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 on such forward-looking statements discussed elsewhere in this prospectus supplement.

Risks Related to Our Business

We have not operated at a profit and do not expect to be profitable in the foreseeable future.

We have had net losses in each of the past three fiscal years and in the nine months ended December 31, 2006. We plan to make large expenditures in fiscal 2007 and subsequent fiscal years for, among other things, the expansion of our global distribution network and ongoing product development, which we expect will result in losses in future periods. These expenditures include 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. The amount of these expenditures is difficult to forecast accurately, and cost overruns may occur. We also expect that we will need to make significant expenditures to begin to market and manufacture in commercial quantities our Impella products, our IAB, the AbioCor and any other new products for which we may receive regulatory approvals or clearances in the future.

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 United States 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 United States, 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 either a premarket approval, or PMA, or 510(k) clearance from the FDA. Both of these processes can be expensive and lengthy and entail significant expenses. The FDA s 510(k) clearance process usually takes from three to 12 months, but it can last longer. The process of obtaining premarket approval is much more costly and uncertain than the 510(k) clearance process. It generally takes from one to three years, or even longer, from the time the PMA application is submitted to the FDA. We cannot assure you that any regulatory clearances or approvals, either foreign or domestic, will 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.

For example, we plan to pursue premarket approval for each of our Impella 2.5 and Impella 5.0, and we are seeking 510(k) clearance of our Impella 2.5. In addition, we have submitted for premarket approval of our iPulse console.

We cannot assure you that we will receive any of these approvals or clearances. For example, in response to our 510(k) submission for the Impella 2.5 for short duration use, the FDA recently responded with a letter indicating that the FDA believes that the technological characteristics of the Impella 2.5 raise new questions of safety and effectiveness that are not addressed by the predicate devices we identified in our 510(k) submission.

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The FDA stated it is unaware of a predicate device raising the same questions and asked us to identify a predicate device that does so. We intend to respond to the FDA s letter by submitting additional data attempting to demonstrate that the device does not raise a new question of safety or effectiveness, and we believe we will be successful in answering the FDA s concerns. We may also amend our 510(k) submission to identify additional predicate devices. If we succeed in addressing these concerns, we expect to receive additional questions and requests for information from the FDA as we pursue 510(k) clearance of the Impella 2.5. If the FDA deems any of our responses unsatisfactory, we will not receive 510(k) clearance. We cannot assure you that we will successfully address the FDA s concerns or obtain 510(k) clearance for the Impella 2.5 on a timely basis, or at all. If we do not receive 510(k) clearance for our Impella 2.5 device, then based on our plan to continue with our PMA strategy, the commercial launch of the Impella 2.5 in the U.S. could take an additional 12 months or more. 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 intend to market our new products in international markets, including the European Union and Japan. 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.

Our current and planned clinical trials may not begin on time, or at all, and may not be completed on schedule, or at all.

In order to obtain premarket approval and, in some cases, a 510(k) clearance, we may be required to conduct well-controlled clinical trials designed to test the safety and effectiveness of the product. In order to conduct clinical studies, we must generally receive an investigational device exemption, or IDE, for each device from the FDA. An IDE allows us to use an investigational device in a clinical trial to collect data on safety and effectiveness that will support an application for premarket approval or 510(k) clearance from FDA. We have received IDE approval and are currently conducting pilot clinical trials for each of our Impella 2.5 and Impella 5.0.

Conducting clinical trials is a long, expensive and uncertain process that is subject to delays and failure at any stage. Clinical trials can take months or years to complete. The commencement or completion of any of our clinical trials may be delayed or halted for numerous reasons, including:

- the FDA may not approve a clinical trial protocol or a clinical trial, or may place a clinical trial on hold;
- subjects may not enroll in clinical trials at the rate we expect and/or subjects are not followed-up at the rate we expect;
- subjects may experience adverse side effects or events related or unrelated to our products;
- third-party clinical investigators may not perform our clinical trials on our anticipated schedule or consistent with the clinical trial protocol and good clinical practices, or other third-party organizations may not perform data collection and analysis in a timely or accurate manner;
- the interim results of any of our clinical trials may be inconclusive or negative;

regulatory inspections of our clinical trials or manufacturing facilities may require us to undertake corrective action or suspend or terminate our clinical trials if investigators find us not to be in compliance with regulatory requirements;

our manufacturing process may not produce finished products that conform to design and performance specifications; or

governmental regulations or administrative actions may change and impose new requirements.

The results of pre-clinical studies do not necessarily predict future clinical trial results, and predecessor clinical trial results may not be repeated in subsequent clinical trials. A number of companies in the medical industry have suffered delays, cost overruns and project terminations despite achieving promising results in

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pre-clinical testing or early clinical testing. In addition, the data obtained from clinical trials may be inadequate to support approval or clearance of a submission. 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 the safety and effectiveness of the product candidate. The FDA may also require us to conduct additional pre-clinical studies or clinical trials, which could further delay approval of our products. If we are unable to receive FDA approval of an IDE to conduct clinical trials or the trials are halted by the FDA or others, or if we are unsuccessful in receiving FDA approval of a product candidate, we would not be able to sell or promote the product candidate in the U.S., which would seriously harm our business. Moreover, we face similar risks in each other jurisdiction in which we sell or propose to sell our products.

If we make modifications to a product, whether in response to results of clinical testing or otherwise, we could be required to start our clinical trials over, which could cause serious delays that would adversely affect our results of operations. Even modest changes to certain components of our products could result in months or years of additional clinical trials.

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. Since 2004, we have experienced significant growth in the scope of our operations and the number of our employees, including the addition of our operations in Germany and France. 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 and marketing infrastructure and capabilities;
- expanding manufacturing capacity and increasing production;
- expansion of foreign regulatory compliance capabilities;
- implementing appropriate operational and financial systems and controls;
- identifying, attracting and retaining qualified personnel, particularly experienced clinical staff; and
- 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 markets for most of our products and products under development are 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 would adversely affect our business and results of operations. We need to create markets for our Impella micro heart pumps, AB5000, IAB, iPulse console, AbioCor, AbioCor II and other new products, including achieving market acceptance among physicians, medical centers, patients and third-party payers. In particular, we need to gain acceptance of our Impella products among interventional cardiologists, who have not previously been users of our other devices. The obstacles we will face in trying to create successful commercial markets for our products include:

- limitations inherent in first-generation devices, and the potential failure to develop successive improvements, including increases in service life;

- the introduction by other companies of new treatments, products and technologies that compete with our products;

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- the timing and amount of reimbursement for these products, if any, by third-party payers;
- the potential reluctance of clinicians to obtain adequate training to use our products;
- the lifestyle limitations that patients will have to accept for our AbioCor and AbioCor II products; and
- the potential reluctance of physicians, patients and society as a whole to accept medical devices that replace or assist the heart or the finite life and risk of mechanical failure inherent in such devices.

The commercial success of our products will require acceptance by 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 by these clinicians 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 our Impella products, IAB and iPulse console will require that we also develop relationships with leading interventional cardiologists in cath labs, where we do not yet have a significant presence. 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.

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 sales efforts 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 product sales. Furthermore, our inability to educate and train clinicians to use our products may lead to inadequate demand for 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, 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-cleared device that could significantly affect its safety or effectiveness, or that would constitute a major change in its intended use, requires a new 510(k) clearance or PMA approval. The FDA requires each manufacturer to make this determination in the first instance, but the FDA may review any such decision. Modifications of this type are common with new products, and we anticipate that the first generation of each of our products will undergo a number of changes, refinements and improvements over time. For example, the current configuration of the AbioCor s thoracic unit, or replacement heart, is sized for patients with relatively large chest cavities, and we anticipate that we will need to obtain regulatory approval of thoracic units

of other sizes, such as the AbioCor II. If the FDA requires us to seek clearance or approval for modification of a previously cleared 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 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, and 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 problems with 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 may 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 governmental entity 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 or design defects, including labeling defects. We have in the past initiated voluntary recalls of 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.

Our principal products and current primary source of revenues, the AB5000 and BVS 5000, are vulnerable to competitive pressures.

To date, we have derived most of our product revenues from sales of the AB5000 and BVS 5000. We believe that we will continue to rely heavily on these products for at least the next several years until we obtain U.S. regulatory approval for new products, including our Impella products and iPulse console. Moreover, we expect to rely increasingly on sales of the AB5000, as sales of the BVS 5000 have been declining. If another company were to introduce new treatments, products or technologies that compete with our products, add new features to its existing products or reduce its prices to make its products more financially attractive to customers, revenue from our AB5000 and BVS 5000 could decline. For example, in the event of the expansion of technologies that allow heart surgical procedures to be performed without stopping the heart, a reduction in the market for these products could result. In addition, variations in the quantity and timing of sales of our AB5000 consoles have a disproportionate effect on our revenues, because the price of the console is substantially greater than the price of our disposable blood pumps. If we cannot maintain and increase our disposable revenues from our AB5000 and BVS 5000, our overall business and financial condition could be adversely affected.

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. We do not have experience in manufacturing our Impella products in the commercial quantities that might be required if we receive FDA approval of those products, nor do we have experience manufacturing our AB5000, IAB and AbioCor in large quantities. 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, adequacy of 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 current or future products at an acceptable cost and on time, which could limit market acceptance of our products or otherwise damage our business.

Each of our products is manufactured in a single location, and any significant disruption in production could impair our ability to deliver our products.

We manufacture our Impella micro heart pumps at our facility in Aachen, Germany, and we manufacture our other products at our facility in Danvers, Massachusetts. Events such as fire, flood, power loss or other disasters could prevent us from manufacturing our products in compliance with applicable FDA and other regulatory requirements, which could result in significant delays before we restore production or commence production at another site. These delays may result in lost sales. Our insurance may not be adequate to cover our losses resulting from disasters or other business interruptions. Any significant disruption in the manufacturing of our products could seriously harm our business and results of operations.

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. Our 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. We have from time to time voluntarily recalled certain products. Despite our very high manufacturing standards, we cannot completely eliminate the risk of errors, defects or failures. If we are unable to manufacture the AB5000, BVS 5000, Impella products and our iPulse consoles 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.

Our AbioCor products involve even greater manufacturing complexities than our current commercial products. Our AbioCor products must be significantly more durable and meet different standards, which may be more difficult to achieve, than those that apply to our current products. If we are unable to manufacture our AbioCor products or other future products on a timely basis at acceptable quality and cost, or if we experience unanticipated technological problems or delays in production, our business will suffer.

We depend on third-party reimbursement to our customers for market acceptance of our products. If third-party payers fail to provide appropriate levels of reimbursement for purchase and use of our products, our sales and profitability would be adversely affected.

Sales of medical devices largely depend on the reimbursement of patients medical expenses by government health care programs and private health insurers. The cost of our AB5000 systems, BVS 5000 systems, Impella micro heart pumps and iPulse consoles is substantial, and the cost of implanting the AbioCor in a patient will also be substantial. 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. With regard to the AbioCor, there is a Medicare noncoverage decision for artificial hearts that would prevent Medicare coverage of the services related to the implantation of that device, and that may deter coverage by private insurers. We cannot be sure that third-party payers will cover and/or adequately reimburse sales of our Impella products, iPulse console, AbioCor or other products under development, to enable us to sell them at profitable prices.

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In addition, third-party payers are increasingly requiring evidence that medical devices are cost-effective. If we are unable to meet the standards of a third-party payer, that payer may not reimburse the use of our products, which could reduce sales of our products to heath care providers who depend upon reimbursement for payment. We also cannot be sure that third-party payers will continue the current level of reimbursement to physicians and medical centers for use of our AB5000, BVS 5000, Impella products and iPulse consoles. Any reduction in the amount of this reimbursement could harm our business.

Changes in health care reimbursement systems in the United States and abroad could reduce our revenues and profitability.

The federal government has considered ways to change, and has changed, the manner in which healthcare services are provided and paid for in the U.S. Occasionally, Congress passes laws that impact reimbursement for health care services, including reimbursement to hospitals and physicians. States may also enact legislation that impacts Medicaid payments to hospitals and physicians. In addition, the Centers for Medicare & Medicaid Services, the federal agency responsible for administering the Medicare program, establishes payment levels for hospitals and physicians on an annual basis, which can increase or decrease payment to such entities. Future legislative and regulatory initiatives could be introduced that adversely affect demand for our products and have a material adverse impact on our revenues. Our business and results of operations could therefore be adversely affected by future healthcare reforms.

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.

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.

Our business is regulated by laws pertaining to healthcare fraud and abuse, including:

- the federal Anti-Kickback Statute, which prohibits persons from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, in exchange for or to induce either the referral of an individual for, or the furnishing, recommending, or arranging for, a good or service for which payment may be made under a federal healthcare program such as Medicare and Medicaid; and

- state law equivalents to the Anti-Kickback Statute, which may not be limited to government-reimbursed items.

We have various arrangements with customers that may implicate these laws. For example, some physicians who use our products also provide medical advisory and other consulting and personal services. Some of these physician arrangements may not meet Anti-Kickback Statute safe harbor requirements, which may result in increased scrutiny by government authorities having responsibility for enforcing these laws. Additionally, we do not maintain a formal compliance plan concerning interactions with healthcare professionals nor have we formally adopted the recommendations issued by the Office of Inspector General of the U.S. Department of Health and Human Services, or OIG. The OIG may interpret the absence of such formal plan negatively in the case of an enforcement action, which could result in a material adverse effect on our financial condition and results of operations.

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If our operations are found to be in violation of any of these or similar laws or regulations, we or our officers may face significant civil and criminal penalties, damages, fines, imprisonment and exclusion from the Medicare and Medicaid programs. Any violations may lead to curtailment or restructuring of our operations, which could adversely affect our ability to operate our business and our financial results. The risk of our being found in violation of these laws is increased by the fact that many of these laws are open to a variety of interpretations. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses, divert our management s attention from the operation of our business and damage our reputation. If enforcement action were to occur, our reputation and our business and financial condition may be harmed, even if we were to prevail or settle the action. Similarly, if the physicians or other providers or entities with whom we do business are found not to comply with applicable laws, they may be subject to sanctions, which could also have a negative impact on our business.

If we cannot attract and retain the 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 and administrative management and staff, many of whom would be difficult to replace. For example, many of the members of our clinical staff are registered nurses with experience in the surgery suite or cath lab, only a limited number of whom seek employment with a company like ours. Competition for skilled and experienced management, scientific, clinical and sales personnel in the medical devices industry is intense. 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 all of our consoles, other than final assembly and testing. Relying on third-party suppliers makes us vulnerable to component part failures 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 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 with required components when we need them. These factors could make it more difficult for us to effectively and efficiently manufacture our products, 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. Sole-source vendors may decide to limit or eliminate sales of certain components to the medical industry 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 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.

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

We are seeking to expand our international sales of the AB5000, BVS 5000 and Impella circulatory assist systems, as well as our iPulse console, by recruiting direct sales and support teams in Germany and France. Our international operations 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.;
- longer sales cycles;
- limited protection of intellectual property rights;
- difficulty in collecting accounts receivable;
- 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 intend to expand our reliance on distributors 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 parts of Europe, Asia, South America and Australia. 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. 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 aggressively, we could lose sales and impair our ability to compete in that market.

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, particularly for our consoles, which are substantially more expensive than our disposable products;
- 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 micro heart pumps, IAB, iPulse console, AbioCor, AbioCor II and other new products or product enhancements;
- costs we incur in anticipation of future sales, such as inventory purchases, expansion of manufacturing facilities, or establishment of international sales offices;
- economic conditions in the health care industry; and
- efforts by governments, insurance companies and others to contain health care costs, including changes to reimbursement policies.

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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 be unable to obtain any benefit from our net operating loss carryforwards and research and experimentation credit carryforwards.

At March 31, 2006, we had federal and state net operating loss carryforwards of approximately $67.9 million and $24.1 million, respectively, which begin to expire in fiscal 2007. At March 31, 2006, we also had foreign net operating loss carryforwards of approximately $24.8 million that can be carried forward indefinitely. Additionally, at March 31, 2006, we had federal and state research and experimentation credit carryforwards of approximately $5.6 million and $3.8 million, respectively, which begin to expire in fiscal 2007. Ownership changes, as defined in Section 382 of the Internal Revenue Code, may have limited the amount of net operating loss carryforwards and research and experimentation credit carryforwards that we can use each year to offset future taxable income and taxes payable. Subsequent ownership changes could impose additional limitations. We have not done a complete analysis to determine whether changes in the composition of our stockholders, including as a result of our acquisition of Impella and this offering, have resulted or will result in an ownership change for purposes of Section 382. We cannot assure you that we will obtain any benefit from any of our net operating loss carryforwards and research and experimentation credit carryforwards.

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

We are currently devoting our major research and development and regulatory efforts, and significant financial resources, to the development of our Impella micro heart pumps, iPulse console, AbioCor, AbioCor II and product extensions of existing commercial products and new products. The development of new products and product extensions presents enormous challenges in a variety of areas, many or all of which we may have difficulty in overcoming, 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.

We may not have sufficient funds to develop and commercialize our new products.

The development, manufacture and sale of any medical device in the United States and abroad is very expensive. We cannot be sure that we will have the necessary funds to develop and commercialize our new products, or that additional funds will be available on commercially acceptable terms, if at all. If we are unable to obtain the necessary funding to develop and commercialize our products, our business may be adversely affected.

We own patents, trademarks, trade secrets, copyrights and other intellectual property and know-how that we believe gives 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. A substantial portion of our intellectual property rights relating to the AB5000, BVS 5000, Impella products, AbioCor, AbioCor II 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 exposed to 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 assure you 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 the AB5000, BVS 5000, Impella products, AbioCor or AbioCor II 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 be approved, may not give us a competitive advantage, and could be challenged by others, or, if issued, could be deemed invalid or unenforceable. 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. Finally, 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.

We may face claims of intellectual property infringement, which could result in significant expenses or the payment of damages or require us to stop selling our products.

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.

Product liability claims could damage our reputation and hurt 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 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 introduce more products, we face an increased risk that a product liability claim will be brought against us.

Many 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 the products we distribute for clinical testing or sale could give rise to product liability claims and negative publicity.

The risk of product liability claims will increase as we sell more 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

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patient s life. For example, the AbioCor will have a finite life and could cause unintended complications to other organs and may not be able to support all patients successfully. Its malfunction could give rise to product liability claims whether or not it has extended or improved the quality of the patient s life. If we have to pay product liability claims in excess of our insurance coverage, our financial condition will be adversely affected.

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 the indications cleared 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. Product liability claims are expensive to defend and could divert our management s attention and result in substantial damage awards against us.

If the FDA or another regulatory agency determines that we have promoted off-label use of our products, we may be subject to various penalties, including civil or criminal penalties.

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.

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

Government regulations require us to track materials used in the manufacture of our products, so that any problem identified in one product can be traced to other products that may have the same problem. An identified quality problem may require reworking or scrapping related inventory and recalling previous shipments. Because a malfunction in our products can 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.

Future milestone payments relating to our acquisition of Impella could harm our financial position or result in dilution.

We may be required to make additional contingent payments of up to $11.2 million under the terms of our acquisition of Impella, based on our future stock price performance and milestones related to FDA approval of Impella s products. If we pay any milestone payment in shares of our common stock, our stockholders may experience dilution. If we use cash to make any such payment, our financial resources will be diminished and we may be unable to pursue other activities, such as research and development, the expansion of our sales force or the acquisition of other new products.

If we fail to compete successfully against our existing or potential competitors, our product 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. These competitors may develop superior products or products of similar quality at the same or lower prices. Moreover, improvements in current or new technologies may make them technically equivalent or superior to our products in addition to providing cost or other advantages.

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Our customers frequently 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. 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 reimbursement, and supply commercial quantities of the product to the market.

Our AB5000 and BVS 5000 systems compete with a temporary cardiac assist device from Thoratec Corporation, which is approved for post-cardiotomy support. In addition, the AB5000 and BVS 5000 compete with other blood pumps that are used in medical centers for a variety of applications, such as intra-aortic balloon pumps, including those offered by Datascope and Arrow International, and centrifugal pumps. Levitronix is conducting clinical trials in the U.S. for a device that may compete with our current heart assist products in some applications. Levitronix has licensed this product to Thoratec Corporation for distribution in the U.S. The FDA recently approved a product designed by CardiacAssist, Inc. that may compete with our Impella products, and Jarvik Heart is conducting clinical trials for a new ventricular assist device that may compete with our AB5000 and Impella products. Approval by the FDA of products that compete directly with our products would increase competitive pricing and other pressures.

Advances in medical technology, biotechnology and pharmaceuticals may reduce the size of the potential markets for our products or render those products obsolete. We are aware of other heart replacement device research efforts in the U.S., Canada, Europe and Japan. In October 2004, the FDA approved Syncardia Systems CardioWest Total Artificial Heart for use as a bridge to transplantation in cardiac transplant-eligible candidates at risk of imminent death from non-reversible biventricular failure. In addition, there are a number of companies including Thoratec Corporation, World Heart Corporation, MicroMed Technology, Ventracor and several early-stage companies that are developing permanent heart assist products, including implantable left ventricular assist devices and miniaturized rotary ventricular assist devices.

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 while striving to preserve the goodwill of the acquired company. 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 and customers.

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 our stock, our stockholders would experience dilution of their ownership interests. If we use cash or debt financing, our financial liquidity would be reduced. We may be required to capitalize a significant amount of intangibles, including goodwill, which may lead to significant amortization charges. In addition, we may incur significant, one-time write-offs and amortization charges, such as our $13.3 million write-off of in-process research and development expenses in connection with the Impella acquisition. These amortization charges and write-offs could decrease our future earnings or increase our future losses.

Fluctuations in foreign currency exchange rates could result in declines in our reported sales and earnings.

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. The

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functional currency of Abiomed Europe is the Euro. At present, we do not hedge our exposure to foreign currency fluctuations. As a result, sales 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 the Offering

Management will have broad discretion over the use of proceeds of this offering and could apply the proceeds to uses that do not increase our market value or improve our operating results.

Management will have broad discretion over the use of proceeds of this offering, including the use of proceeds for making acquisitions of assets, businesses or securities, share repurchases, repayment of debt, capital expenditures, and for working capital. We have not reserved or allocated the proceeds for any specific purpose.

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 December 31, 2005 to December 31, 2006 the price of our stock ranged from a high of $16.19 per share to a low of $9.12 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;
- the status of regulatory approvals for our products;
- the introduction of new products by us or our competitors;
- acquisitions or strategic alliances involving us or our competitors;
- changes in accounting principles;
- changes in health care policy or third-party reimbursement practices;
- changes in estimates of our performance or recommendations by securities analysts;
- the hiring or departure of key personnel;

future sales of shares of common stock in the public market; and

market conditions in the industry 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 currently outstanding options and warrants to purchase our common stock, could dilute your ownership interest.

We have issued a substantial number of options and warrants to acquire our common stock, and we expect to continue to issue options to our employees and others. If all currently outstanding stock options and warrants were exercised, you would suffer dilution of your ownership interest. In addition, in connection with our acquisition of Impella CardioSystems AG in 2005, we may be obligated to make certain milestone payments. These payments may be made in stock, which would also result in a dilution of your ownership interest.

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The sale of material amounts of common stock could encourage short sales by third parties and depress the price of our common stock. As a result, you may lose all or part of your investment.

The downward pressure on our stock price caused by the sale of a significant number of shares of our common stock, or the perception that such sales could occur, pursuant to this offering or by any of our significant stockholders could cause our stock price to decline, thus allowing short sellers of our stock an opportunity to take advantage of any decrease in the value of our stock. The presence of short sellers in our common stock may further depress the price of our common stock.

Our rights distribution, 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.

Our rights distribution and provisions of our certificate of incorporation and of the 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. Our rights distribution and 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 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 your 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 your investment will only occur if our stock price appreciates.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

The Securities and Exchange Commission, or SEC, encourages companies to disclose forward-looking information so that investors can better understand a company s future prospects and make informed investment decisions. This prospectus supplement contains such forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements may be made directly in this prospectus supplement, and they may also be made a part of this prospectus supplement by reference to other documents filed with the SEC, which is known as incorporation by reference.

Words such as may, anticipate, estimate, expects, projects, intends, plans, believes and words and terms of similar substance used in with any discussion of future operating or financial performance identify forward-looking statements. All forward-looking statements are management s present expectations of future events and are subject to a number of risks and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. These risks include, but are not limited to, the risks and uncertainties set forth in Risk Factors, beginning on page S-9 of this prospectus supplement, as well as those set forth in our other SEC filings incorporated by reference herein.

In light of these assumptions, risks and uncertainties, the results and events discussed in the forward-looking statements contained in this prospectus supplement or in any document incorporated by reference might not occur. You are cautioned not to place undue reliance on the forward-looking statements, which speak only as of the date of this prospectus supplement or the date of the document incorporated by reference in the accompanying prospectus. We do not undertake any obligation to update or alter any forward-looking statements, whether as a result of new information, future events or otherwise. All subsequent forward-looking statements attributable to us or to any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section.

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USE OF PROCEEDS

We estimate that our net proceeds from the sale of the 5,000,000 shares of common stock we are offering will be approximately $62.2 million, after deducting the estimated underwriting discounts and commissions and estimated offering expenses we expect to pay and assuming a public offering price of $13.46 per share (based on the last reported sale price on March 9, 2007). Each $0.50 increase (decrease) in the assumed public offering price of $13.46 per share would increase (decrease) the net proceeds to us from this offering by approximately $2.3 million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus supplement, remains the same and after deducting estimated underwriting discounts and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. An increase (decrease) of 1,000,000 shares in the number of shares offered by us would increase (decrease) the net proceeds to us from this offering by approximately $12.6 million. We do not expect that a change in the offering price or the number of shares by these amounts would have a material effect on our uses of the proceeds from this offering.

We intend to use the net proceeds from the sale of our securities to expand our global sales and distribution, to complete clinical studies and regulatory processes, to invest in research and development to continue to broaden our portfolio of products across the continuum of care, and for general corporate purposes, including, without limitation, making acquisitions of assets, businesses, or securities, capital expenditures, and for working capital. Pending the application of our net proceeds, we intend to invest our net proceeds in short-term, investment-grade securities, interest-bearing securities, or guaranteed obligations of the United States or its agencies.

For risks associated with our use of proceeds, see Risk Factors Management will have broad discretion over the use of proceeds of this offering and could apply the proceeds to uses that do not increase our market value or improve our operating results.

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PRICE RANGE OF COMMON STOCK AND DIVIDEND POLICY

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 the periods indicated:

	High	Low
Fiscal Year Ended March 31, 2005		
First Quarter	$ 14.63	$ 7.80
Second Quarter	12.64	8.63
Third Quarter	17.70	8.88
Fourth Quarter	15.97	9.92
Fiscal Year Ended March 31, 2006		
First Quarter	$ 11.91	$ 7.75
Second Quarter	10.97	8.31
Third Quarter	10.15	7.81
Fourth Quarter	13.40	9.12
Fiscal Year Ending March 31, 2007		
First Quarter	$ 14.08	$ 11.48
Second Quarter	16.19	12.25
Third Quarter	15.65	12.07
Fourth Quarter through (March 9, 2007)	15.10	12.94

On March 9, 2007, the closing sale price of our common stock as reported on the Nasdaq Global Market was $13.46 per share. As of March 1, 2007, there were approximately 721 holders of record 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.

We have never declared or paid any cash dividends on our common stock and do not anticipate paying 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.

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CAPITALIZATION

The following table summarizes our capitalization as of December 31, 2006 on an actual basis and as adjusted to reflect our sale of 5,000,000 shares of common stock at an assumed public offering price of $13.46 per share (based on the last reported sale price on March 9, 2007), after deducting the estimated underwriting discounts and commissions and estimated offering expenses we expect to pay. You should read this information in conjunction with our consolidated financial statements and the related notes beginning on page SF-1.

Amounts representing common stock outstanding on December 31, 2006 exclude the following:

- options outstanding on December 31, 2006 to purchase 4,471,277 shares of common stock at a weighted average exercise price of $11.02 per share;
- options and other stock awards with respect to an additional 1,449,596 shares of common stock that may be granted under our stock incentive plans after December 31, 2006;
- 245,544 shares of common stock issuable under our employee stock purchase plan after December 31, 2006; and
- warrants to purchase up to 400,000 shares of common stock issued in connection with the purchase of intellectual property at an exercise price of $0.01 per share.

	As of December 31, 2006	
	Actual	As adjusted [1]
	(in thousands, except share data)	
Cash, cash equivalents, and short-term marketable securities	$ 17,241	$ 79,435
Stockholders equity:		
Class B preferred stock, $0.01 par value; 1,000,000 shares authorized; no shares issued and outstanding	$	$
Common stock, $0.01 par value; 100,000,000 shares authorized; 26,764,455 shares issued and outstanding, actual; 31,764,455 shares issued and outstanding, as adjusted	268	318
Additional paid-in capital	221,438	283,582
Accumulated other comprehensive loss	329	329
Accumulated deficit	(164,840)	(164,840)
Treasury stock	(116)	(116)
Stockholders equity	57,079	119,273
Total capitalization	$ 57,079	$ 119,273

(1) Each $0.50 increase (decrease) in the assumed public offering price of $13.46 per share would increase (decrease) each of cash, cash equivalents, and short-term marketable securities; additional paid-in capital; stockholders equity; and total capitalization by approximately $2.3 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus supplement, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. An increase (decrease) of 1,000,000 shares in the number of shares offered by us would increase (decrease) each of cash, cash equivalents, and short-term marketable securities; additional paid-in capital; stockholders

equity; and total capitalization by approximately $12.6 million. The as adjusted information discussed above is illustrative only and will be adjusted based on the actual public offering price and other terms of this offering determined at pricing.

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DILUTION

If you invest in our common stock in this offering, your ownership interest will be diluted to the extent of the difference between the public offering price per share and the net tangible book value per share of our common stock after this offering. Our net tangible book value on December 31, 2006 was approximately $23.1 million, or $0.86 per share. Net tangible book value is equal to our total assets at December 31, 2006 minus the sum of liabilities and intangible assets at December 31, 2006. Net tangible book value per share is net tangible book value divided by the total number of shares of our common stock outstanding on December 31, 2006.

Investors participating in this offering will incur immediate, substantial dilution. After giving effect to adjustments relating to the offering, our adjusted net tangible book value on December 31, 2006 would have been $85.3 million, or $2.69 per share. The adjustments made to determine adjusted net tangible book value per share consist of:

- an increase in total assets to reflect the net proceeds to us of the offering as described under Use of Proceeds
- the addition of the number of shares offered by us in this prospectus supplement to the number of shares outstanding

The following table illustrates the increase in net tangible book value of $1.83 per share and the dilution (the difference between the offering price per share and net tangible book value per share) to new investors:

Assumed public offering price per share		$ 13.46
Net tangible book value per share as of December 31, 2006	$ 0.86	
Increase in net tangible book value per share attributable to the offering	1.83	
Adjusted net tangible book value per share as of December 31, 2006 after giving effect to the offering		2.69
Dilution per share to new investors in the offering		$ 10.77

Each $0.50 increase (decrease) in the assumed public offering price of $13.46 per share would increase (decrease) our as adjusted net tangible book value by approximately $2.3 million, or approximately $0.07 per share, and the dilution per share to investors in this offering by approximately $0.43 per share, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus supplement, remains the same and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. An increase of 1,000,000 shares in the number of shares offered by us would result in an as adjusted net tangible book value of approximately $97.9 million, or $2.99 per share, and the dilution per share to investors in this offering would be $10.47 per share. Similarly, a decrease of 1,000,000 shares in the number of shares offered by us would result in an as adjusted net tangible book value of approximately $72.7 million, or $2.36 per share, and the dilution per share to investors in this offering would be $11.10 per share. The as adjusted information discussed above is illustrative only and will be adjusted based on the actual public offering price and other terms of this offering determined at pricing.

If the underwriters exercise their option to purchase additional shares in this offering in full, our adjusted net tangible book value at December 31, 2006 would have been $94.8 million, or $2.91 per share, representing an immediate increase in net tangible book value to our

existing stockholders of $2.05 per share and an immediate dilution to new investors of $10.55 per share.

The preceding discussion and tables assume no exercise of any stock options or warrants outstanding as of December 31, 2006. As of December 31, 2006, there were outstanding options to purchase a total of 4,471,277 shares of common stock at a weighted average exercise price of $11.02 per share and warrants to purchase a total of 400,000 shares of common stock at an exercise price of $0.01 per share. To the extent any of these options or warrants are exercised, there will be further dilution to new investors.

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BUSINESS

Overview

We are a leading provider of medical devices that provide circulatory support to acute heart failure patients across the continuum of care in heart recovery. Our products are designed to enable the heart to rest, heal and recover by improving blood flow and/or performing the pumping function of the heart. We believe we are currently the only company with commercially available cardiac assist devices approved for heart recovery by the Food and Drug Administration, or FDA, and our products have been used to treat thousands of patients to date. Our products can be used in a broad range of clinical settings, including by heart surgeons for patients in profound shock and by interventional cardiologists for patients who are pre-shock in the cardiac catheterization lab, or cath lab. We are focused on increasing awareness of heart recovery and establishing it as the standard of care for patients with failing but potentially recoverable hearts. We expect this standard of care to significantly increase the number of patients able to return home from the hospital with their own hearts. Since 2004, our new executive team has focused our efforts on expanding our product portfolio, and we currently have eight disposable products that have either been approved or cleared by the FDA or have received CE mark approval as well as several additional products in development.

Industry Background

Heart Disease Overview

According to the American Heart Association, or AHA, coronary heart disease is the leading cause of death in the U.S. Coronary heart disease is a condition of the coronary arteries that causes reduced blood flow and insufficient oxygen delivery to the affected portion of the heart. Two of the most common forms of coronary heart disease are acute myocardial infarction, or AMI, commonly known as a heart attack, and congestive heart failure, a condition in which the heart is unable to pump enough blood to the body s other organs. The AHA estimates that in the United States in 2004 there were approximately two million hospital visits with coronary heart disease as the first-listed diagnosis and approximately 1.1 million hospital visits with congestive heart failure as the first-listed diagnosis. The number of hospital visits with acute myocardial infarction, or heart attack, as the first- or second-listed diagnosis was approximately 896,000.

A broad spectrum of therapies exists for the treatment of patients in early stages of coronary heart disease. Patients who have rhythm management problems can be treated with anti-arrhythmic drugs or implantable defibrillators. Additionally, angioplasty procedures and stents are commonly used in the cath lab for early-stage circulatory complications to increase blood flow to and from 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. However, heart failure is generally progressive, and these treatments are typically inadequate for patients with end-stage heart disease. Limited therapies exist today for patients with severe end-stage 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 heart failure patients are patients in profound shock, including those suffering from myocarditis, or a virus in the heart, or suffering from cardiogenic shock, or the impaired ability of the heart to pump blood, after a heart attack or heart surgery. For example, according to The New England Journal of Medicine, approximately 7 to 10% of the patients who are hospitalized for a heart attack suffer from cardiogenic shock and 60 to 80% of those patients die. These patients typically require treatments in the surgery suite involving the use of mechanical circulatory support devices that provide increased blood flow and reduce the strain on the heart. However, many less severe patients in the cath lab could also benefit from circulatory support devices, which could potentially prevent them from entering into profound shock.

The Market for Mechanical Circulatory Support Devices in the U.S.

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

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An IAB is an inflatable balloon inserted by a catheter that 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 support and depend on the patient s own heart to generate the majority of the patient s blood flow. In addition, IABs are often used in conjunction with inotropes or other drugs that improve heart muscle ejection but significantly increase the risk of mortality. Moreover, IABs can also require significant time to put in place.

Ventricular assist devices are mechanical devices that help the failing heart pump blood. Historically, VADs have been highly invasive and require implantation in the surgery suite. The use of VADs generally falls into three sub-categories: destination therapy, bridge-to-transplant and recovery. Destination therapy generally involves the implantation of a mechanical support device as the last clinical alternative for a chronic patient with end-stage heart failure who is not eligible for transplantation. Destination therapy only prolongs the end-stage disease, as the patient s condition is terminal and the patient s heart is not expected to recover. In addition, a number of companies have been trying to develop artificial replacement hearts, which are a form of destination therapy.

Bridge-to-transplant VADs are primarily used to support chronic patients eligible to receive a heart transplant. According to the United Network for Organ Sharing, in 2006 there were only approximately 1,850 heart transplants in the U.S. As a result, many patients eligible for transplant must rely on bridge-to-transplant devices for an extended period while waiting for a heart transplant. During this time, these patients frequently experience significant medical complications, such as infection. Moreover, these devices generally require the removal of a portion of the patient s heart tissue, significantly limiting the chance of recovery of the patient s heart.

Recovery VADs are designed to enable the patient s heart to 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 be removed once the heart has recovered. If possible, recovery of one s own heart is generally preferred to transplantation or prolonged device implantation, both of which have significant side effects and increase the risk of mortality. Historically, however, recovery devices have not been widely available.

Our Solution

Our product portfolio is designed to provide heart recovery as an option across the continuum of care for acute heart failure patients. We believe our AB5000 and BVS 5000 products are currently the only commercially available cardiac assist devices approved by the FDA for heart recovery. In addition, if approved by the FDA, our Impella products and our iPulse console, together with our recently FDA-cleared IAB, will expand our heart recovery devices beyond the surgery suite by providing circulatory support for pre-shock heart failure patients in the cath lab. This expansion into the cath lab will significantly increase our target market opportunity and will enable us to offer products to interventional cardiologists in the approximately 1,750 U.S. hospitals with cath labs. We estimate that there are approximately 14,000 interventional cardiologists in the U.S. The new target patient population in the cath lab for our Impella and IAB devices includes approximately one million U.S. patients annually who enter the hospital for heart attacks and high-risk angioplasty procedures. This target patient base is in addition to our existing target population of approximately 75,000 patients suffering from cardiogenic shock after a heart attack or heart surgery, or suffering from myocarditis. Our existing target patients are those treated in the approximately 1,000 open heart centers and transplant centers in the U.S., which continue to represent a significant opportunity for growth as well.

We developed our first heart recovery products for use in open heart centers and transplant centers. Our AB5000 and BVS 5000 are capable of assuming the pumping function of the heart. Unlike destination therapy and bridge-to-transplant devices, which are designed for heart patients with irreversible heart damage, our AB5000 and BVS 5000 systems are designed for heart recovery, requiring only a minimal incision in the left ventricle of the heart. We believe the AB5000 s high flow rates, ease of implant, facilitation of patient mobility in the hospital and historically low incidence of adverse events facilitate heart recovery, potentially avoiding the need for heart transplantation and improving patient outcomes. In October 2005, the Centers for Medicare & Medicaid Services, or CMS, increased reimbursement for our AB5000 and BVS 5000 products for patients that

recover using our devices to levels similar to those for patients who undergo heart transplants. Since its introduction, the BVS 5000 has supported thousands of patients in hundreds of medical centers around the world. The AB5000, our next-generation heart recovery device introduced in 2004, has already supported more than 500 patients globally.

In 2005, we began to expand our product portfolio to include devices that address the larger population of heart attack and high-risk angioplasty patients treated by interventional cardiologists in the cath lab. This population includes patients whose hearts can potentially recover with assistance but without open heart surgery. Our Impella 2.5 and 5.0 catheters are micro heart pumps that can be quickly inserted percutaneously through the femoral artery over a guide wire to reach the left ventricle of the heart. This rapid procedure time facilitates early patient stabilization, giving an interventional cardiologist additional time to evaluate the most effective and clinically prudent treatment option for the patient. These devices allow the heart to rest, heal and potentially recover without the use of inotropes, drugs commonly used with IABs that increase the risk of mortality. In addition, the higher blood flow rate of our Impella 5.0 enables surgeons to use it to treat more severe heart conditions in the surgery suite. We believe our Impella products can provide solutions to patients with less severe heart disease, enhancing patient outcomes and increasing the number of patients who return home with their own hearts.

We expect that our iPulse console, if approved by the FDA, will further expand our product reach into the cath lab. The iPulse console is designed to support our IAB as well as other manufacturers IABs, which are used primarily in the cath lab. Because our multi-functional console also supports our AB5000 and BVS 5000 blood pumps, we believe the iPulse will provide our customers additional flexibility in allocating console resources between the surgery suite and the cath lab. In addition, because a significant portion of IABs are used in the surgery suite, we believe adoption of our iPulse console will increase utilization of our AB5000 ventricle.

In September 2006, we received Humanitarian Device Exemption, or HDE, approval from the FDA for our AbioCor Implantable Replacement Heart, the first completely self-contained artificial heart. The AbioCor gives chronic patients with biventricular heart failure who are not eligible for a transplant and whose sole alternative is death the opportunity to extend life. The AbioCor has no wires piercing the skin and allows the patient improved quality of life outside the hospital. We currently expect to begin a controlled roll-out of the AbioCor in the quarter ending September 30, 2007 at approximately five heart centers in the U.S. We are also developing our next-generation artificial heart, the AbioCor II, which is approximately 30% smaller than the existing AbioCor and is being designed with a goal of five-year reliability.

Our Strategy

Our strategic objective is to become the global leader in medical devices for heart recovery. To achieve this objective, we intend to:

Expand our global distribution by hiring additional direct sales and clinical personnel and growing our network of international distributors. With the growth in our product portfolio and recent regulatory approvals for certain of our products, we now have greater opportunities to market and sell our products to both heart surgeons and interventional cardiologists in the United States and abroad. To address this larger market, we plan to continue to expand our global sales and clinical headcount. In particular, we intend to hire sales representatives with extensive clinical experience, particularly in the cath lab, to enhance our ability to market and sell our products to interventional cardiologists. To address international markets, we intend to augment our direct sales force in Germany and France and expand our network of international distributors to include additional territories.

Promote heart recovery as the standard of care through clinical data and published scientific studies. Many heart surgeons and cardiologists are unfamiliar with the clinical results that have been achieved with our heart recovery devices and accordingly do not consider heart recovery as a viable medical alternative. We are using evidence-based medicine to promote heart recovery as the standard of care for patients with failing but potentially recoverable hearts. We also plan to promote our Impella

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products as an alternative to the use of IABs and inotropes as the initial treatment for less severe patients. We intend to continue to support the publication of papers that illustrate the benefits of heart recovery, provide webcasts and seminars on the cost savings associated with recovery, promote heart recovery at industry trade shows, and hold training sessions for clinicians to begin using our heart recovery products. We will also continue to educate hospitals on the reimbursement options available for our products.

Enhance our product portfolio to address patients along the entire continuum of care for heart recovery, from the cath lab, to the surgery suite, to the intensive care unit, to home discharge. Our earliest circulatory assist product, the BVS 5000 system, and our next-generation AB5000 system address heart failure patients requiring surgical intervention to improve their heart function and are sold primarily to open heart centers and transplant centers. More recently, we acquired our Impella 2.5 and 5.0 catheters and launched our IAB and iPulse console. These products target the larger population of heart failure patients in the cath lab, whose hearts might recover with assistance but without open heart surgery. We intend to obtain regulatory approval in the U.S. for our Impella 2.5 and 5.0 catheters, as well as our iPulse console. We intend to continue to develop and introduce additional new products to cover a broader population of potential heart recovery patients, and we also plan to seek regulatory approval for the use of our products for a broader range of patient indications. We currently have a number of new products at various stages of development. For example, in January 2007 we announced that we are conducting pre-clinical trials for a catheter-based heart pump to provide left-ventricular support to pediatric patients.

Evaluate strategic opportunities to add complementary products and technologies. We constantly evaluate strategic opportunities to add complementary products and technologies, and we may pursue selective additions that would provide products or intellectual property that enhance our product portfolio to address patients across the continuum of care in heart recovery. For example, as a result of our acquisition of Impella CardioSystems AG in May 2005, we added the Impella line of products, which expanded our target market for heart recovery devices beyond the surgery suite and into the cath lab.

Our Products

We are building a portfolio of cardiac assist solutions for cardiologists and surgeons. Our cardiac assist products provide circulatory support to acute heart failure patients across the continuum of care in heart recovery.

Product Name	Description of Use	Regulatory Status US	Regulatory Status CE Mark
Disposable Products for the Surgery Suite			
BVS 5000 Blood Pump	Provides temporary LVAD, RVAD or BiVAD support until recovery for cardiogenic shock from heart attack; post-cardiotomy cardiogenic shock; and myocarditis	ü	ü
AB5000 Ventricle	Provides LVAD, RVAD or BiVAD support until recovery for cardiogenic shock from heart attack; post-cardiotomy cardiogenic shock; and myocarditis	ü	ü
Integrated Cannula System	Connects the BVS 5000 and AB5000 ventricle to the body	ü	Not yet submitted
Impella RD	Provides temporary RVAD support until recovery for post-cardiotomy and heart attack patients after transplantation or coronary bypass surgery	Not yet submitted	ü
Impella LD		IDE approved	ü

Provides temporary LVAD support until recovery for post-cardiotomy failure to wean ; cardiogenic shock and low output syndrome		and pilot clinical trial in progress

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Product Name	Description of Use	Regulatory Status US	Regulatory Status CE Mark
Disposable Products for the Cardiac Catheterization Lab and the Surgery Suite			
Impella 2.5	Percutaneous heart pump providing 2.5 liters of blood per minute for high-risk angioplasty procedures	IDE approved; pilot clinical trial in progress; and seeking 510(k) clearance	ü
Impella 5.0	Percutaneous heart pump providing 5.0 liters of blood per minute for low cardiac output post-surgery patients	IDE approved and pilot clinical trial in progress	ü
IAB	Percutaneous intra-aortic balloon for enhancing blood flow and diminished heart function	ü	ü
Consoles			
AB5000 Console	Driver console for both BVS 5000 Blood Pump and AB5000 Ventricle	ü	ü
Mobile Pump Console	Driver console for Impella products	Pilot clinical trial in progress and seeking 510(k) clearance	ü
iPulse Console	Multi-purpose driver console for IAB, AB5000, BVS 5000 and other manufacturers balloons	PMA supplement under review	ü
Disposable Implants			
AbioCor	Fully implantable replacement heart for severe heart failure when patients are ineligible for a heart transplant	Approved under HDE	Not yet submitted

AB5000 and BVS 5000

We currently manufacture and sell the AB5000 Circulatory Support System and the BVS 5000 Biventricular Support System for the temporary support of acute heart patients in profound shock, including patients suffering from cardiogenic shock after a heart attack, post-cardiotomy cardiogenic shock, or myocarditis. The AB5000 and BVS 5000 systems, which are implanted in the surgery suite, can assume the full pumping function of a patient s failing heart, allowing the heart to rest, heal and potentially recover. Both systems are designed to provide either univentricular or biventricular support. We believe the AB5000 and BVS 5000 systems are currently the only commercially available cardiac assist devices that are approved by the FDA for heart recovery for patients who have undergone successful cardiac surgery and subsequently develop low cardiac output, or patients who suffer from acute cardiac disorders leading to hemodynamic instability.

The BVS 5000 Biventricular Support System was our first product and has been available for sale since 1992. It was the first FDA-approved heart assist device capable of assuming the pumping function of the heart. The BVS 5000 provides up to 4.0 liters of pulsatile blood flow per minute. Since its introduction in 1992, the BVS 5000 has supported thousands of patients in the U.S., Europe and other countries.

The AB5000 Circulatory Support System, our next-generation product for heart recovery, is designed to provide a longer duration of support than the BVS 5000 and facilitates patient mobility in the hospital. The AB5000 can provide up to 6.0 liters of pulsatile blood flow per minute to support patients in profound shock. The AB5000 was approved by the FDA in 2003 and has supported more than 500 patients globally. Our AB5000 is

designed to provide enhanced patient mobility within and between medical centers and to provide enhanced features and ease of use for caregivers. We believe the AB5000 s high flow rates, ease of implant and historically low incidence of adverse events facilitate heart recovery, potentially avoiding the need for heart transplantation and improving patient outcomes. We intend to seek expansion of the current FDA-approved indications for use of the AB5000 in order to allow support of expanded patient populations for longer periods of time. We expect to rely increasingly on sales of the AB5000, as sales of the BVS 5000 have been declining.

Each of the AB5000 and BVS 5000 systems consists of a blood pump, or ventricle, one atrial cannula, one arterial cannula and a driver console to operate the pump. Other than the console, each component is a disposable item. The AB5000 console supports biventricular BVS 5000 blood pumps, AB5000 ventricles or a combination of the two. Both the AB5000 and BVS 5000 systems use the same cannulae and console, allowing for seamless transition of devices without requiring an additional surgical procedure. We generally offer the AB5000 ventricle at a price of approximately $40,000.

Impella 2.5, Impella 5.0, Impella RD and Impella LD

Our Impella 2.5 and 5.0 catheters are percutaneous micro heart pumps with integrated motors and sensors for use in interventional cardiology and heart surgery. These devices are designed primarily for use by interventional cardiologists to support pre-shock patients in the cath lab who may not require as much support as patients in the surgery suite. Our Impella catheters are designed to provide ventricular support for patients requiring hemodynamic stabilization or suffering from reduced cardiac output, and can aid in recovering the hearts of patients following a heart attack. These products increase flow to the heart and organs without the use of drugs such as inotropes and reduce the workload of the heart. Our Impella devices have already been used to treat more than 850 patients in Europe and have been the subject of over 20 peer-reviewed publications.

These catheters can be quickly inserted through the femoral artery over a guide wire to reach the left ventricle of the heart. The Impella 2.5 is implanted percutaneously, while the Impella 5.0 is implanted via a small cut-down of the femoral artery in the groin. The Impella 2.5 can pump up to 2.5 liters of blood per minute, and the Impella 5.0 can pump up to 5.0 liters per minute. The Impella 5.0 has been used to treat patients in need of cardiac support resulting from post-cardiotomy cardiogenic shock, myocarditis, low cardiac output after a heart attack, or post-coronary intervention procedures, or as a bridge to other circulatory support devices, including our AB5000 and BVS 5000 systems. Our Impella RD is a right ventricle heart pump, and our Impella LD is a left ventricle heart pump. Both are surgically implanted.

Our Impella 2.5 and 5.0 catheters and Impella RD and LD heart pumps are already available in Europe under CE mark approval. We are currently conducting pilot clinical trials in the U.S. for both the Impella 2.5 and 5.0 to support planned PMAs. The Impella 2.5 pilot clinical trial is designed to study the use of the Impella 2.5 to support high-risk angioplasty as a left ventricular assist device. The Impella 2.5 pilot trial is expected to enroll approximately 20 patients at seven hospitals: Brigham & Women s Hospital, Columbia Presbyterian, Scripps Clinic, Cedars-Sinai Medical Center, Texas Heart Institute, William Beaumont Hospital and Academic Medical Centre of the University of Amsterdam. Angioplasty, performed in the cath lab, is the insertion of a catheter-guided balloon and is used to open a narrowed coronary artery. A stent, or a wire-mesh tube that expands to hold the artery open, is usually placed at the narrowed section. According to the American Heart Association, there are approximately 1.3 million in-patient angioplasty procedures in the U.S. annually, of which only a fraction are high-risk. For purposes of our clinical trials, high-risk angioplasty is generally defined as a procedure on patients undergoing angioplasty on an unprotected left main coronary artery lesion, or the last patent coronary conduit, and who have poor cardiac function. The Impella 5.0 pilot clinical trial will include post-cardiotomy patients who have been weaned from the heart-lung machine. In addition, we are seeking 510(k) clearance of our Impella 2.5 catheter for short duration use. Regardless of the outcome of our 510(k) submission, we plan to pursue PMA approval for other clinical indications.

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If we receive either PMA approval or 510(k) clearance of the Impella 2.5 catheter, we expect that we will market it in the U.S. at a price in the range of approximately $10,000 to $15,000. We cannot assure you that we will receive PMA approval or 510(k) clearance for either of our Impella 2.5 or 5.0 or that we will be able to sell them at anticipated prices.

IAB and iPulse

We recently introduced our percutaneous intra-aortic balloon, or IAB. An IAB is typically used in the cath lab as an initial line of therapy for patients with diminished heart function, although a substantial number of IABs are used in the surgery suite. Our IAB is easy to insert and is designed to enhance blood flow to the heart and other organs for patients with diminished heart function. Our IAB is inserted percutaneously into a patient s descending aorta and inflates and deflates in counterpulsation to the patient s heart rhythm. The IAB extends our clinical and market reach further upstream in acute patient care, including direct usage in the intensive care unit, cath lab and surgery suite.

To support the IAB, we developed our iPulse combination console. The iPulse console is also designed to support our AB5000 and BVS 5000 systems, other manufacturers intra-aortic balloons and products we may offer in the future. We believe the ability of the iPulse console to support multiple devices will make it more attractive than consoles designed to operate a single device. The new iPulse console will support procedures with associated Medicare reimbursement that extends across four diagnostic related groups, which further enhances its attractiveness to customers.

We received 510(k) clearance from the FDA for our new IAB in December 2006 and CE Mark approval in January 2007. The iPulse console has CE mark approval in Europe but has not been approved for commercial sale in the United States. To obtain FDA approval of the iPulse console, we have filed a supplement to our PMA application for our existing AB5000 console. We expect to begin shipping our IAB and integrated iPulse console outside the U.S. during the quarter ending March 31, 2007.

AbioCor

Our AbioCor Implantable Replacement Heart is the first completely self-contained artificial heart. The complete AbioCor system consists internally of a thoracic unit, a rechargeable battery, a miniaturized electronics package and a power receiver coil, and externally, a power transmitter coil, power and battery pack, handheld alarm monitor and computer console. Once implanted, the AbioCor system does not penetrate the skin, reducing the chance of infection. This technology provides patients with mobility and remote diagnostics.

Designed to sustain the body s circulatory system, the AbioCor is intended for end-stage heart failure patients whose other treatment options have been exhausted. Patients with advanced age, organ failure or cancer are, in most circumstances, ineligible for a heart transplant and are potential candidates to receive the AbioCor implantable heart.

We received Humanitarian Device Exemption, or HDE, approval from the FDA for the AbioCor in September 2006. HDE approval signifies that no comparable alternative therapy exists for patients facing imminent death without the technology. Under this approval, only a limited number of patients may receive the AbioCor per year. Under HDE approval, the FDA may request a panel review of the post-approval study data.

We currently expect to begin selling the AbioCor in the quarter ending September 30, 2007 in a controlled roll-out to approximately five heart centers in the U.S. We expect eventually to expand availability to up to ten hospitals in the U.S., including qualified clinical trial sites and additional qualified centers once they have completed a comprehensive and rigorous training program. We expect this training period to take six to eight months. We are unable to determine how many patient procedures will be performed after the respective centers are trained. We do not expect that revenues from sales of the AbioCor will be a material portion of our total revenues for the foreseeable future.

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Cannulae

Each of our AB5000 and BVS 5000 systems requires two cannulae, or tubes that connect the ventricle or blood pump to the heart and an associated artery. We offer a variety of cannulae. We recently introduced our new integrated cannula system, which was approved by the FDA in July 2006. The new cannula, which is inserted through a small incision, is easier to implant and remove and has the potential for use off-pump (also called beating heart) with minimally invasive procedures. For example, although removal of the cannulae requires a surgical procedure, it does not require a sternotomy, a substantially more invasive procedure that separates the breastbone in order to access the heart. Moreover, because the AB5000 and the BVS 5000 blood pumps use the same cannulae, clinicians can seamlessly transfer patients from one device to another without requiring an additional surgical procedure.

Research and Product Development

Our research and development efforts are focused on developing a broader portfolio of products across the continuum of care in heart recovery, primarily focused in the area of circulatory care. In the past few years, our research and development efforts have helped us to significantly expand our product portfolio, and we currently have eight disposable products that have either been approved or cleared by the FDA or have received CE mark approval. In addition, we currently have a number of new products at various stages of development.

In January 2007 we announced that we are conducting pre-clinical trials for a catheter-based heart pump to provide left-ventricular support to pediatric patients. This device is similar to the Impella 2.5 and is intended to provide support to patients requiring preconditioning before a cardiac intervention, or to recover patients who are either post-surgery, cannot be weaned from bypass, or who have endocarditis. We have designed the technology to operate as either a pulsatile device that can provide up to 120 beats per minute or as a continuous flow device. We estimate that the device will provide circulatory support for approximately two weeks.

Over the last 25 years, we have gained substantial expertise in circulatory support while developing our AbioCor Implantable Replacement Heart, the first completely self-contained artificial heart. We used this expertise to develop the AB5000, and we intend to continue to use this experience to develop additional circulatory care products. We are also working on our next-generation implantable replacement heart, the AbioCor II. Incorporating technology from both Abiomed and Pennsylvania State University, the AbioCor II is approximately 30% smaller than the existing AbioCor and is being designed with a goal of five-year reliability.

We cannot assure you that any of our products under development will achieve the intended clinical goals or that any of them will receive regulatory approval for commercial sale in the United States or abroad.

As of March 1, 2007, research and development staff consisted of 76 professional and technical personnel, including 28 engineers with advanced degrees, covering disciplines such as electrical engineering, mechanical engineering, computer science, reliability engineering, fluid mechanics, materials and physiology.

We expended $14.2 million, $13.4 million, $16.7 million and $16.3 million on research and development in fiscal 2004, fiscal 2005, fiscal 2006 and the nine months ended December 31, 2006, respectively. Our research and development expenditures include costs related to clinical trials, including ongoing pilot clinical trials for our Impella products.

Sales, Clinical Support, Marketing and Field Service

As of March 1, 2007, our worldwide sales, clinical support, marketing and field service teams included 87 full-time employees, 65 of whom are in the U.S. and 22 of whom are in Europe. Since March 31, 2004, we have increased the number of our direct sales and clinical personnel from 17 to 69 employees covering the U.S., France and Germany. In the U.S., we now have 27 direct sales representatives and 24 clinical support personnel.

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Our clinical support personnel consist primarily of registered nurses with experience in either the surgery suite or the cath lab, and they play a critical role in training current and prospective customers in the use of our products. To enhance our global distribution and to augment our efforts to establish recovery as the standard of care for acute heart patients, we intend to increase our global sales and clinical headcount by approximately two to four sales and clinical employees per quarter over the next few years.

As of March 1, 2007, we have international sales and distribution agreements for select products in Australia, China, Italy, Japan, Latin America and Spain. We also use distributors in certain European and Middle Eastern countries where we have chosen not to sell directly to medical centers. In fiscal 2004, fiscal 2005, fiscal 2006 and the nine months ended December 31, 2006, approximately 8%, 8%, 13% and 11%, respectively, of our product revenues were derived from international sales.

We recently entered into a five-year distribution agreement with Medix Japan Inc. The agreement provides for distribution of our AB5000, BVS 5000, and Impella 2.5 and 5.0 products following regulatory approval in Japan. Medix intends to initiate clinical trials in Japan during our fiscal year 2008. The agreement includes a minimum purchase commitment of $11 million for the Impella products within the first 18 months following Impella regulatory approvals in Japan. The agreement also includes a minimum purchase commitment of $5 million for our other products that begins in our first quarter of fiscal year 2008. If the purchase commitments are not met, our available remedy is to terminate the agreement.

Manufacturing

We manufacture our products in Danvers, Massachusetts and Aachen, Germany. Our United States operations manufacture the BVS 5000, AB5000, AbioCor, IAB and other products under development. Our Aachen, Germany facility manufactures all of our Impella products and other products under development. In addition, 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 all of our consoles, other than final assembly and testing.

We believe our existing manufacturing facilities give us the physical capacity to produce sufficient quantities of products to meet anticipated demand for at least the next twelve months. However, we will continue to monitor market conditions and demand and evaluate the potential need for expanded capacity in the future. Our U.S. manufacturing facility is ISO 13485:2003 certified and operates under the FDA s good manufacturing practice requirements set forth in the current quality system regulation, known as 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, patents, copyrights, trademarks, and confidentiality agreements and 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 AB5000, the BVS 5000, the AbioCor and the AbioCor II 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.

As of March 1, 2007, we own or have rights to 71 U.S. patents and at least 84 foreign patents. Of our U.S. patents, 19 are related to the AbioCor Implantable Replacement Heart, one is related to the BVS 5000 Biventricular Support System, 17 are related to Impella products and 24 are related to other technologies. Our portfolio also includes ten patents related to an artificial heart developed by the Pennsylvania State University, to

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which we have an exclusive worldwide license. Our U.S. patents have expiration dates ranging from March 12, 2007 to October 24, 2026. Of our foreign patents, one is related to the BVS 5000 Biventricular Support System and 83 are related to Impella products. Our foreign patents have expiration dates ranging from April 4, 2016 to August 8, 2023. 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. They may also be challenged by third parties or, if issued, could be deemed invalid or unenforceable. Our pending or future patent applications may not be approved. The patents of others may render our patents obsolete, limit our ability to patent future 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.

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 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 and sales and marketing resources and experience than we do. These competitors may develop superior products or products of similar quality at the same or lower prices. Moreover, improvements in current or new technologies may make them technically equivalent or superior to our products in addition to providing cost or other advantages. Other advances in medical technology, biotechnology and pharmaceuticals may reduce the size of the potential markets for our products or render those products obsolete.

Our customers frequently 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. 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 reimbursement, and supply commercial quantities of the product to the market.

The AB5000 and BVS 5000 systems can assume the full pumping function of the heart. The FDA approved these systems as recovery devices for the treatment of patients with potentially reversible heart failure. These products compete with a temporary cardiac assist device from Thoratec Corporation, which is also capable of

assuming the full pumping function of the heart and is today approved for post-cardiotomy support. The Thoratec device was originally approved for bridge-to-transplant indications, and we believe bridge-to-transplant continues to be the primary use of the device. In addition, the AB5000 and BVS 5000 compete with other blood pumps that are used in medical centers for a variety of applications, such as intra-aortic balloon pumps, including those offered by Datascope and Arrow International, and centrifugal pumps. To our knowledge, these other pumps are limited to either providing partial pumping support of failing hearts, or are non-pulsatile, or are not recommended for the duration of support generally required for recovery. Levitronix is conducting clinical trials in the U.S. for a device that may compete with our current heart assist products in some applications. Levitronix has licensed this product to Thoratec Corporation for distribution in the U.S. The FDA recently approved a product designed by CardiacAssist, Inc. that may compete with our Impella products, and Jarvik Heart is conducting clinical trials for a new ventricular assist device that may compete with our AB5000 and Impella products. Approval by the FDA of products that compete directly with our products could increase competitive pricing and other pressures. We believe that we will compete with such products based primarily on cost, clinical utility and customer relations.

We are aware of other heart replacement device research efforts in the U.S., Canada, Europe and Japan, but we are not aware of any plans for any other totally implantable replacement heart to commence clinical trials in the U.S. or anywhere in the world. In October 2004, the FDA approved Syncardia Systems CardioWest Total Artificial Heart for use as a bridge to transplantation in cardiac transplant-eligible candidates at risk of imminent death from non-reversible biventricular failure. Unlike our AbioCor, the CardioWest heart is not fully implantable. In addition, there are a number of companies including Thoratec Corporation, World Heart Corporation, MicroMed Technology, Ventracor and several early-stage companies that are developing permanent heart assist products, including implantable left ventricular assist devices, or LVADs, and miniaturized rotary ventricular assist devices, that may address markets that overlap with certain segments of the markets targeted by our products. In addition to these devices, several companies and institutions have been for many years investigating xenotransplantation, the transplantation of a heart from another species, as a potential therapy. Research is also being conducted by others to develop gene and cell therapy potentially to reverse the disease process or to supplant diseased heart cells.

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 United States, 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.

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 and, along with its contractors, establishes coverage and reimbursement policies for the Medicare program. Because a large percentage of the population for which our products are intended includes elderly individuals who are Medicare beneficiaries, Medicare s coverage and reimbursement policies are particularly significant to our business. In addition, private payers often follow the coverage and reimbursement policies of Medicare. We cannot assure you that government or private third-party payers will cover and reimburse the procedures using our products in whole or in part in the future or that payment rates 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 the facilities 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 diagnosis-related groups, or DRGs. Prospective rates are adjusted for,

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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 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 inpatient stays, decrease labor or otherwise lower their costs.

Coverage and reimbursements for procedures to implant, remove, replace or repair the AB5000 and BVS 5000 are well-established in the United States market. For instance, Medicare covers the use of VADs, such as our AB5000 and BVS 5000 devices, 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 therapy for patients who require permanent mechanical cardiac support. Medicare does not, however, cover the use of VADs as a permanent replacement for the human heart or artificial heart. CMS recently increased Medicare reimbursement for patients that recover during an in-patient stay using external VADs, such as our AB5000 and BVS 5000 devices, to levels similar to those for patients who undergo heart transplants. Reimbursements for patients who do not recover remain at lower levels.

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 AB5000 or BVS 5000 devices. Physicians generally bill for such services using a coding system known Current Procedural Terminology, or CPT, codes. Physician services performed in connection with the implantation, removal, replacement or repair of our AB5000 or BVS 5000 devices 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.

Coverage and reimbursement in the United States for our other products will depend upon, among other things, our ability to obtain the FDA approvals or clearances to market such products. If and when we obtain FDA approval or clearance for our new products, such as our Impella products and iPulse console, we anticipate that third-party payers, including both CMS and commercial insurance companies, will reimburse hospitals and physicians under existing billing codes or general procedural codes for newer technologies and we believe that procedures targeted for use with our products are generally already reimbursable under governmental programs and most private plans. Although certain costs associated with the use of our Impella 2.5 and 5.0 products in qualifying clinical trials is currently reimbursed, we cannot assure you that, if these products receive FDA approval or clearance, the commercial use of these products will also be reimbursed.

Medicare does not currently cover the use of artificial hearts, either as a permanent replacement for a human heart or as a temporary life-support system until a human heart becomes available for transplant. This means that our AbioCor system, when used as a replacement for the human heart, is not covered by Medicare. In December 2006, the Medicare Evidence Development and Coverage Advisory Committee, a Medicare advisory group that offers expert clinical advice, recommended to CMS that Medicare cover and reimburse the costs of HDE-approved technologies, such as our AbioCor system, when used in qualifying clinical trials. CMS is not required to follow the recommendations of its advisory group or otherwise incorporate their recommendations into coverage policy. CMS plans to issue a draft of its clinical trial policy in April 2007, and a final decision is slated for July 2007. We cannot assure you that CMS will follow the recommendation of the committee. If this recommendation is followed, it could provide for future coverage of our AbioCor product when used as a replacement for the human heart.

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, redesign of benefits, second opinions required prior to major surgery, careful review of bills, encouragement of healthier

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lifestyles and exploration of 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

The healthcare industry, and thus our business, is subject to extensive federal, state, local and foreign regulation. Some of the pertinent laws have not been definitively interpreted by the regulatory authorities or the courts, and their provisions are open to a variety of interpretations. In addition, these laws and their interpretations are subject to change.

Premarket Regulation

The FDA strictly regulates medical devices under the authority of the Federal Food, Drug and Cosmetic Act, or FFDCA, and the regulations promulgated under the FFDCA. The FFDCA and the implementing regulations govern, among other things, the following activities relating to our medical devices: preclinical and clinical testing, design, manufacture, safety, efficacy, labeling, storage, record keeping, sales and distribution, post-market adverse event reporting, and advertising and promotion.

In the U.S., medical devices are classified into one of three classes (i.e., Class I, II or III) based on the statutory framework described in the FFDCA. Class III devices, which are typically life-sustaining, life-supporting or implantable devices, or new devices that have been found not to be substantially equivalent to legally marketed devices, must generally receive premarket approval, or PMA, by the FDA to ensure their safety and effectiveness.

When clinical trials of a device are required in order to obtain FDA approval, the sponsor of the trial is required to file an Investigational Device Exemption, known as an IDE, application before commencing clinical trials. The IDE application must be supported by data, which typically include the results of extensive device bench testing, animal testing performed in conformance with Good Laboratory Practices, and formal laboratory testing and documentation in accordance with appropriate design controls and scientific justification.

The FDA reviews and must approve an IDE before a study may begin in the United States. In addition, the study must be approved by an Institutional Review Board, or IRB, for each clinical site. When all approvals are obtained, the study may be initiated to evaluate the device. The FDA, and the IRB at each institution at which a clinical trial is being performed, may suspend a clinical trial at any time for various reasons, including a belief that the subjects are being exposed to an unacceptable health risk. All clinical studies of investigational devices must be conducted in compliance with FDA s extensive requirements. During a study, we would be required to comply with the FDA s IDE requirements for investigator selection, trial monitoring, reporting, record keeping and prohibitions on the promotion of investigational devices or making safety or efficacy claims for them. The investigators must obtain patient informed consent, rigorously follow the investigational plan and study protocol, control the disposition of investigational devices, and comply with all reporting and record keeping requirements. Following completion of a study, we would need to collect, analyze and present the data in an appropriate submission to the FDA, either a 510(k) premarket notification or a PMA.

In the 510(k) process, the FDA reviews a premarket notification and determines whether or not a proposed device is substantially equivalent to a predicate device. In making this determination, the FDA compares the proposed device to the predicate device. If the two devices are

comparable in intended use and safety and effectiveness, the device may be cleared for marketing. A device that raises a new question of safety or effectiveness is not eligible for the 510(k) clearance pathway and must undergo the PMA approval process. The FDA s 510(k) clearance pathway usually takes from four to 12 months, but it can last longer and clearance is never assured. In reviewing a premarket notification, the FDA may request additional information, including clinical data. After a device receives 510(k) clearance, any modification that could significantly affect its safety or effectiveness, or that would constitute a major change in its intended use, requires a new 510(k) clearance or

could require PMA approval. The FDA requires each manufacturer to make this determination in the first instance, but the agency can review any such decision. If the FDA disagrees with a manufacturer s decision not to seek a new 510(k) clearance, the agency may retroactively require the manufacturer to seek 510(k) clearance or PMA approval. The FDA also can require the manufacturer to cease marketing and/or recall the modified device until 510(k) clearance or PMA approval is obtained. Also, the manufacturer may be subject to significant regulatory fines or penalties.

Certain Class III devices that were on the market before May 28, 1976, known as preamendments Class III devices, and devices that are determined to be substantially equivalent to them, can be brought to market through the 510(k) process until the FDA, by regulation, calls for PMA applications for the devices. Generally, the FDA will not grant 510(k) clearance for such devices unless the facilities at which they are manufactured successfully undergo an FDA preapproval QSR inspection. In addition, the FFDCA requires the FDA either to down-classify preamendments Class III devices to Class I or Class II, or to publish a classification regulation retaining the devices in Class III. Manufacturers of preamendments Class III devices that the FDA retains in Class III must have PMA applications accepted by the FDA for filing within 90 days after the publication of a final regulation in which the FDA calls for PMA applications. Failure to meet the deadline can lead the FDA to prevent continued marketing of the device during the PMA application review period. The IAB received 510(k) clearance as a preamendments Class III device. The Impella 2.5 for short duration use would also be a preamendments Class III device, if 510(k) clearance is obtained. If the FDA calls for a PMA for a preamendments Class III device, a PMA must be submitted for the device even if the device has already received 510(k) premarket clearance; however, if the FDA down-classifies a preamendments Class III device to Class I or Class II, a PMA application will not be required.

The PMA approval pathway requires proof of the safety and effectiveness of the device to the FDA s satisfaction. The PMA approval pathway is much more costly, lengthy and uncertain. In 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 the PMA, the FDA will conduct an inspection of the manufacturing facilities and the clinical sites where the supporting study was conducted. The facility inspection evaluates the company s compliance with the QSR. An inspection of clinical sites evaluates compliance with the IDE requirements. Typically, the FDA will convene an advisory panel meeting to seek review of the data presented in the PMA. The panel s recommendation is given substantial weight, but is not dispositive of the agency s decision. If the FDA s evaluation is favorable, the PMA is approved, and the device may be marketed in the United States. The FDA may approve the PMA with post-approval conditions intended to ensure the safety and effectiveness of the device including, among other things, restrictions on labeling, promotion, sale and distribution. Failure to comply with the conditions of approval can result in material adverse enforcement action, including the loss or withdrawal of the approval. Even after approval of a PMA, a new PMA or PMA supplement is required in the event of a modification to the device, its labeling or its manufacturing process. Supplements to a PMA often require the submission of the same type of information required for an original PMA, except that the supplement is generally limited to that information needed to support the proposed change from the product covered by the original PMA.

By regulation, the FDA has 180 days to review a PMA application, during which time an advisory committee may evaluate the application and provide recommendations to the FDA. While the FDA has approved PMA applications within the allotted time period, reviews can occur over a significantly protracted period, usually 18 to 36 months but sometimes longer, and a number of devices have never been approved for marketing. This process is lengthy and expensive, and there can be no assurance that FDA approval will be obtained.

Both a 510(k) and a PMA, if cleared or approved, may include significant limitations on the indicated uses for which a product may be marketed. FDA enforcement policy prohibits the promotion of approved medical devices for unapproved uses. In addition, product approvals can be withdrawn for failure to comply with regulatory requirements or the occurrence of unforeseen problems following initial marketing.

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In addition, certain devices can be distributed under a Humanitarian Device Exemption, or HDE, rather than a PMA. In order for a device to be eligible for an HDE, a qualifying target patient population of less than 4,000 patients per year for which there is currently no other available therapy must be approved by the FDA. The FDA s approval of an HDE to treat that qualifying patient population then 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.

Our AB5000 and BVS 5000 systems are approved by the FDA for heart recovery for patients who have undergone successful cardiac surgery and subsequently develop low cardiac output, or patients who suffer from acute cardiac disorders leading to hemodynamic instability. In 1992, the FDA approved our PMA for the BVS 5000. In 1996 and 1997, the FDA approved the use of the BVS 5000 for additional indications, expanding its use to the treatment of all patients with potentially reversible heart failure. In April 2003, the AB5000 Circulatory Support System Console was approved under a PMA supplement, and in September 2003 a PMA supplement for the AB5000 blood pump was approved.

To support applications for premarket approval, we have begun pilot clinical trials for our Impella 2.5 and 5.0 products in the U.S. In the Impella 2.5 pilot trial, the proposed indication for use of our Impella 2.5 is support during high-risk angioplasty for up to five days. In the Impella 5.0 pilot trial, the proposed indication for use includes post-cardiotomy patients who have been weaned from the heart-lung machine. We may conduct additional clinical trials in the future to address additional indications for use.

In May 2006, we announced that our primary regulatory pathway for the Impella 2.5 will be to seek PMA approval. Based on our current clinical trial, we expect that we will initially seek approval of the device for the support of high-risk angioplasty for five or more days. In addition, we announced in February 2007 that we had also made a submission seeking 510(k) clearance for the Impella 2.5 for short duration use (up to six hours). The FDA recently responded to our 510(k) submission with a letter indicating that the FDA believes that the technological characteristics of the Impella 2.5 raise new questions of safety and effectiveness that are not addressed by the predicate devices we identified in our 510(k) submission. The FDA stated it is unaware of a predicate device raising the same questions and asked us to identify a predicate device that does so. We intend to respond to the FDA s letter by submitting additional data to the FDA attempting to demonstrate that the device does not raise a new question of safety or effectiveness, and we believe we will be successful in answering the FDA s concerns. We may also amend our 510(k) submission to identify additional predicate devices. If we succeed in addressing these concerns, we expect to receive additional questions and requests for information from the FDA as we pursue 510(k) clearance of the Impella 2.5. If the FDA deems any of our responses unsatisfactory, we will not receive 510(k) clearance. We cannot assure you that we will successfully address the FDA s concerns or obtain 510(k) clearance for the Impella 2.5 on a timely basis, or at all. We will continue our primary regulatory pathway of seeking PMA approval of the Impella 2.5 while we respond to current and any future inquiries from the FDA on the pending 510(k) clearance submission. If we receive 510(k) clearance from the FDA for short duration use, we intend to launch the Impella 2.5 for commercial sale in the U.S. for that use while continuing the PMA pathway for the Impella 2.5 to obtain FDA approval to promote the Impella 2.5 for high-risk angioplasty and/or other specific indications for longer-term support.

We received FDA clearance for our new IAB in December 2006. We have submitted our iPulse console for FDA approval by filing a PMA supplement to the PMA for our existing AB5000 console.

In January 2001, the FDA granted an IDE providing us with regulatory permission to commence the initial clinical trial of the AbioCor. In September 2003, a Humanitarian Use Device designation was approved by the Office of Orphan Product Development, paving the way for our HDE submission in September 2004. In September 2006 we received HDE approval from the FDA for the AbioCor.

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Postmarket Regulation

The medical devices that we manufacture and distribute pursuant to FDA clearances or approvals are subject to continuing regulation by the FDA and other regulatory authorities. The FDA reviews design and manufacturing 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. These QSR regulations govern the methods used in, and the facilities and controls used for, the design, manufacture, packaging and servicing of all finished medical devices intended for human use. We must also comply with Medical Devices Reporting, or MDR, which requires that a firm report to the FDA any incident in which its product may have caused or contributed to a death or serious injury, or in which its product malfunctioned and, if the malfunction were to recur, it 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. Current FDA enforcement policy prohibits the marketing of approved medical devices for unapproved uses.

We are subject to routine inspection by the FDA and other regulatory authorities for compliance with 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 impose operating restrictions, enjoin and restrain certain violations of applicable law pertaining to medical devices, and assess civil or criminal fines and penalties against our officers, employees, or us. The FDA may also recommend prosecution to the Department of Justice.

The FDA often requires post market surveillance, or PMS, for significant risk devices, such as VADs, that require ongoing collection of clinical data during commercialization that must be gathered, analyzed and submitted to the FDA periodically for up to several years. These PMS data collection requirements are often burdensome and expensive and have an effect on the PMA approval status. The failure to comply with the FDA s regulations can result in enforcement action, including seizure, injunction, prosecution, civil fines and penalties, recall and/or suspension of FDA approval. The export of devices such as ours is also subject to regulation in certain instances.

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

International Regulation

We are also subject to regulation in each of the foreign countries in which we sell our products. Many of the regulations applicable to our products in these countries are similar to those of the FDA. The European Union requires that medical devices such as ours comply with the Medical Device Directive, which includes quality system and CE certification requirements. To obtain a CE Mark in the European Union, defined products must meet minimum standards of safety and quality (i.e., the essential requirements) and then comply with one or more of a selection of conformity routes. A Notified Body assesses the quality management systems of the manufacturer and the product conformity to the essential and other requirements within the Medical Device Directive. In the European Community, we are also required to maintain certain International Organization for Standardization (ISO) certifications in order to sell our products. Our BVS 5000, AB5000, Impella products, IAB and iPulse console are CE marked and available for sale in the European Union.

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Fraud and Abuse Laws

Our business is regulated by laws pertaining to healthcare fraud and abuse, including anti-kickback laws and false claims laws. Violations of these laws are punishable by significant criminal and civil sanctions, including, in some instances, exclusion from participation in federal and state healthcare programs, including Medicare and Medicaid. Because of the far-reaching nature of these laws, we may be required to alter one or more of our practices to be in compliance with these laws. Evolving interpretations of current laws, or the adoption of new laws or regulations, could adversely affect our arrangements with customers and physicians. In addition, any violation of these laws or regulations could have a material adverse effect on our financial condition and results of operations.

Anti-Kickback Statute

Subject to a number of statutory exceptions, the federal Anti-Kickback Statute prohibits persons from knowingly and willfully soliciting, offering, receiving or providing remuneration, directly or indirectly, in cash or in kind, in exchange for or to induce either the referral of an individual for, or the furnishing, recommending, or arranging for, a good or service for which payment may be made under a federal health care program such as Medicare and Medicaid. The term remuneration has been broadly interpreted to include anything of value, including gifts, discounts, the furnishing of supplies or equipment, credit arrangements, waiver of payments, and providing anything of value at less than fair market value. The Office of the Inspector General of the U.S. Department of Health and Human Services, or the OIG, is primarily responsible for enforcing the federal Anti-Kickback Statute and generally for identifying fraud and abuse activities affecting government healthcare programs.

Penalties for violating the federal Anti-Kickback Statute include substantial criminal fines and/or imprisonment, substantial civil fines and possible exclusion from participation in federal health care programs such as Medicare and Medicaid. Many states have adopted prohibitions similar to the federal Anti-Kickback Statute, some of which apply to the referral of patients for healthcare services reimbursed by any source, not only by the Medicare and Medicaid programs, and do not include comparable exceptions.

The OIG has issued safe harbor regulations that identify activities and business relationships that are deemed safe from prosecution under the federal Anti-Kickback Statute. There are safe harbors for various types of arrangements, including certain investment interests, leases, personal service arrangements, and management contracts. The failure of a particular activity to comply with all requirements of an applicable safe harbor regulation does not mean that the activity violates the federal Anti-Kickback Statute or that prosecution will be pursued. However, activities and business arrangements that do not fully satisfy each applicable safe harbor may result in increased scrutiny by government enforcement authorities such as the OIG.

We have various arrangements with customers and physicians that may implicate these laws. For example, some physicians who use our products also provide medical advisory and other consulting and personal services. Some of these physician arrangements may not meet Anti-Kickback Statute safe harbor protections, which may result in increased scrutiny by government authorities having responsibility for enforcing these laws. Additionally, we do not maintain a formal compliance plan concerning interactions with healthcare professionals nor have we formally adopted the recommendations issued by the OIG. The OIG may interpret the absence of such formal plan negatively in the case of an enforcement action, which could result in a material adverse effect on our financial condition and results of operations.

If our operations are found to be in violation of these or similar laws or regulations, we or our officers may face significant civil and criminal penalties, damages, fines, imprisonment, and exclusion from the Medicare and Medicaid programs. Any violations may lead to curtailment or restructuring of our operations. Any penalties, damages, fines, or curtailment or restructuring of our operations could adversely affect our ability

to operate our business and our financial results. The risk of our being found in violation of these laws is increased by the fact that some of these laws are open to a variety of interpretations. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses, divert our

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management s attention from the operation of our business and damage our reputation. If enforcement action were to occur, our reputation and our business and financial condition could be harmed, even if we were to prevail or settle the action. Similarly, if the physicians or other providers or entities with whom we do business are found not to comply with applicable laws, they may be subject to sanctions, which could also have a negative impact on our business.

Federal False Claims Act

The federal False Claims Act prohibits the knowing filing or causing the filing of a false claim or the knowing use of false statements to obtain payment from the federal government. When an entity is determined to have violated the False Claims Act, it must pay three times the actual damages sustained by the government, plus mandatory civil penalties for each separate false claim. Private individuals can file suits under the False Claims Act on behalf of the government. These lawsuits are known as qui tam actions, and the individuals bringing such suits, sometimes known as relators or, more commonly, whistleblowers, may share in any amounts paid by the entity to the government in fines or settlement. In addition, certain states have enacted laws modeled after the federal False Claims Act. Qui tam actions have increased significantly in recent years, causing greater numbers of healthcare companies to have to defend a false claim action, pay fines or be excluded from Medicare, Medicaid or other federal or state healthcare programs as a result of an investigation arising out of such action.

HIPAA

The Health Insurance Portability and Accountability Act of 1996, or HIPAA, created two new federal crimes: healthcare fraud and false statements relating to healthcare matters. The healthcare fraud statute prohibits knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program, including private payers. A violation of this statute is a felony and may result in fines, imprisonment or exclusion from government-sponsored programs. The false statements statute prohibits knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. A violation of this statute is a felony and may result in fines or imprisonment.

HIPAA also protects the security and privacy of individually identifiable health information maintained or transmitted by healthcare providers, health plans and healthcare clearinghouses. HIPAA restricts the use and disclosure of patient health information, including patient records. Although we believe that HIPAA does not apply to us directly, most of our customers have significant obligations under HIPAA, and we intend to cooperate with our customers and others to ensure compliance with HIPAA with respect to patient information that comes into our possession. Failure to comply with HIPAA obligations can entail criminal penalties. Some states have also enacted rigorous laws or regulations protecting the security and privacy of patient information. If we fail to comply with these laws and regulations, we could face additional sanctions.

Employees

As of March 1, 2007, we had approximately 329 full-time employees, including:

- 85 in product engineering, research and development, and regulatory;

87 in sales, clinical support, marketing and field service;

91 in manufacturing and quality control; and

66 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.

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Properties

Our headquarters are in an industrial office park located 22 miles north of Boston. This facility, located at 22 Cherry Hill Drive in Danvers, Massachusetts, consists of approximately 80,000 square feet of space under an operating lease that expires in 2010. This facility houses all of our U.S. operations, including research and development, manufacturing, sales and marketing and general and administrative departments. Under the terms of the lease, we have two five-year options to extend our lease term beyond 2010 at market rates. We have also recently entered into a short-term lease for office space in Washington, DC.

Our European headquarters are located in Aachen, Germany in a 30,000 square foot leased facility. Our lease expires in August 2008. The building houses all of the research and development and manufacturing operations for our Impella product line as well as the sales, marketing and general and administrative functions for most of our product lines sold in Europe and the Middle East. In addition, we recently leased an approximately 270 square foot office in France, which will focus on the sales and marketing of our product lines sold in France.

Legal Proceedings

On May 15, 2006, Richard A. Nazarian, as Selling Stockholder Representative, filed a Demand for Arbitration (subsequently amended) with the Boston office of the American Arbitration Association. The claim arises out of our purchase of intellectual property rights relating to the Penn State Heart and the acquisition of BeneCor Heart Systems. The claim seeks 600,000 unrestricted shares of Abiomed common stock and attorneys fees for an alleged breach of our obligation to fund development of the Penn State Heart program and an alleged cancellation of the Penn State Heart development project. We instituted a legal action in Federal Court to determine the arbitrability of the claims asserted and the Federal Court has stayed the arbitration of a portion of the claim. Arbitration has commenced and we continue to vigorously defend against the claims asserted.

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MANAGEMENT

Executive Officers and Directors

The following persons are our executive officers and directors as of March 1, 2007:

Name	Age	Position
Michael R. Minogue [1][2]	39	Chairman of the Board of Directors, President and Chief Executive Officer
W. Gerald Austen [1][3]	77	Director
Ronald W. Dollens [3]	60	Director
David Gottlieb [4][5]	46	Director
Louis E. Lataif [4]	68	Director
Desmond H. O Connell, Jr. [4][5]	71	Director
Dorothy E. Puhy [4][5]	55	Director
Henri A. Termeer [1][3]	61	Director
Daniel J. Sutherby	42	Chief Financial Officer and Treasurer
Karim Benali	40	Chief Medical Officer
William J. Bolt	54	Senior Vice President, Quality Assurance and Field Service
Robert T.V. Kung, Ph.D.	63	Senior Vice President, Chief Scientific Officer
Christopher Macdonald	41	Senior Vice President, Global Sales and Applications
Robert Farra	45	Vice President, Engineering and Manufacturing
Andrew Greenfield	34	Vice President, Healthcare Solutions

(1) Member of the Executive Committee
(2) Member of the Special Stock Option Committee
(3) Member of the Compensation Committee
(4) Member of the Audit Committee
(5) Member of the Governance and Nominating Committee

Our board of directors is divided into three classes. The term of one class of directors expires each year at our annual meeting of stockholders. Each director also continues to serve as a director until his or her successor is duly elected and qualified. Ms. Puhy and Messrs. O Connell and Dollens currently serve as Class I directors; their term of office expires in 2008. Messrs. Termeer and Lataif currently serve as Class II directors; their term of office expires in 2009. Messrs. Austen, Gottlieb and Minogue currently serve as Class III directors; their term of office expires in 2007. Our executive officers are elected by, and serve at the discretion of, our board of directors. There are no family relationships among our directors and executive officers.

Mr. Michael R. Minogue joined us as Chief Executive Officer, President and a director in April 2004. In June 2005, he was also appointed Chairman of our Board of Directors. Prior to joining us, Mr. Minogue had a twelve-year career at GE Medical Systems. Most recently, Mr. Minogue was Vice President and General Manager of Americas sales and marketing for GE Medical Systems Information Technology. From 1998 to 2003, Mr. Minogue held various positions at GE, including general manager for the global PET business, general manager, Americas cardiology and information technology sales and general manager, global installed base. Mr. Minogue received his bachelor s

degree in engineering from the United States Military Academy at West Point and his MBA from the University of Chicago. Mr. Minogue is also a director of LifeCell Corporation.

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Dr. W. Gerald Austen, M.D., has served as a director since 1985. Since 1974, he has been the Edward D. Churchill professor of surgery at Harvard Medical School and at Massachusetts General Hospital. From 1969 to 1997, Dr. Austen was chief of the surgical services at Massachusetts General Hospital. Dr. Austen is the former President of the American College of Surgeons, the American Association for Thoracic Surgery, the American Surgical Association and the Massachusetts and American Heart Associations. Dr. Austen is a member emeritus of the Institute of Medicine of the National Academy of Sciences, a fellow of the American Academy of Arts and Sciences, a life member emeritus of the corporation of the Massachusetts Institute of Technology and Chairman of the board of trustees of the John S. and James L. Knight Foundation.

Mr. Ronald W. Dollens has served as a director since January 2006. He was the president and chief executive officer of Guidant Corporation from 1994 until his retirement from Guidant in November 2005. Previously, he served as president of Eli Lilly and Company s Medical Devices and Diagnostics Division from 1991 until 1994, and also held the position of president and chief executive officer of Guidant s subsidiary, Advanced Cardiovascular Systems, Inc. Mr. Dollens involvement in health policy includes serving as chairman of the Healthcare Leadership Council, past chairman of the Advanced Medical Technology Association, and on the board of the Alliance for Aging Research. Mr. Dollens is also a member of the New York Stock Exchange Listed Company Advisory Board. Recently, he served on the Advisory Committee for Regulatory Reform appointed by US Health and Human Services Secretary Tommy G. Thompson. Mr. Dollens is also a director of Kinetic Concepts, Inc.

Mr. David Gottlieb has served as a director since 2004. Mr. Gottlieb is the managing partner of Noble Bridge Group LLC, a financial consulting company he established in early 2004. From 1990 to 2003, Mr. Gottlieb held various investment banking positions, including global head of the medical technology corporate and investment banking group of Banc of America Securities from 1999 to 2003; managing director of the health care group of UBS Investment Bank where he was employed from 1995 to 1999; and Vice President, health care group of Kidder, Peabody & Company where he was employed from 1990 to 1994. Mr. Gottlieb s degrees include a bachelor s degree in economics from Connecticut College and an MBA from the Columbia Business School.

Mr. Louis E. Lataif has served as a director since September 2005. Since 1991, Mr. Lataif has served as Dean of the Boston University School of Management. Prior to joining Boston University in 1991, Mr. Lataif worked with Ford Motor Company for more than 27 years and had retired as a corporate officer. He had also served as President of Ford of Europe, with extensive global experience. He earned a BS from Boston University and his MBA from Harvard University. He also holds three honorary doctoral degrees. Mr. Lataif is also a director of Magna Entertainment Corp. and Group I Automotive, Inc.

Mr. Desmond H. O Connell, Jr. has served as a director since 1995. He is currently a director of Stemcells, Inc. Until July 2006, he served as a director and independent management consultant for Serologicals Corporation. From December 1992 until December 1993, he served as the Chairman, management committee, of Pharmakon Research International, Inc. During 1991, he briefly served as Chairman of the Board and Chief Executive Officer of Osteotech, Inc. Mr. O Connell was with the BOC Group, PLC in senior management positions from 1983 to 1990. From April 1990 until September 1990, Mr. O Connell was President and Chief Executive Officer of BOC Health Care. From 1986 to April 1990, he was group managing director of BOC Group, PLC. Prior to joining BOC, Mr. O Connell held various positions at Baxter Laboratories, Inc., including Chief Executive of the Therapeutic and Diagnostic Division and Vice President, Corporate Development.

Ms. Dorothy E. Puhy has served as a director since 2003 and as our Lead Director since October 2005. Ms. Puhy is currently Executive Vice President, Chief Financial Officer and Assistant Treasurer for the Dana-Farber Cancer Institute. Ms. Puhy has served as the Chief Financial Officer of Dana-Farber since 1994 and has served as its Assistant Treasurer since 1995. From 1985 to 1994 Ms. Puhy held various financial positions at the New England Medical Center Hospitals, Inc., including Chief Financial Officer from 1989 to 1994. Ms. Puhy is also a director of Eaton Vance Corp.

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Mr. Henri A. Termeer has served as a director since 1987. Mr. Termeer has been the President and a director of Genzyme Corporation since 1983, its Chief Executive Officer since 1985, and its Chairman since 1988. Mr. Termeer is a member of the Board of Directors of the Massachusetts Institute of Technology, Federal Reserve Bank of Boston and Massachusetts General Hospital. He also serves on the Board of Directors of the Biotechnology Industry Organization, the Pharmaceutical Research and Manufacturers of America and is a trustee of Hambrecht & Quist Healthcare Investors and Hambrecht & Quist Life Sciences Investors.

Our executive officers who are not also directors are listed below:

Mr. Daniel J. Sutherby joined us in January 2006 as our Chief Financial Officer. From August 1998 to December 2005, Mr. Sutherby was employed by PerkinElmer, Inc. in a number of management positions, serving as Corporate Director of Global Accounting & Finance from August 1998 to September 2000, Acting Corporate Controller from September 2000 to June 2001, Director of Global Finance for PerkinElmer s Life and Analytical Sciences Unit from June 2001 to January 2003, and Corporate Vice President, Investor Relations, Corporate Communications and Risk Management from January 2003 to December 2005. Mr. Sutherby is a Certified Public Accountant, and has a bachelor s degree in accounting and a master s of science in finance from Bentley College.

Dr. Karim Benali, M.D., joined us in July 2004 and was elected as our Chief Medical Officer in June 2006. From August 2004 to June 2006, Dr. Benali was our Vice President of Product Development. Prior to joining us, Dr. Benali served as global manager of cardiology-functional imaging of GE Healthcare from June 2003 to July 2004. From May 2000 to June 2003, Dr. Benali was a leader of global research in cardiology at GE Healthcare. Dr. Benali earned a BA from the University of Algiers in Engineering Technology, an MD from the Institut National de l Enseignement Superieur des Sciences Medicales in Algiers, an MS in Bio-imaging and Bio-engineering from the University of Val de Marne Paris XII, and an MS in Biostatistics and Clinical Research from University Pierre & Marie Curie Paris VI.

Mr. William J. Bolt has been with us since 1982 and has been our Senior Vice President for Design Assurance and Quality Assurance since January 2003. He is currently responsible for all of our quality and design assurance activities as well as global product service support. He was responsible for all product development and the AbioCor program from 2000 to 2002, and for the BVS and AB5000 development from 1999 to 2002. From 1994 to 1998, he was President of our former dental subsidiary, Abiodent, Inc. From 1982 to 1994, he served in various roles, including our Vice President of Engineering and our Vice President of Operations. In these roles he was the engineer in charge of the development of the BVS and other systems. Mr. Bolt received his bachelor s degree in electrical engineering and an MBA from Northeastern University.

Dr. Robert T.V. Kung has been with us since 1982 and has been our Senior Vice President and Chief Scientific Officer since 1995. He was our Vice President of Research and Development from 1987 to 1995 and our chief scientist from 1982 to 1987. Prior to joining us, Dr. Kung was a principal research scientist at Schafer Associates from 1978 to 1982 and at the Avco Everett Research Laboratory from 1972 to 1978. He developed non-linear optical techniques for laser applications and investigated physical and chemical phenomena in re-entry physics. Dr. Kung has been the principal investigator for our National Institutes of Health-funded AbioCor. Dr. Kung received his Ph.D. in physical chemistry from Cornell University.

Mr. Christopher Macdonald joined us in May 2004 and is currently our Senior Vice President, Global Sales and Applications. From June 2004 to April 2005, Mr. Macdonald served as our Senior Vice President, Global Sales, Applications and Service. Mr. Macdonald was previously employed for eleven years at GE Healthcare where he was employed in sales and operations management positions. His most recent assignments at GE were with the cardiology business unit and included positions as sales manager for the central U.S. region from 2002 to 2004, corporate accounts director from 2001 to 2002 and operations manager from 2000 to 2001. Mr. Macdonald received his bachelor s degree in biology from Tulane University.

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Mr. Robert Farra joined us in June 2005 as Vice President of Engineering and in July 2005 was given the additional responsibilities of Vice President of Manufacturing. Prior to joining us, Mr. Farra held leadership positions at Accellent Endoscopy from February 2002 to June 2005 and Arthur D. Little, Inc. from August 1987 to February 2002, where he led and managed multidisciplinary teams in the development of numerous minimally invasive surgical instruments, ophthalmic aspirators, irrigation systems, as well as interventional catheters and guidewires. Mr. Farra has a BS in mechanical engineering from the University of Massachusetts at Lowell and an SM in mechanical engineering from the Massachusetts Institute of Technology.

Mr. Andrew Greenfield joined us in January 2005 as Vice President of Healthcare Solutions. Prior to joining us, Mr. Greenfield held multiple positions at GE Healthcare since October 1999, including consulting with large U.S. health systems in the Enterprise Client Group from November 2003 to January 2005, Six Sigma Master Black Belt from January 2002 to November 2003, and Finance Manager from October 1999 to January 2002. Prior to GE Healthcare, he held multiple positions in marketing and sales management at the Boeing Company, including Project Manager and European Country Manager. He received his bachelor s degree in finance from the University of Illinois and an MBA from St. Louis University.

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PRINCIPAL STOCKHOLDERS

The following table provides information, as of March 9, 2007, with respect to the beneficial ownership of our common stock by:

- each person known by us to be the beneficial owner of five percent or more of our common stock;
- each of our directors;
- each of our named executive officers; and
- all of our directors and executive officers as a group.

The persons named in this table have sole voting and investment power with respect to the shares listed, except as otherwise indicated. The inclusion of shares listed as beneficially owned does not constitute an admission of beneficial ownership. The Right to acquire column reflects beneficial ownership of shares subject to options that may be exercised within 60 days after March 9, 2007. The shares that a person has the right to acquire are deemed to be outstanding solely for purposes of calculating that person s percentage ownership. The total number of shares of common stock outstanding as of March 9, 2007 was 27,226,012.

	Shares beneficially owned			
Name	**Outstanding**	**Right to acquire**	**Total**	**Percentage**
Henri A. Termeer [(1)]	2,337,243	61,000	2,398,243	8.8%
Genzyme Corporation 500 Kendall Street Cambridge, MA 02139	2,307,692		2,307,692	8.5
Dr. David M. Lederman [(2)] c/o Analytical LLC 100 Cummings Center Suite 323A P.O. Box 7015 Beverly, MA 01915	1,071,836	355,000	1,426,836	5.2
Dr. Robert T.V. Kung [(3)]	204,228	194,600	398,828	1.5
Michael R. Minogue	29,901	325,000	354,901	1.3
Desmond H. O Connell, Jr.	50,481	61,000	111,481	*
Dr. W. Gerald Austen	48,200	36,000	84,200	*
Christopher D. Macdonald	546	63,750	64,296	*
Dr. Karim Benali	783	58,750	59,533	*

Dorothy E. Puhy	4,105	36,000	40,105	*
David Gottlieb	2,731	31,000	33,731	*
Louis E. Lataif	581	5,000	5,581	*
Ronald W. Dollens	290	5,000	5,290	*
Javier Jimenez [4]	628		628	*
All current executive officers and directors as a group (15 persons) [1][3]	2,682,505	1,091,950	3,774,455	13.3

* Less than one percent.

(1) Includes 2,307,692 shares held by Genzyme Corporation, as to which Mr. Termeer disclaims beneficial ownership. Mr. Termeer is the Chief Executive Officer of Genzyme.

(2) Dr. Lederman is our former President, Chief Executive Officer and Chairman. The number of outstanding shares beneficially owned by Dr. Lederman is based on information in a Schedule 13G/A dated March 1, 2007 and includes 545,700 shares held by Dr. Lederman s spouse. Each of Dr. Lederman and Mrs. Lederman disclaim beneficial ownership as to the shares owned by the other.

(3) Includes 100,200 shares held in trust by Dr. Kung s spouse, as to which Dr. Kung disclaims beneficial ownership, and 104,028 shares held in trust for the benefit of Dr. Kung.

(4) Mr. Jimenez resigned his position effective January 15, 2007 and as of such date was no longer an employee. Information regarding the shares beneficially owned by Mr. Jimenez is based solely on information currently available to us.

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UNDERWRITING

Morgan Stanley & Co. Incorporated and UBS Securities LLC are acting as the underwriters of this offering. Under the terms and subject to the conditions contained in an underwriting agreement dated the date of this prospectus supplement, the underwriters have severally agreed to purchase, and we have agreed to sell to them, the number of shares of common stock indicated in the table below:

Underwriter	Number of shares
Morgan Stanley & Co. Incorporated	
UBS Securities LLC	
Total	5,000,000

The underwriters are offering the shares of common stock subject to their acceptance of the shares from us and subject to prior sale. The underwriting agreement provides that the obligations of the several underwriters to pay for and accept delivery of the shares of common stock offered by this prospectus supplement are subject to the approval of certain legal matters by their counsel and to other conditions. The underwriters are obligated to take and pay for all of the shares of common stock offered by this prospectus supplement if any such shares are taken. However, the underwriters are not required to take or pay for the shares covered by the underwriters over-allotment option described below.

The underwriters initially propose to offer part of the shares of common stock directly to the public at the public offering price listed on the cover page of this prospectus supplement, less underwriting discounts and commissions, and part to certain dealers at a price that represents a concession not in excess of $ a share under the public offering price. After the initial offering of the shares of common stock, the offering price and other selling terms may from time to time be varied by the underwriters.

We have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus supplement, to purchase up to an aggregate of 750,000 additional shares of common stock at the public offering price, less underwriting discounts and commissions. The underwriters may exercise this option solely for the purpose of covering over-allotments, if any, made in connection with the offering of the shares of common stock offered by this prospectus supplement. To the extent the option is exercised, each underwriter will become obligated, subject to certain conditions, to purchase approximately the same percentage of the additional shares of common stock as the number listed next to the underwriter s name in the preceding table bears to the total number of shares of common stock listed next to the names of all underwriters in the preceding table. If the underwriters over-allotment option is exercised in full, the total price to the public would be $, the total underwriters discounts and commissions would be $ and the total proceeds to us would be $.

The following table shows the per share and total underwriting discounts and commissions that we are to pay to the underwriters in connection with this offering. These amounts are shown assuming both no exercise and full exercise of the underwriters option.

	No Exercise	Full Exercise
Per Share	$	$
Total		

In addition, we estimate that the expenses of this offering other than underwriting discounts and commissions payable by us will be approximately $900,000.

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We and all of our directors and officers have agreed that, without the prior written consent of the underwriters, we and they will not, during the period beginning on the date of this prospectus supplement and ending 90 days thereafter:

- offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of common stock or any securities convertible into or exercisable or exchangeable for common stock; or

- enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock;

whether any such transaction described above is to be settled by delivery of common stock or such other securities, in cash or otherwise. The restrictions described in this paragraph do not apply to:

- the sale by us of shares to the underwriters in connection with the offering;

- the issuance by us of shares of common stock upon the exercise of an option or a warrant or the conversion of a security outstanding on the date of this prospectus supplement;

- the grant of options or the issuance of shares of common stock by us to employees, officers, directors, advisors or consultants pursuant to equity incentive plans and the issuance by us of any shares of common stock upon the exercise of such options;

- the issuance by us of shares of common stock in connection with milestone payments that we may become obligated to make pursuant to the terms of our acquisition of Impella;

- transactions relating to the common stock acquired in open market transactions after the closing of the offering; and

- transfers of the common stock as a bona fide gift.

With respect to the last bullet, it shall be a condition to the transfer that the transferee execute a copy of the lock-up agreement.

The 90-day restricted period described in the preceding paragraph will be extended if:

- during the last 17 days of the 90-day restricted period we issue a release regarding earnings or regarding material news or events relating to us; or

- prior to the expiration of the 90-day restricted period, we announce that we will release earnings results during the 16-day period beginning on the last day of the 90-day period,

in which case the restrictions described in the preceding paragraph will continue to apply until the expiration of the 18-day period beginning on the issuance of the release or the occurrence of the material news or material event.

In order to facilitate this offering of common stock, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the common stock. Specifically, the underwriters may sell more shares than they are obligated to purchase under the underwriting agreement, creating a short position. A short sale is covered if the short position is no greater than the number of shares available for purchase by the underwriters under the over-allotment option. The underwriters can close out a covered short sale by exercising the over-allotment option or by purchasing shares in the open market. In determining the source of shares to close out a covered short sale, the underwriters will consider, among other things, the open market price of shares compared to the price available under the over-allotment option. The underwriters may also sell shares in excess of the over-allotment option, creating a naked short position. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the

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underwriters are concerned that there may be downward pressure on the price of the common stock in the open market after pricing that could adversely affect investors who purchase in this offering. In addition, to stabilize the price of the common stock, the underwriters may bid for and purchase shares of common stock in the open market. Finally, the underwriters may reclaim selling concessions allowed to an underwriter or a dealer for distributing the common stock in the offering, if the underwriters repurchase previously distributed common stock to cover syndicate short positions or to stabilize the price of the common stock. These activities may raise or maintain the market price of the common stock above independent market levels or prevent or retard a decline in the market price of the common stock. The underwriters are not required to engage in these activities and may end any of these activities at any time.

Our common stock is quoted on the NASDAQ Global Market under the symbol ABMD.

We and the underwriters have agreed to indemnify each other against certain liabilities, including liabilities under the Securities Act.

A prospectus supplement and accompanying prospectus in electronic format may be made available on the web sites maintained by one or more of the underwriters, and one or more of the underwriters may distribute prospectuses electronically. The underwriters may agree to allocate a number of shares to underwriters for sale to their online brokerage account holders. Internet distributions will be allocated by the underwriters that make Internet distributions on the same basis as other allocations.

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LEGAL MATTERS

The validity of the shares of common stock offered by this prospectus supplement will be passed upon for us by Foley Hoag LLP, Boston, Massachusetts. A partner at Foley Hoag is our secretary, and he and other partners beneficially own, together with their immediate families, 10,000 shares of our common stock. Certain legal matters will be passed upon for the underwriters by Latham & Watkins LLP, New York, NY.

WHERE YOU CAN FIND MORE INFORMATION

We file annual reports, quarterly reports, current reports, proxy statements and other information with the Securities and Exchange Commission or SEC. You may read and copy any of our SEC filings at the SEC s Public Reference Room at 100 F Street, NE, Washington, DC 20549. You may call the SEC at 1-800-SEC-0330 for further information about the Public Reference Room. Our SEC filings are also available to the public on the SEC s web site at http://www.sec.gov.

Our principal internet address is www.abiomed.com.

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INDEX TO UNAUDITED CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

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ABIOMED, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED BALANCE SHEETS

(in thousands, except per share data)

	December 31, 2006 (Unaudited)	March 31, 2006
ASSETS		
Current assets:		
Cash and cash equivalents	$ 6,081	$ 7,832
Short-term marketable securities	11,160	23,003
Accounts receivable, net of allowance for doubtful accounts of $274 at December 31, 2006 and $211 at March 31, 2006	9,230	8,880
Inventories	6,883	4,868
Prepaid expenses and other current assets	1,640	1,860
Total current assets	34,994	46,443
Property and equipment, net	5,572	4,824
Intangible assets, net	7,613	8,164
Goodwill	26,355	19,106
Total assets	$ 74,534	$ 78,537
LIABILITIES AND STOCKHOLDERS EQUITY		
Current liabilities:		
Accounts payable	$ 4,636	$ 3,070
Accrued expenses	5,786	5,185
Deferred revenue	577	484
Total current liabilities	10,999	8,739
Long-term deferred tax liability	873	310
Accrued costs of acquisition	5,583	
Total liabilities	17,455	9,049
Commitments and contingencies		
Stockholders equity		
Class B preferred stock, $.01 par value		
Authorized 1,000,000 shares; issued and outstanding none		
Common stock, $.01 par value	268	265
Authorized 100,000,000 shares;		
Issued 26,775,474 shares at December 31, 2006 and 26,474,270 shares at March 31, 2006;		
Outstanding 26,764,455 shares at December 31, 2006 and 26,468,091 shares at March 31, 2006		
Additional paid-in-capital	221,438	214,666
Deferred stock-based compensation		(171)
Accumulated deficit	(164,840)	(143,308)
Treasury stock at cost 11,019 shares at December 31, 2006 and 6,179 shares at March 31, 2006	(116)	(66)

Accumulated other comprehensive income (loss)	329	(1,898)
Total stockholders equity	57,079	69,488
Total liabilities and stockholders equity	$ 74,534	$ 78,537

See Accompanying Notes to Condensed Consolidated Financial Statements.

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ABIOMED, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS

(Unaudited)

(in thousands, except per share data)

	Nine months ended December 31,	
	2006	**2005**
Revenue:		
Products	$ 36,698	$ 29,605
Funded research and development	100	269
	36,798	29,874
Costs and expenses:		
Cost of product revenue excluding amortization	9,281	7,851
Research and development	16,329	12,517
Selling, general and administrative	31,355	21,558
Expensed in-process research and development	800	13,306
Amortization of intangible assets	1,243	955
	59,008	56,187
Loss from operations	(22,210)	(26,313)
Other income:		
Investment income	841	876
Foreign exchange gain (loss)	149	(168)
Other income (expense), net	32	91
	1,022	799
Net loss before provision for income taxes	(21,188)	(25,514)
Provision for income taxes	344	253
Net loss	$ (21,532)	$ (25,767)
Basic and diluted net loss per share	$ (0.81)	$ (1.01)
Weighted average shares outstanding	26,602	25,447

See Accompanying Notes to Condensed Consolidated Financial Statements.

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ABIOMED, INC. AND SUBSIDIARIES

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOW

(Unaudited)

(in thousands)

	Nine months ended December 31,	
	2006	**2005**
Operating activities:		
Net loss	$ (21,532)	$ (25,767)
Adjustments required to reconcile net loss to net cash used for operating activities:		
Depreciation and amortization	2,891	2,159
Bad debt expense	84	102
Stock-based compensation	4,652	179
Write-down of inventory	205	269
Deferred tax provision	344	253
Expensed in-process research and development		13,306
Changes in assets and liabilities, net of acquisition		
Accounts receivable	(7)	775
Inventories	(2,416)	(1,429)
Prepaid expenses, other current assets and other assets	399	742
Accounts payable	1,474	75
Accrued expenses	510	17
Deferred revenue	84	256
Net cash used for operating activities	(13,312)	(9,063)
Investing activities:		
Proceeds from the sale and maturity of short-term securities	26,792	36,242
Purchases of short-term securities	(14,949)	(24,293)
Business acquisition, net of cash acquired		(2,562)
Purchase of intangible assets	(50)	(112)
Expenditures for property and equipment	(2,066)	(1,547)
Net cash provided by investing activities	9,727	7,728
Financing activities:		
Proceeds from the exercise of stock options	1,826	1,465
Proceeds from employee stock purchase plan	159	95
Return of common stock from escrow	(50)	(66)
Net cash provided by financing activities	1,935	1,494
Effect of exchange rate changes on cash	(101)	130
Net (decrease) increase in cash and cash equivalents	(1,751)	289
Cash and cash equivalents at beginning of period	7,832	7,618
Cash and cash equivalents at end of period	$ 6,081	$ 7,907

See Accompanying Notes to Condensed Consolidated Financial Statements.

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ABIOMED, INC. AND SUBSIDIARIES

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)

1. Nature of Business and Basis of Preparation

Abiomed, Inc. (the Company or Abiomed) is a leading provider of medical devices that provide circulatory support to acute heart failure patients across the continuum of care in heart recovery. Our products are designed to enable the heart to rest, heal and recover by improving blood flow and/or performing the pumping function of the heart. We are focused on establishing heart recovery as the standard of care for patients with failing but potentially recoverable hearts. We expect this standard of care will significantly increase the number of patients able to return home from the hospital with their own hearts.

The accompanying unaudited condensed consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by accounting principles generally accepted in the United States of America for complete financial statements. These statements should be read in conjunction with the consolidated financial statements and notes thereto included in the Company s audited annual financial statements. These audited statements are contained in the accompanying prospectus dated October 17, 2006.

In the opinion of management, the accompanying condensed consolidated financial statements include all adjustments, which are of a normal recurring nature, necessary for a fair presentation of results for the interim periods to summarize fairly the financial position and results of operations as of December 31, 2006 and for the nine months then ended. The results of operations for the interim period may not be indicative of the results that may be expected for the full fiscal year.

On May 10, 2005, the Company acquired all of the shares of outstanding capital stock of Impella CardioSystems AG (Impella), a manufacturer of percutaneous cardiovascular support systems headquartered in Aachen, Germany (See Note 9). All significant intercompany accounts and transactions have been eliminated in consolidation.

Certain prior year amounts have been reclassified to conform with the current year presentation. Specifically, amortization of intangibles has been shown separately in the statement of operations in fiscal 2007 versus prior year presentation of reflecting intangibles amortization in research and development and selling, general and administrative expenses to more clearly reflect the amortization impact on the financial statements. Reclassifications have also been made to the Company s statements of cash flow to conform to current year presentation with respect to the inclusion in depreciation and amortization the amount of amortization expense recorded for inventory used for demonstration purposes.

2. Significant Accounting Policies

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimated or assumed. The more significant estimates reflected in these financial statements include collectibility of accounts receivable, inventory valuation and accrued expenses.

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Goodwill

The Company periodically evaluates goodwill for impairment using forecasts of discounted future cash flows. Estimates of future cash flows require assumptions related to revenue and operating income growth, asset-related expenditures, working capital levels and other factors. Different assumptions from those made in the analysis could materially affect projected cash flows and the evaluation of goodwill for impairment. Should the fair value of our goodwill decline because of reduced operating performance, market declines, delays in regulatory approval, or other indicators of impairment, or as a result of changes in the discount rate, charges for impairment of goodwill may be necessary. The Company performed its annual impairment review for fiscal 2007 as of October 31, 2006 and determined that goodwill was not impaired. The carrying amount of goodwill at December 31, 2006 was $26.4 million.

3. Accounting for Stock-Based Compensation

In December 2004, the FASB issued SFAS No. 123(R), *Share-based Payment*. SFAS No. 123(R) requires compensation costs related to share-based transactions, including employee share options, to be recognized in the financial statements based on the grant-date fair value.

Effective April 1, 2006, the Company adopted the provisions of SFAS No. 123(R) using the modified prospective application transition method. Under this transition method, the compensation cost recognized beginning April 1, 2006 includes compensation cost for (i) all share-based payments granted prior to, but not yet vested as of April 1, 2006, based on the grant-date fair value estimated in accordance with the original provisions of SFAS No. 123, and (ii) all share-based payments granted subsequent to March 31, 2006 based on the grant-date fair value estimated in accordance with the provisions of SFAS No. 123(R). Compensation cost is recognized on a straight-line basis over the requisite vesting period for those stock options issued subsequent to the adoption of SFAS No. 123(R). For stock options issued prior to the adoption of SFAS No. 123(R), the accelerated method is used for expense recognition.

Prior to April 1, 2006, the Company accounted for stock-based compensation in accordance with the provisions of APB No. 25. The Company elected to follow the disclosure-only alternative requirements of SFAS No. 123, *Accounting for Stock-Based Compensation*. Accordingly, the Company did not recognize the compensation expense for the issuance of options with fixed exercise prices at least equal to the fair market value at the date of the grant. The modified prospective transition method of SFAS No. 123(R) requires the presentation of pro forma net income (loss) and net income (loss) per share as if the Company had accounted for its stock plans under the fair value method of SFAS No. 123 for periods presented prior to the adoption of SFAS No. 123(R).

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In the process of adopting SFAS No. 123(R), the Company determined that the historical estimated forfeiture rates used in the SFAS No. 123 pro forma disclosure in the previously issued financial statements were higher than the Company s actual historical forfeiture rates resulting in an understatement of the Company s pro forma stock compensation expense. The Company has revised its pro forma disclosure for the years ended March 31, 2006, 2005 and 2004. This revision resulted in an increase in pro forma expense and pro forma net loss, from amounts previously reported, in the amount of $1.1 million for the nine months ended December 31, 2005 and an increase in net loss per share of $0.05 for the nine months ended December 31, 2005, which are reflected in the table below.

	Nine months ended December 31, 2005
Net loss, as reported	$ (25,767)
Add: Stock-based employee compensation included in reported net loss	179
Deduct: Total stock-based employee compensation determined under fair value based method for all awards	(4,335)
Pro forma net loss	$ (29,923)
Basic and diluted net loss per share:	
As reported	$ (1.01)
Pro forma	$ (1.18)

Stock Option Plans

Consistent with the policies and practices of the Company pertaining to stock options, all outstanding stock options of the Company as of December 31, 2006 were granted with an exercise price equal to the fair market value on the date of grant with the exception of 3,557 outstanding options that were granted to certain employees during the fiscal year ended March 31, 2004, with an exercise price of $0.01 per share. For the options granted at $0.01 per share and restricted stock granted below fair market value, compensation expense is recognized on a straight-line basis over the vesting period. Outstanding stock options, if not exercised, expire 10 years from the date of grant.

The 1992 Combination Stock Option Plan (as amended, the Combination Plan) was adopted in September 1992 as a combination and amendment of the Company s then outstanding Incentive Stock Option Plan and Nonqualified Plan. A total of 2,670,859 options were awarded from the Combination Plan that ended on May 1, 2002. As of December 31, 2006, 145,700 of these options remain outstanding, fully vested and eligible for future exercise.

The 1998 Equity Incentive Plan (the Equity Incentive Plan) was adopted by the Company in August 1998. The Equity Incentive Plan provides for grants of options to key employees, directors, advisors and consultants as either incentive stock options or nonqualified stock options as determined by the Company s Board of Directors. A maximum of 1,000,000 shares of common stock may be awarded under this plan. Options granted under the Equity Incentive Plan are exercisable at such times and subject to such terms as the Board of Directors may specify at the time of each stock option grant. Options outstanding under the Equity Incentive Plan have vesting periods of 3 to 5 years from the date of grant.

The 2000 Stock Incentive Plan (as amended, the 2000 Plan) was adopted by the Company in August 2000. The 2000 Plan provides for grants of options to key employees, directors, advisors and consultants to the Company or its subsidiaries as either incentive or nonqualified stock options as determined by the Company s Board of Directors. Up to 4,900,000 shares of common stock may be awarded under the 2000 Plan and are exercisable at such times and subject to such terms as the Board of Directors may specify at the time of each stock option grant. Options outstanding under the 2000 Plan generally vest 4 years from the date of grant.

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The Company has a nonqualified stock option plan for non-employee directors (the Directors Plan). The Directors Plan, as amended, was adopted in July 1989 and provides for grants of options to purchase shares of the Company s common stock to non-employee directors of the Company. Options for the purchase of up to 400,000 shares of common stock may be awarded under the Directors Plan. Options outstanding under the Director s Plan have vesting periods of 1 to 5 years from the date of grant.

The Company estimates the fair value of each stock option granted at the grant date using the Black-Scholes option valuation model, consistent with the provisions of SFAS No. 123(R), SEC SAB No. 107 *Share-based Payment* and the Company s prior period pro forma disclosure of net loss, including stock-based compensation (determined under a fair value method as prescribed by SFAS No. 123). The fair value of options granted during the nine months ended December 31, 2006 and December 31, 2005 were calculated using the following assumptions:

	Nine Months Ended December 31	
	2006	**2005**
Risk-free interest rate	4.58 5.04%	3.90 4.36%
Expected volatility	65.00%	73.00%
Expected option life (years)	6.25	7.40

The risk-free interest rate is based on the United States 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 a combination of the historical volatility of our stock and adjustments for factors not reflected in historical volatility that are more indicative of future volatility. By using this combination, the Company is taking into consideration estimates of future volatility that the Company believes will differ from historical volatility as a result of product diversification and the Company s acquisition of Impella. The average expected life was estimated using the simplified method for determining the expected term as prescribed by the SEC s Staff Accounting Bulletin No. 107. The calculation of the fair value of the options is net of estimated forfeitures. Forfeitures are estimated based on an analysis of actual option forfeitures, adjusted to the extent historic forfeitures may not be indicative of forfeitures in the future. In addition, an expected dividend yield of zero is used in the option valuation model, because the Company does not pay dividends and does not expect to pay any cash dividends in the foreseeable future.

The weighted average grant-date fair value for options granted during the nine months ended December 31, 2006 was $8.75 per share. The weighted average grant date fair value for options granted during the nine months ended December 31, 2005 was $6.89 per share.

The application of SFAS No. 123(R) resulted in expense of $4.6 million for the nine months ended December 31, 2006 which is recorded within the applicable operating expense where the Company reports the option holders compensation cost in the condensed consolidated statements of operations. The remaining unrecognized stock-based compensation expense for unvested stock option awards at December 31, 2006 was approximately $10.2 million, net of forfeitures, and the weighted average time over which this cost will be recognized is 2.0 years. The stock-based compensation expense resulted in a $0.17 decrease in earnings per share for the nine months ended December 31, 2006.

SFAS No. 123(R) also requires the benefits of tax deductions in excess of recognized compensation cost to be reported as a financing cash flow, rather than as an operating cash flow. Because the Company does not recognize the benefit of tax deductions in excess of recognized compensation cost due to its net operating loss position, this change had no impact on the Company s consolidated statement of cash flows for the nine months ended December 31, 2006.

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The following table summarizes the stock option activity for the nine months ended December 31, 2006:

	Options (in thousands)	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value (in thousands)
Outstanding at March 31, 2006	3,962	$ 10.11		
Granted	1,057	13.54		
Exercised	(287)	7.45		
Cancelled	(261)	11.26		
Outstanding at December 31, 2006	4,471	$ 11.02	7.27	$ 15,961
Exercisable at December 31, 2006	1,966	$ 10.76	5.56	$ 8,731

The total intrinsic value of options exercised during the nine months ended December 31, 2006 was $1.7 million. The total fair value of stock options which vested during the nine months ended December 31, 2006 was $4.5 million.

Restricted Stock

On March 1, 2005, the Company issued a restricted stock grant of 24,000 shares to an officer of the Company, of which 8,000 shares vested on March 1, 2006. The remaining 16,000 shares will vest in 8,000 share increments on March 1, 2007 and 2008, respectively. The restricted stock grant compensation expense is recognized on a straight-line basis over a vesting period of three years. At December 31, 2006, there was $0.1 million of unrecognized compensation cost related to these restricted shares.

Employee Stock Purchase Plan

In March of 1988, the Company adopted the 1988 Employee Stock Purchase Plan (ESPP) under which 500,000 shares of common stock were reserved for issuance. Eligible employees may purchase a limited number of shares of the Company s common stock at 85% of the lower of the market value on the offering date or the market value on the purchase date. During the nine months ended December 31, 2006 and December 31, 2005, 14,549 shares of common stock and 11,169 shares of common stock were issued under the ESPP, respectively.

Compensation expense recognized related to the Company s ESPP was $39,000 for the nine months ended December 31, 2006. The weighted average grant-date fair value of the purchases under the Employee Stock Purchase Plan was $3.42 per share. The fair value of these purchases was estimated using the Black-Scholes option pricing model with the following assumptions:

Risk-free interest rate	4.79 %
Expected volatility	38.32%
Expected option life (years)	0.50

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4. Warranties

The Company routinely accrues for estimated future warranty costs on its product sales at the time of sale. The Company s products are subject to rigorous regulation and quality standards. The following table summarizes the activities of the warranty reserves for the nine months ended December 31, 2006 and 2005 (in thousands):

	Nine months ended December 31,	
	2006	2005
Balance at March 31	$ 167	$ 231
Accrual for warranties	84	121
Warranty cost incurred during the period	(42)	(215)
Balance at December 31	$ 209	$ 137

5. Inventories

Inventories are stated at the lower of cost (first-in, first-out) or market and consist of the following (in thousands):

	December 31, 2006	March 31, 2006
Raw materials and supplies	$ 3,134	$ 1,764
Work-in-process	1,318	659
Finished goods	2,431	2,445
	$ 6,883	$ 4,868

All of the Company s inventories relate to circulatory care product lines that include the AB5000, BVS 5000, AbioCor and Impella products. Finished goods and work-in-process inventories consist of direct material, labor and overhead. From time to time, the Company loans finished goods inventory to customers for demonstration purposes. This cost of demo inventory amounted to $1.2 million at December 31, 2006 and the net carrying value was $0.5 million. The Company amortizes finished goods that are used for demonstration purposes over a three-year life.

The Company regularly reviews inventory quantities on hand and writes down to its net realizable value any inventory believed to be impaired. If actual demand or market conditions are less favorable than projected demand, additional inventory write-downs may be required that could adversely impact financial results for the period in which the additional excess or obsolete inventory is identified.

6. Property and Equipment

The Company provides for depreciation on property and equipment by charges to operations in amounts that allocate the cost of depreciable assets over their estimated useful lives on a straight-line basis as follows:

Classification	Estimated useful life
Machinery and equipment	2 10 years
Furniture and fixtures	4 10 years
Leasehold improvements	Lower of life of asset or life of lease

Depreciation expense related to property and equipment was $1.4 million and $1.0 million for the nine months ended December 31, 2006 and 2005, respectively.

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Property and equipment consisted of the following (in thousands):

	December 31, 2006	March 31, 2006
Machinery and equipment	$ 15,141	$ 12,509
Furniture and fixtures	1,388	1,352
Leasehold improvements	2,619	2,545
Construction in progress	436	987
Total cost	19,584	17,393
Less accumulated depreciation	(14,012)	(12,569)
	$ 5,572	$ 4,824

Certain reclassifications were made to property and equipment and accumulated depreciation as previously reported at March 31, 2006 to accurately reflect balances associated with our Europe facility.

7. Net Loss Per Common Share

In accordance with SFAS No. 128, *Earnings Per Share*, basic net loss per share is computed by dividing net loss by the weighted average number of common shares outstanding during the period. Diluted net loss per share is computed by dividing net loss by the weighted average number of dilutive common shares outstanding during the period. Diluted shares outstanding is calculated by adding to the weighted shares outstanding any potential (unissued) shares of common stock from outstanding stock options and warrants based on the treasury stock method. In periods when a net loss is reported, such as the nine months ended December 31, 2006 and December 31, 2005, 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 the calculation of basic and dilutive loss per share results in the same value.

The calculation of diluted weighted average shares outstanding for the nine months ended December 31, 2006 and 2005 excludes warrants to purchase up to 400,000 shares of common stock issued in connection with the purchase of intellectual property. Also excluded from the calculation of diluted weighted average shares outstanding for the nine months ended December 31, 2006 and 2005 are stock options outstanding in the amount of 4,471,277 and 3,964,129, respectively, and unvested shares of restricted stock in the amount of 16,000 shares and 24,000 shares, respectively.

8. Marketable Securities

The Company classifies any security with a maturity date of greater than 90 days at the time of purchase as marketable securities. In accordance with SFAS No. 115, *Accounting for Certain Investments in Debt and Equity Securities* , 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 securities. At December 31, 2006, the held-to-maturity investment portfolio consisted primarily of government securities and corporate bonds with maturities of one year or less.

The amortized cost including interest receivable approximates market value of held-to-maturity short-term marketable securities and was approximately $16.9 million and $10.2 million at March 31, 2006 and December 31, 2006, respectively.

The Company has classified the portion of its investment portfolio consisting of corporate asset-backed securities as available-for-sale securities. The cost of these securities approximates market value and was $6.1 million and $1.0 million at March 31, 2006 and December 31, 2006, respectively. Principal payments of these available-for-sale securities are typically made on an expected pre-determined basis rather than on the longer contractual maturity date.

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9. Acquisition

In May 2005, the Company acquired all of the shares of outstanding capital stock of Impella CardioSystems AG (Impella). The acquisition of Impella was accounted for under the purchase method of accounting and the results of operations of Impella have been included in the consolidated results of the Company from the acquisition date. The aggregate initial purchase price was approximately $45.1 million, which consisted of $42.2 million of the Company s common stock, $1.6 million of cash paid to certain former shareholders of Impella, and $1.3 million of transaction costs, consisting primarily of fees paid for financial advisory and legal services. The Company issued 4,029,004 shares of common stock, the fair value of which was based upon a five-day average of the closing price two days before and two days after the terms of the acquisition were agreed to and publicly announced.

In addition, the purchase agreement for the acquisition of Impella provides that the Company may be required to make additional contingent payments to Impella s former shareholders based on both the Company s future stock price performance and milestones related to FDA approvals and unit sales of Impella products.

The contingent payment based on stock price performance as of the 18-month anniversary of the closing date was not required to be paid as the average of the daily volume weighted average price per share of Abiomed s common stock for the 20 trading days prior to November 10, 2006 was below $15.00.

The Company also agreed, subject to certain exceptions based on future stock price performance described below, to make additional payments of up to $16.75 million based on the following milestones:

- upon FDA approval of Impella s 2.5 liter pump system, a payment of $5,583,333,
- upon FDA approval of Impella s 5.0 liter pump system, a payment of $5,583,333, and
- upon the sale of 1,000 units of Impella s products worldwide between the closing and December 31, 2007, a payment of $5,583,334.

These milestone payments may be made, at the Company s option, by a combination of cash or stock, except that no more than an aggregate of $15 million of these milestone payments may be made in the form of stock. If any contingent payments are made, they will result in an increase in the carrying value of goodwill. The Company reached the 1,000 unit milestone in the third quarter of fiscal 2007. The Company accounted for this contingent milestone by increasing goodwill and recording a liability at December 31, 2006 for $5.6 million. The Company expects to issue approximately 403,000 shares of common stock during the fourth quarter of fiscal 2007 to satisfy this milestone obligation of $5.6 million.

The foregoing notwithstanding, if the average market price per share of Abiomed s common stock, as determined in accordance with the purchase agreement, as of the date that any of the milestones is achieved is $22 or more, no additional contingent consideration will be required with respect to that milestone. If the average market price is between $18 and $22 on the date of the Company s achievement of a milestone, the relevant milestone payment will be reduced ratably.

The following represents the pro forma results of the ongoing operations for Abiomed and Impella as though the acquisition of Impella had occurred on April 1, 2005 (in thousands, except per share data). The pro forma information, however, is not necessarily indicative of the results that would have resulted had the acquisition occurred on that date.

	Nine months ended December 31, 2005
Revenues	$ 30,040
Net loss	$ (15,621)
Net loss per common share (basic and diluted)	$ (0.60)

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10. Intangible Assets and Goodwill

The carrying amount of goodwill was $26.4 million at December 31, 2006 and was recorded in connection with the Company s acquisition of Impella. As part of the Impella acquisition in May of 2005, the Company recorded tax-deductible goodwill amounting to $15.5 million. As discussed in Note 9, goodwill was increased during the third fiscal quarter of 2007 by $5.6 million in connection with the Impella 1,000 unit milestone obligation. This increase to goodwill will be tax-deductible once shares of common stock are issued in the fourth quarter. Additional changes in goodwill as compared to March 31, 2006 reflect the fluctuation in foreign currency.

The Company s intangible assets in the accompanying consolidated balance sheets are detailed as follows, each with a weighted average amortization period of seven years (in thousands):

	December 31, 2006		March 31, 2006	
	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Patents	$ 7,544	$ 2,407	$ 6,990	$ 1,564
Trademarks and tradenames	438	159	407	109
Distribution agreements	648	154	754	99
Acquired technology	2,235	532	2,054	269
	$ 10,865	$ 3,252	$ 10,205	$ 2,041

11. Research and Development

Research and development costs are expensed when incurred and include direct materials and labor, depreciation, contracted services and other costs associated with developing and testing of new products and significant enhancements to existing products. Research and development costs consist of the following amounts (in thousands):

	Nine months ended December 31,	
	2006	2005
Internally funded	$ 16,251	$ 12,336
Incurred under government contracts and grants	78	181
Total research and development expense	$ 16,329	$ 12,517

12. Expensed In-Process Research and Development

The Company recorded a charge of $0.8 million during the quarter ended June 30, 2006 in connection with the acquisition of certain circulatory care device patents and know-how. This charge relates to costs to acquire in-process research and development projects and technologies, which have not reached technological feasibility at the date of the asset acquisition and have no alternative future use, and are expensed as incurred.

The Company recorded a $13.3 million non-cash charge to in-process research and development expense during the quarter ended June 30, 2005 in connection with the Company s acquisition of Impella on May 10, 2005. This charge relates to costs to acquire in-process research and development projects and technologies, which have not reached technological feasibility at the date of the business acquisition and have no alternative future use, and are expensed as incurred.

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13. Comprehensive Loss

Comprehensive loss details follow (in thousands):

	Nine months ended December 31,	
	2006	2005
Net loss	$ (21,532)	$ (25,767)
Other comprehensive loss:		
Foreign currency translation adjustments	2,227	(2,582)
Comprehensive loss	$ (19,305)	$ (28,349)

14. Income Taxes

As a result of the adoption of SFAS No. 142, Goodwill and Other Intangible Assets (SFAS No. 142) and the acquisition of Impella, the Company has recorded a valuation allowance in excess of its net deferred tax assets to the extent the difference between the book and tax basis of indefinite lived intangible assets is not expected to reverse during the net operating loss carryforward period.

As of December 31, 2006, the Company has accumulated a net deferred tax liability in the amount of $0.9 million which is primarily the result of a difference in accounting for the Company s goodwill which is amortized over 15 years for tax purposes but not amortized for book purposes, in accordance with SFAS No. 142. The net deferred tax liability cannot be offset against the Company s deferred tax assets under U.S. generally accepted accounting principles since it relates to an indefinite-lived asset and is not anticipated to reverse in the same period. For the nine months ended December 31, 2006, the Company has recorded a deferred tax provision relating to amortization of goodwill for tax purposes in the amount of $0.3 million. For the nine months ended December 31, 2005, the Company recorded a deferred tax provision relating to amortization of goodwill in the amount of $0.3 million.

15. Segment and Enterprise Wide Disclosures

SFAS No. 131, *Disclosures about Segments of an Enterprise and Related Information* , requires certain financial and supplementary information to be disclosed on an annual and interim basis for each reportable segment of an enterprise. 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. Approximately 48% of the Company s total consolidated assets are located within the United States as of December 31, 2006. Remaining assets are located in Europe, related to our Impella production facility, and include goodwill of $26.4 million at December 31, 2006 associated with the Impella acquisition from May 2005 as discussed in Note 9. Total assets in Europe excluding goodwill were $12.5 million at December 31, 2006 and amounted to 17% of total consolidated assets. International sales (sales outside the United States) accounted for 11% and 14% of total product revenue during the nine months ended December 31, 2006 and 2005, respectively.

16. Commitments and Contingencies

The Company s acquisition of Impella provides that Abiomed may be required to make additional contingent payments to Impella s former shareholders (see Note 9). As described in Note 9, the Company has accrued $5.6 million related to the sale of 1,000 Impella units since the date of acquisition. The Company may

make additional contingent payments to Impella s former shareholders based on additional milestones related to FDA approvals in the amount of up to $11.2 million. These contingent payments may be made in a combination of cash or stock under circumstances described in the purchase agreement.

On May 15, 2006, Richard A. Nazarian, as Selling Stockholder Representative, filed a Demand for Arbitration (subsequently amended) with the Boston office of the American Arbitration Association. The claim seeks 600,000 unrestricted shares of Abiomed common stock for an alleged breach of our obligation to fund development of the Penn State Heart program and an alleged cancellation of the Penn State Heart development project. The Company instituted a legal action in Federal Court to determine the arbitrability of the claims asserted and the Federal Court has stayed the arbitration of a portion of the claim. Arbitration has commenced and the Company continues to vigorously defend against the claims asserted. The Company has applied the concepts of SFAS No. 5 *Accounting for Contingencies* , and has determined that no accrual is warranted.

The Company applies the disclosure provisions of FIN No. 45, *Guarantor s Accounting and Disclosure Requirements for Guarantees, Including Guarantees of Indebtedness of Others, and Interpretation of FASB Statements No. 5, 57 and 107 and Rescission of FASB Interpretation No. 34* (FIN No. 45) to its agreements that contain guarantee or indemnification clauses. These disclosure provisions expand those required by SFAS No. 5, by requiring that guarantors disclose certain types of guarantees, even if the likelihood of requiring the guarantor s performance is remote. The following is a description of arrangements in which the Company is a guarantor.

The Company enters into agreements with other companies in the ordinary course of business, typically with underwriters, contractors, clinical sites and customers that include indemnification provisions. Under these provisions the Company generally indemnifies and holds harmless the indemnified party for losses suffered or incurred by the indemnified party as a result of its activities. These indemnification provisions generally survive termination of the underlying agreement. The maximum potential amount of future payments the Company could be required to make under these indemnification provisions is unlimited. Abiomed has never incurred any material costs to defend lawsuits or settle claims related to these indemnification agreements. As a result, the estimated fair value of these agreements is minimal. Accordingly, the Company has no liabilities recorded for these agreements as of December 31, 2006.

Clinical study agreements In the Company s clinical study agreements, Abiomed has agreed to indemnify the participating institutions against losses incurred by them for claims related to any personal injury of subjects taking part in the study to the extent they relate to uses of the Company s devices in accordance with the clinical study agreement, the protocol for the device and Abiomed s instructions. The indemnification provisions contained within the Company s clinical study agreements do not generally include limits on the claims. The Company has never incurred any material costs related to the indemnification provisions contained in its clinical study agreements.

17. New Accounting Pronouncements

In June 2006, the Financial Accounting Standards Board (FASB) released FASB Interpretation No. 48, *Accounting for Uncertainty in Income Taxes an Interpretation of FASB Statement No. 109* (FIN 48). FIN 48 prescribes a comprehensive model for how a company should recognize, measure, present, and disclose in its financial statements uncertain tax positions that the Company has taken or expects to take on a tax return. Under FIN 48, the financial statements will reflect expected future tax consequences of such positions presuming the taxing authorities full knowledge of the position and all relevant facts, but without discounting for the time value of money. FIN 48 also revises disclosure requirements and introduces a prescriptive, annual, tabular roll-forward of the unrecognized tax benefits. FIN 48 will become effective with the Company s fiscal year beginning April 1, 2008. The Company is assessing the impact of FIN 48, but does not expect that this standard will have a material impact on its financial statements.

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In September 2006, the SEC issued Staff Accounting Bulletin No. 108, *Considering the Effects of Prior Year Misstatements when Quantifying Misstatements in Current Year Financial Statements* (SAB No. 108). SAB No. 108 provides guidance regarding the consideration of the effects of prior year misstatements in quantifying current year misstatements for the purpose of materiality assessments. The method established by SAB No. 108 requires each of our financial statements and the related financial statement disclosures to be considered when quantifying and assessing the materiality of the misstatement. The provisions of SAB No. 108 are effective for the fiscal year ending March 31, 2007. The Company does not expect SAB No. 108 to have a material impact on its financial statements.

In September 2006, the FASB issued SFAS No. 157, *Fair Value Measurements* . Among other requirements, SFAS No. 157 defines fair value and establishes a framework for measuring fair value and also expands disclosure requirements regarding fair value measurements. SFAS No. 157 is effective for financial statements issued for fiscal years beginning after November 15, 2007 and interim periods within those years. The Company is evaluating the impact of adopting SFAS No. 157 on its financial statements.

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Annex List of Selected Clinical Materials

Included below is a list of peer-reviewed publications of which we are aware that have been published since 2004 and which relate to our AB5000 or Impella products. We cannot assure you that this list represents all of the clinical studies and other publications relating to our AB5000 or our Impella products. Moreover, these clinical studies and publications present a wide variety of findings, and any other studies or publications, including future studies, may present additional or different findings. You should not make an investment decision based upon the data contained in these publications. Before making an investment decision, you should carefully consider the risks and other information we include or incorporate by reference in this prospectus supplement, including our consolidated financial statements and the related notes.

AB5000

Zhang L, Kapetanakis EI, Cooke RH, Sweet LC, Boyce SW. Bi-ventricular circulatory support with the Abiomed AB5000 system in a patient with idiopathic refractory ventricular fibrillation. Ann Thorac Surg. 2007 Jan;83(1):298-300.

Sai-Sudhakar CB, Firstenberg MS, Sun B. Biventricular mechanical assist for complex, acute post-infarction ventricular septal defect. J Thorac Cardiovasc Surg. 2006 Nov;132(5):1238-9.

Anderson M, Madani M, Sun B, Raess D, Samuels L. Ventricular assist devices improve recovery outcomes in acute myocardial infarction cardiogenic Shock: Benchmark of the US multicenter experience against SHOCK trial. (TCT 2006). TCT 2006 poster.

Anderson M, Madani M, Sun B, Raess D, Samuels L. Is cardiac recovery with ventricular assist devices after cardiogenic shock post acute myocardial infarction sustainable? Long-term follow-up of a US multicenter study (TCT 2006). TCT 2006 poster.

Anderson M, Acker M, Kasirajan V, Madani M, Naka Y, Raess D, Samuels L, Sun B. Mechanical circulatory support improves recovery outcomes in profound cardiogenic shock post acute myocardial infarction: A US multicenter study. (TCT 2005). Am J Cardiol. 2006 96 [7(Supp)], 11H.

Crumbley AJ, Mandani M, Elefteriades JA, Barrett PW. Clinical bridge to transplant experience with the AB5000 VAD [abstract]. Transplantation. 2006;82 (1 Supp 2):744-5.

Samuels, LE, Holmes EC, Garwood P, Ferdinand F. Initial experience with the Abiomed AB5000: A successful option for extended bridge-to-recovery patients ventricular assist device system. Ann Thorac Surg. 2005 Jul;80(1):309-12.

Leyvi G, Taylor DG, Hong S, Garcia JP, Crooke G, Wasnick JD. Intraoperative off-bypass management of the Abiomed AB5000 ventricle. J Cardiothorac Vasc Anesth. 2005 Feb.;19(1):76-8.

Impella

Garatti A, Colombo T, Vitali E. Placement of the Impella Recover LD microaxial blood pump through a bioprosthesis is technically feasible. J Thorac Cardiovasc Surg. 2006 Oct;132(4):989-90.

Tevaearai HT, Schmidli J, Mohacsi P, Rothen HU, Eckstein FS, Carrel TP. Leakage of the arterial prosthesis of an Impella RVAD. Ann Thorac Surg. 2006 Oct;82(4):1527-9.

Garatti A, Colombo T, Russo C, Lanfranconi M, Milazzo F, Catena E, Bruschi G, Frigerio M, Vitali E. Left ventricular mechanical support with the Impella Recover left direct microaxial blood pump: a single-center experience. Artif Organs. 2006 Jul;30(7):523-8.

Niccoli G, Siviglia M, De Vita M, Altamura L, Fusco B, Leone AM, Ferrante G, Rebuzzi AG, Crea F. A case of fatal stent thrombosis after Carbostent implantation: Is clopidogrel alone antiplatelet therapy a safe alternative to aspirin alone antiplatelet therapy? Int J Cardiol. 2006 Jun 4.

Lee MS, Makkar RR. Percutaneous left ventricular support devices. Cardiol Clin. 2006 May;24(2):265-75, vii.

LaRocca GM, Shimbo D, Rodriguez CJ, Stewart A, Naka Y, Weinberger J, Homma S, Pizzarello R. The Impella Recover LP 5.0 left ventricular assist device: a bridge to coronary artery bypass grafting and cardiac transplantation. J Am Soc Echocardiogr. 2006 Apr;19(4):468-7.

Henriques JP, Remmelink M, Baan J, Jr., van der Schaaf RJ, Vis MM, Koch KT, Scholten EW, de Mol BA, Tijssen JG, Piek JJ, de Winter RJ. Safety and feasibility of elective high-risk percutaneous coronary intervention procedures with left ventricular support of the Impella Recover LP 2.5. Am J Cardiol. 2006 Apr 1;97(7):990-2.

Minden HH, Lehmann H, Meyhofer J, Butter C. Transradial unprotected left main coronary stenting supported by percutaneous Impella((R)) Recover LP 2.5 assist device. Clin Res Cardiol. 2006 Mar 21.

Vlasselaers D, Desmet M, Desmet L, Meyns B, Dens J. Ventricular unloading with a miniature axial flow pump in combination with extracorporeal membrane oxygenation. Intensive Care Med. 2006 Feb;32(2):329-33.

Ramondo A, Napodano M, Tarantini G, Calzolari D, Nalli C, Cacciavillani L, Iliceto S. High-risk percutaneous coronary intervention using the intracardiac microaxial pump Impella Recover . J Cardiovasc Med. 2006;7:149-52.

Strauch JT, Franke UF, Breuer M, Wippermann J, Wittwer T, Madershahian N, Kaluza M, Wahlers T. Technical feasibility of Impella Recover 100 microaxial left ventricular assist device placement after biologic aortic valve replacement (21 mm) for postcardiotomy failure. J Thorac Cardiovasc Surg. 2005 Dec;130(6):1715-6.

Catena E, Barosi A, Milazzo F, Paino R, Pelenghi S, Garatti A, Colombo T, Vitali E. Three-dimensional echocardiographic assessment of a patient supported by intravascular blood pump Impella Recover 100. Echocardiography. 2005 Sep;22(8):682-5.

Valgimigli M, Steendijk P, Sianos G, Onderwater E, Serruys PW. Left ventricular unloading and concomitant total cardiac output increase by the use of percutaneous Impella Recover LP 2.5 assist device during high-risk coronary intervention. Catheter Cardiovasc Interv. 2005 Jun;65(2):263-7.

Bierbach B, Kasper-Konig W, Haist T, Meier M, Pritzer H, Hanenkamp U, Horstick G, Kempski O, Oelert H. Effect of different operative techniques for myocardial revascularisation on hemodynamics and myocardial perfusion in a porcine model. Thorac Cardiovasc Surg. 2005 Apr;53(2):103-9.

Garatti A, Colombo T, Russo C, Lanfranconi M, Milazzo F, Catena E, Bruschi G, Frigerio M, Vitali E. Different applications for left ventricular mechanical support with the Impella Recover 100 microaxial blood pump. J Heart Lung Transplant. 2005 Apr;24(4):481-5.

Windecker S, Meier B. Impella assisted high risk percutaneous coronary intervention. Kardiovasc Medizin. 2005;8(5):187-9.

Catena E, Milazzo F, Merli M, Paino R, Garatti A, Colombo T, Vitali E. Echocardiographic evaluation of patients receiving a new left ventricular assist device: the Impella Recover 100 Eur J Echocardiogr. 2004 Dec;5(6):430-7.

Strecker T, Fischlein T, Pfeiffer S. Impella Recover 100: successful perioperative support for off pump coronary artery bypass grafting surgery in a patient with end-stage ischemic cardiomyopathy. J Cardiovasc Surg. (Torino) 2004 Aug;45(4):381-4.

Catena E, Milazzo F, Pittella G, Paino R, Colombo T, Garatti A, Vitali E, Merli M. Echocardiographic approach in a new left ventricular assist device: Impella Recover 100. J Am Soc Echocardiogr. 2004 May;17(5):470-3.

Jurmann MJ, Siniawski H, Erb M, Drews T, Hetzer R. Initial experience with miniature axial flow ventricular assist devices for postcardiotomy heart failure. Ann Thorac Surg. 2004 May;77(5):1642-7.

Garatti A, Colombo T, Russo C, Lanfranconi M, Bruschi G, Milazzo F, Catena E, Vitali E. Impella Recover 100 microaxial left ventricular assist device: the Niguarda experience. Transplant Proc. 2004 Apr;36(3):623-6.

Siegenthaler MP, Brehm K, Strecker T, Hanke T, Notzold A, Olschewski M, Weyand M, Sievers H, Beyersdorf F. The Impella Recover microaxial left ventricular assist device reduces mortality for postcardiotomy failure: a three-center experience. J Thorac Cardiovasc Surg. 2004 Mar;127(3):812-22.

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PROSPECTUS

ABIOMED, Inc.

7,500,000 Shares of

Common Stock

By this prospectus, we may offer up to 7,500,000 shares of our common stock from time to time. We may offer the common stock to or through underwriters or dealers, through agents or directly to investors. We will provide a prospectus supplement each time we offer common stock. The prospectus supplement will inform you about the specific terms of an offering and may also supplement, update or change the information in this prospectus.

This prospectus may not be used to complete sales of common stock unless it is accompanied by a prospectus supplement.

Our common stock trades on the NASDAQ Global Market under the symbol ABMD. The last reported sale price of our common stock on the NASDAQ Global Market on September 28, 2006 was $15.09 per share.

Investing in our common stock involves a high degree of risk. See Risk Factors beginning on page 3.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

Unless the context otherwise requires, all references to ABIOMED, we, our, us or our company in this prospectus refer to ABIOMED, Inc., Delaware corporation and its subsidiaries.

The date of this prospectus is October 17, 2006.

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You should rely on the information contained in this prospectus, in any applicable prospectus supplement and in the documents incorporated by reference in this prospectus. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not making an offer to sell these securities in any jurisdiction where their offer or sale is not permitted. You should assume that the information appearing in this prospectus is accurate only at the date on the front cover of this prospectus, regardless of the time of delivery of this prospectus or of any sale of the securities. Our business, financial condition, results of operations and prospects may have changed since the date indicated on the front cover of this prospectus.

This prospectus contains summaries of certain provisions contained in some of the documents described herein, and reference is made to the actual documents filed with the United States Securities and Exchange Commission, or SEC, for complete information. Copies of some of the documents referred to herein have been filed, will be filed or incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under Where You Can Find More Information.

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SUMMARY

This summary is a brief discussion of material information contained in, or incorporated by reference into, this prospectus as further described below under Where You Can Find More Information. This summary does not contain all of the information that you should consider before investing in our common stock being offered by this prospectus. We urge you to read carefully this entire prospectus, the documents incorporated by reference into this prospectus and all applicable prospectus supplements relating to our common stock before making an investment decision.

About this Prospectus

This prospectus is part of a registration statement that we filed with the SEC using a shelf registration process. Under this shelf registration process, we may sell up to 7,500,000 shares of common stock in one or more offerings on a delayed or continuous basis.

This prospectus provides a general description of the common stock we may offer. Each time we offer common stock, we will provide a prospectus supplement that will contain specific information about the terms of the offering. The prospectus supplement may also supplement, update or change the information in this prospectus. In that event, the information in the prospectus supplement will supersede the information in this prospectus.

This prospectus and the applicable prospectus supplement will include all material information regarding an offering. This prospectus may not be used to complete sales of common stock unless it is accompanied by a prospectus supplement.

You should read this prospectus, the applicable prospectus supplement and the additional information described under the heading Where You Can Find More Information beginning on page 13.

About ABIOMED, Inc.

We are a leading provider of medical products and services in the area of circulatory care. Our strategy is centered around establishing recovery as the standard of care for acute patients. We have two products designed for heart recovery following acute events, the AB5000 and BVS® 5000, both of which have been approved by the FDA. Our AB5000 Circulatory Support System is a heart assist product designed to provide enhanced patient mobility within and between medical centers, to facilitate patient ambulation and to provide enhanced features and ease of use for caregivers. The AB5000 console serves as a platform for ongoing and future blood pump product line enhancements expected to meet patient needs across a broader spectrum of temporary heart assist applications. Our AB5000 marketing efforts were initially focused on introducing the system in the largest cardiothoracic surgical centers through sales of consoles and blood pumps. It is our intention to seek expansion of the current approved indications for use of the AB5000 in order to allow support of expanded patient populations for longer periods of support.

The BVS and AB5000 systems each consist of single-use external blood pumps and cannulae and a reusable pneumatic drive and control console. Both are capable of assuming the full pumping function of a patient s failing heart, and are designed to provide either univentricular or biventricular support. Both are currently approved by the FDA for temporary use while the patient s heart is allowed to rest, heal and recover. The AB5000 console is capable of controlling both the BVS and the AB5000 blood pumps and ventricles and a patient can be switched from a BVS VAD to an AB5000 VAD without surgery due to the compatible design of the cannulae used with the products.

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Our AbioCor is a battery-powered totally implantable replacement heart system, designed to operate without wires or any other material penetrating the patient s skin. We applied for and have received initial FDA market approval for the AbioCor to treat a defined subset of irreversible end-stage heart failure patients under a Humanitarian Device Exemption (HDE). The FDA decision was completed after extensive review of the clinical testing of the AbioCor, beginning with clinical trials that started in 2001 under an Investigational Device Exemption. As a result of this approval, the AbioCor will be available to a limited patient population in the United States, with no more than 4,000 patients receiving the technology each year.

Through our Germany operations, we manufacture, sell and support our Impella products, which include the world s smallest micro blood pumps. These high-performance, minimally invasive pumps feature integrated motors and sensors for use in interventional cardiology and heart surgery. Our Recover System pumps are designed to provide ventricle support for patients requiring hemodynamic stabilization, or suffering from reduced cardiac output and can potentially aid in recovering the hearts of patients suffering from acute myocardial infarction (AMI or Heart Attack). Currently several of the Impella Recover devices, including the 5.0 catheter-based circulatory support system, the 2.5 minimally invasive ventricular assist device, the LD left ventricular unloading catheter, and the RD right ventricular unloading catheter, have the CE mark and we market each of these devices throughout Europe. We intend to seek FDA approval to sell the Recover System blood pumps in the United States. We also intend to seek regulatory approval in other countries in order to address wider market opportunities for circulatory care.

In May 2006, we received FDA approval to commence our pilot clinical trial immediately in the United States for the Impella 2.5 ventricular assist device. The indication for use is as a left ventricular assist device providing support for up to five days during high-risk angioplasty. Angioplasty, performed in the catheterization lab, is the insertion of a catheter-guided balloon that is used to open a narrowed coronary artery. A stent (a wire-mesh tube that expands to hold the artery open) is usually placed at the narrowed section. An angioplasty is considered high-risk if the patient has poor cardiac function and the procedure is performed on an unprotected left main coronary artery lesion or the last patent coronary conduit. It is estimated that 5 to 10 percent of the approximately one million annual U.S. angioplasty cases are high-risk.

In June 2006, we received conditional FDA approval to commence immediately a pilot clinical trial in the United States for the Impella 5.0. This system is already available in Europe, where it has been used to treat more than 250 patients in need of cardiac support resulting from postcardiotomy cardiogenic shock, myocarditis, low cardiac output post-acute myocardial infarction, post-coronary intervention procedures, or as a bridge to other circulatory support devices, including our AB5000 and BVS 5000 Circulatory Support Systems.

We are a Delaware corporation, incorporated in 1981, with our principal executive offices located at 22 Cherry Hill Drive, Danvers, Massachusetts 01923. We commenced operations in 1981. Our telephone number is (978) 777-5410 and our web address is www.abiomed.com. We make available free of charge through the Investor section of our website, all reports filed with the Securities and Exchange Commission. We include our website address in this prospectus only as an inactive textual reference and do not intend it to be an active link to our website.

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RISK FACTORS

Investing in our common stock involves a high degree of risk. In addition to the risks detailed below, please see the risk factors described under the heading Risk Factors in our annual report on Form 10-K for the fiscal year ended March 31, 2006, which is incorporated by reference in this prospectus.

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 prospectus, including our consolidated financial statements and the related notes. The risks and uncertainties we have described are not the only ones we face. Additional risks and uncertainties of which we are unaware or that we currently deem immaterial may also adversely affect our business operations. If any of these risks materializes, the trading price of our common stock could fall and you might 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 on such forward-looking statements discussed elsewhere in this prospectus.

Risks Related to a Common Stock Offering

Management has broad discretion over the use of proceeds of an offering pursuant to this prospectus and could apply the proceeds to uses that do not increase our market value or improve our operating results.

Management has broad discretion over the use of proceeds of an offering pursuant to this prospectus including the use of proceeds for making acquisitions of assets, businesses or securities, share repurchases, repayment of debt, capital expenditures, and for working capital. We have not reserved or allocated the net proceeds for any specific purpose and our management will have considerable discretion in applying the net proceeds. We may use the remaining net proceeds for purposes that do not result in any increase in our market value or improve our results of operations.

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 August 30, 2005 to August 30, 2006 the price of our stock ranged from a high of $14.62 per share to a low of $7.81 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;

the status of regulatory approvals for our products;

the introduction of new products by us or our competitors;

acquisitions or strategic alliances involving us or our competitors;

changes in accounting principles;

changes in estimates of our performance or recommendations by securities analysts;

the hiring or departure of key personnel

future sales of shares of common stock in the public market; and

market conditions in the industry and the economy as a whole.

In addition, the stock market, at times, experiences significant price and volume fluctuations. 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

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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 material amounts of common stock could encourage short sales by third parties and depress the price of our common stock. As a result, you may lose part of your investment.

The downward pressure on our stock price caused by the sale of a significant number of shares of common stock pursuant to this prospectus could cause our stock price to decline, thus allowing short sellers of our stock an opportunity to take advantage of any decrease in the value of our stock. The presence of short sellers in our common stock may further depress the price of our common stock.

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

The Securities and Exchange Commission, or SEC, encourages companies to disclose forward-looking information so that investors can better understand a company s future prospects and make informed investment decisions. This prospectus contains such forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements may be made directly in this prospectus, and they may also be made a part of this prospectus by reference to other documents filed with the SEC, which is known as incorporation by reference.

Words such as may, anticipate, estimate, expects, projects, intends, plans, believes and words and terms of similar substance used in with any discussion of future operating or financial performance, identify forward-looking statements. All forward-looking statements are management s present expectations of future events and are subject to a number of risks and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. These risks include, but are not limited to, the risks and uncertainties set forth in Risk Factors, beginning on page 3 of this prospectus, as well as those set forth in our other SEC filings incorporated by reference herein.

In light of these assumptions, risks and uncertainties, the results and events discussed in the forward-looking statements contained in this prospectus or in any document incorporated by reference might not occur. You are cautioned not to place undue reliance on the forward-looking statements, which speak only as of the date of this prospectus or the date of the document incorporated by reference in this prospectus. We are not under any obligation, and we expressly disclaim any obligation, to update or alter any forward-looking statements, whether as a result of new information, future events, or otherwise. All subsequent forward-looking statements attributable to us or to any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section.

HOW WE INTEND TO USE THE PROCEEDS

We intend to use the net proceeds from any sale of the securities for building our global distribution, investing in research and development to continue to broaden our portfolio of products across the clinical spectrum of circulatory care, and for general corporate purposes, including, without limitation, making acquisitions of assets, businesses, or securities, share repurchases, repayment of debt, capital expenditures, and for working capital. When particular securities are offered, the prospectus supplement relating thereto will set forth our intended use of the net proceeds we receive from the sale of the securities. Pending the application of the net proceeds, we intend to invest our net proceeds in short-term, investment-grade securities, interest-bearing securities, or guaranteed obligations of the United States or its agencies.

Based upon our historical and anticipated future growth and our financial needs, we may engage in additional financings of a character and amount that we determine as the need arises.

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DESCRIPTION OF CAPITAL STOCK

By this prospectus, we may offer, from time to time, in one or more offerings, up to 7,500,000 shares of our common stock. Our authorized capital stock consists of 100,000,000 shares of common stock, par value $.01 per share, and 1,000,000 shares of preferred stock, par value $.01 per share, of which 25,000 have been designated Series A Junior Participating Preferred Stock. The following summary description of our capital stock is qualified by reference to our restated certificate of incorporation and restated by-laws which are incorporated by reference into this prospectus. As of September 19, 2006, there were 26,692,319 shares of common stock and no shares of preferred stock issued and outstanding.

Common Stock

Holders of our common stock are entitled to one vote per share for each share held of record on all matters submitted to a vote of our stockholders. Subject to preferences that may be applicable to the holders of outstanding preferred stock, if any, the holders of common stock are entitled to receive whatever lawful dividends the board of directors may declare. In the event of a liquidation, dissolution, or winding up of our affairs, whether voluntary or involuntary, and subject to the rights of the holders of outstanding preferred stock, if any, the holders of common stock will be entitled to receive pro rata all of our remaining assets available for distribution to our stockholders. Our common stock has no preemptive, redemption, conversion, or subscription rights. All outstanding shares of common stock are fully paid and non-assessable.

Class B Preferred Stock

Our board of directors is authorized, subject to any limitations prescribed by Delaware law, without further stockholder approval, to issue from time to time up to an aggregate of 1,000,000 shares of Class B preferred stock, in one or more series. Our board of directors is also authorized, subject to the limitations prescribed by Delaware law, to establish the number of shares to be included in each series and to fix the designations, preferences, rights and any qualifications, limitations or restrictions of the shares of any series, including the dividend rights, dividend rates, conversion rights, voting rights, redemption terms and prices, liquidation preferences and the number of shares constituting any series. Our board of directors is authorized to issue preferred stock with voting, conversion and other rights and preferences that could adversely affect the voting power or other rights of the holders of common stock.

Series A Junior Participating Preferred Stock

As of September 19, 2006, we had no shares of preferred stock outstanding. As of September 19, 2006, 25,000 shares of our Series A junior participating preferred stock were reserved for issuance upon exercise of our preferred share purchase rights. For a description of the rights, designations and preferences of our Series A junior participating preferred stock and our preferred stock purchase rights see The Rights Plan below.

Anti-Takeover Effects of Provisions of our Restated Certificate of Incorporation and Restated By-Laws and Delaware Law

Delaware Anti-Takeover Law

Provisions of Delaware law and our restated certificate of incorporation and restated by-laws could make it more difficult to acquire us by means of a tender offer, a proxy contest, open market purchases, removal of incumbent directors and otherwise. These provisions, summarized below, are expected to discourage types of coercive takeover practices and inadequate takeover bids and to encourage persons seeking to acquire control of us to first negotiate with us. We believe that the benefits of increased protection of our potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us outweigh the disadvantages of discouraging takeover or acquisition proposals because negotiation of these proposals could result in an improvement of their terms.

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We must comply with Section 203 of the Delaware General Corporation Law, an anti-takeover law. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a business combination with an interested stockholder for a period of three years following the date the person became an interested stockholder, unless the business combination or the transaction in which the person became an interested stockholder is approved in a prescribed manner. Generally, a business combination includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to an interested stockholder. An interested stockholder includes a person who, together with affiliates and associates, owns, or did own within three years before the determination of interested stockholder status, 15% or more of the corporation s voting stock. The existence of this provision generally will have an anti-takeover effect for transactions not approved in advance by the board of directors, including discouraging attempts that might result in a premium over the market price for the shares of common stock held by stockholders.

Our by-laws establish an advance notice procedure for stockholder proposals to be brought before an annual meeting of stockholders, including proposed nominations of candidates for election to our board of directors. These provisions may have the effect of deterring hostile takeovers or delaying changes in our control or management.

Classified Board of Directors

Our board of directors is divided into three classes designated as Class I, Class II and Class III, respectively. The term of one class of directors expires each year at our Annual Meeting of Stockholders. Each director also continues to serve as a director until his or her successor is duly elected and qualified. Designation of a classified board of directors is permitted under Section 141(d) of the General Corporation Law of the State of Delaware. Our restated certificate of incorporation and restated by-laws require us to have at least three directors but no more than 12. Each class shall consist, as nearly may be possible, of one third of the number of directors constituting the entire board of directors. The principal purposes for a classified board of directors are to promote continuity and stability in the Company s leadership and policies and to encourage any persons who might wish to acquire the Company to negotiate with its management rather than to attempt to effect certain types of business combinations without the approval of management or of a substantial portion of the Company s stockholders.

Undesignated Preferred Stock

The authorization of our undesignated preferred stock makes it possible for our board of directors to issue our preferred stock with voting or other rights or preferences that could impede the success of any attempt to change control of us. These and other provisions may have the effect of deferring hostile takeovers or delaying changes of control of our management.

The Rights Plan

Summary of the Rights Plan

In August 1997, we adopted a rights plan. Under the rights plan, we distributed one preferred stock purchase right as a dividend on each outstanding share of our common stock. The rights will expire on August 13, 2007, unless they are redeemed or exchanged before that time. Each right entitles the holder to purchase one one-thousandth of a share of our Series A junior participating preferred stock at a purchase price of $90.00 per right, subject to adjustment.

If any person or group becomes the beneficial owner of 15% or more of the shares of our common stock, except in a tender or exchange offer for all shares at a fair price as determined by the outside members of the board of directors, each right not owned by the 15% stockholder will entitle its holder to purchase that number of shares of our common stock which equals the exercise price of the right divided by one-half of the market price of our common stock at the date of the occurrence of the event. In addition, if we are involved in a merger or other business combination transaction with another entity in which we are not the surviving corporation or in

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which our common stock is changed or converted, or if we sell or transfer 50% or more of our assets or earning power to another entity, each right will entitle its holder to purchase a number of shares of common stock of the other entity that equals the exercise price of the right divided by one-half of the market price of that common stock at the date of the occurrence of the event.

The rights will not be exercisable until:

- ten days after the public announcement that a person or group has become an acquiring person by obtaining beneficial ownership of 15% or more of our outstanding common stock or, if earlier,
- ten business days (or a later date determined by our board of directors before any person or group becomes an acquiring person) after a person or group begins, or announces an intention to begin, a tender or exchange offer that, if completed, would result in that person or group becoming an acquiring person.

We generally will be entitled to redeem the rights at $.001 per right at any time until the tenth business day following public announcement that a 15% stock position has been acquired and in specified other circumstances. The terms of our rights plan may be amended by our board of directors without the consent of the holders of our rights. After a person or group becomes an acquiring person, our board of directors may not amend the agreement in a way that adversely affects holders of our rights.

The purpose of the rights plan is to protect our stockholders from coercive or otherwise unfair takeover tactics. In general terms, our rights agreement works by imposing a significant penalty upon any person or group that acquires 15% or more of all of our outstanding common stock, without the approval of our board of directors. The rights have anti-takeover effects. The rights should not interfere with any merger or other business combination approved by the board, since we may redeem the rights at $.001 per right.

Please note that the above description is only a summary of our rights plan, is not complete, and should be read together with our entire rights agreement, which has been publicly filed as an exhibit to our Form 8-A filed with the SEC on August 25, 1997, and is incorporated herein by reference.

Our Series A Junior Participating Preferred Shares

Each one one-thousandth of a share of our Series A junior participating preferred stock, if issued:

- will not be redeemable;
- will entitle holders to quarterly dividend payments of $.01 per share, or an amount equal to the dividend paid on one share of our common stock, whichever is greater;
- will entitle holders upon liquidation, dissolution or winding-up to receive, prior and in preference to the common stock and any additional junior ranking securities, an amount equal to the payment that would be made on one share of our common stock;
- will have the same voting power as one share of our common stock; and
- if shares of our common stock are exchanged via merger, consolidation or a similar transaction, will entitle holders to a per share payment equal to the payment made on one share of our common stock.

The value of one one-thousandth interest in a share of our Series A junior participating preferred stock purchasable upon exercise of each right should approximate the value of one share of our common stock.

Limitation of Liability

Our restated certificate of incorporation provides that no member of our board of directors shall be personally liable to us or to our stockholders for monetary damages for breach of fiduciary duty as a director,

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except that the limitation shall not eliminate or limit liability to the extent that the elimination or limitation of such liability is not permitted by the Delaware General Corporation Law as the same exists or may hereafter be amended.

Our restated certificate of incorporation further provides for the indemnification of our directors and officers to the fullest extent permitted by Section 145 of the Delaware General Corporation Law, including circumstances in which indemnification is otherwise discretionary. A principal effect of these provisions is to limit or eliminate in most situations the potential liability of our directors for monetary damages arising from breaches of their duty of care. These provisions may also shield directors from liability under federal and state securities laws.

Officers, directors or other persons controlling us may be entitled under these indemnification provisions to indemnification for liabilities arising under the Securities Act of 1933. We have been informed that in the opinion of the SEC, this indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

Stock Transfer Agent

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company.

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PLAN OF DISTRIBUTION

We may sell the securities from time to time in one or more transactions:

- to purchasers directly;
- to underwriters and through underwriting syndicates for public offering and sale by them;
- to and through agents;
- through dealers; or
- through a combination of any of the foregoing methods of sale.

We may also make direct sales through subscription rights distributed to our stockholders on a pro rata basis, which may or may not be transferable. In any distribution of subscription rights to stockholders, if all of the underlying common stock are not subscribed for, we may then sell the unsubscribed common stock directly to third parties or may engage the services of one or more underwriters, dealers or agents, including standby underwriters, to sell the unsubscribed common stock to third parties.

We may distribute the securities from time to time in one or more transactions at:

- a fixed price or prices, which may be changed;
- market prices prevailing at the time of sale;
- prices related to such prevailing market prices; or
- negotiated prices.

Any of the prices may represent a discount to prevailing market prices.

We may sell the securities directly to institutional investors or others. A prospectus supplement will describe the terms of any sale of the securities we are offering hereunder.

To Underwriters

The applicable prospectus supplement will name any underwriter involved in a sale of the securities. Underwriters may offer and sell common stock at a fixed price or prices, which may be changed, or from time to time at market prices or at negotiated prices. Underwriters may be deemed to have received compensation from us for sales of the securities in the form of underwriting discounts or commissions and may also receive commissions from purchasers of the securities for whom they may act as agent.

Underwriters may sell the securities to or through dealers, and such dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters and/or commissions (which may be changed from time to time) from the purchasers for whom they may act as agent.

Any underwritten offering may be on a best efforts or a firm commitment basis. If underwriters are used in the sale, the common stock acquired by the underwriters will be for their own account. The underwriters may resell the common stock in one or more transactions, including without limitation negotiated transactions, at a fixed public offering price or at a varying price determined at the time of sale. Unless otherwise provided in a prospectus supplement, the obligations of any underwriters to purchase the securities will be subject to certain conditions, and the underwriters will be obligated to purchase all of the securities if any are purchased, which is known as a firm commitment offering. Any public offering price and any discounts or concessions allowed, reallowed or paid to dealers may be changed from time to time. We may grant to the underwriters options to purchase additional securities to cover over-allotments, if any, at the public offering price with additional underwriting discounts and commissions, as may be set forth in the applicable prospectus supplements. If we grant any over-allotment option, the terms will be set forth in the applicable prospectus supplement.

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Until the distribution of the common stock is completed, rules of the SEC may limit the ability of any underwriters and selling group members to bid for and purchase the common stock. As an exception to these rules, underwriters are permitted to engage in some transactions that stabilize the price of the common stock. Such transactions consist of bids or purchases for the purpose of pegging, fixing or maintaining the price of the common stock.

If any underwriters create a short position in the common stock in an offering in which they sell more common stock than is set forth on the cover page of the applicable prospectus supplement, the underwriters may reduce that short position by purchasing the common stock in the open market.

The lead underwriters may also impose a penalty bid on other underwriters and selling group members participating in an offering. This means that if the lead underwriters purchase common stock in the open market to reduce the underwriters short position or to stabilize the price of the common stock, they may reclaim the amount of any selling concession from the underwriters and selling group members who sold those common stock as part of the offering.

In general, purchases of common stock for the purpose of stabilization or to reduce a short position could cause the price of the common stock to be higher than it might be in the absence of such purchases. The imposition of a penalty bid might also have an effect on the price of the common stock to the extent that it were to discourage resales of the common stock before the distribution is completed.

We do not make any representation or prediction as to the direction or magnitude of any effect that the transactions described above might have on the price of the common stock. In addition, we do not make any representation that underwriters will engage in such transactions or that such transactions, once commenced, will not be discontinued without notice at any time.

Through Agents and Dealers

We will name any agent involved in a sale of the securities, as well as any commissions payable by us to such agent, in a prospectus supplement. Unless we indicate differently in the prospectus supplement, any such agent will be acting on a reasonable efforts basis for the period of its appointment.

If we utilize a dealer in the sale of the securities, we may sell the shares of our common stock to the dealer, as principal. The dealer may then resell the securities to the public at varying prices to be determined by the dealer at the time of resale.

To comply with applicable state securities laws, the common stock offered by this prospectus will be sold, if necessary, in such jurisdictions only through registered or licensed brokers or dealers. In addition common stock may not be sold in some states unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Delayed Delivery Contracts

If we so specify in the applicable prospectus supplement, we will authorize underwriters, dealers, and agents to solicit offers by certain institutions to purchase the securities pursuant to contracts providing for payment and delivery on future dates. Such contracts will be subject to only those conditions set forth in the applicable prospectus supplement.

The underwriters, dealers, and agents will not be responsible for the validity or performance of the contracts. We will set forth in the prospectus supplement relating to the contracts the price to be paid for the securities, the commissions payable for solicitation of the contracts and the date in the future for delivery of the securities.

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General Information

Underwriters, dealers, and agents participating in a sale of the securities may be deemed to be underwriters as defined in the Securities Act of 1933, as amended, or Securities Act, and any discounts and commissions received by them and any profit realized by them on resale of the securities may be deemed to be underwriting discounts and commissions under the Securities Act. We may have agreements with underwriters, dealers, and agents to indemnify them against certain civil liabilities, including liabilities under the Securities Act, and to reimburse them for certain expenses.

Underwriters or agents and their associates may be customers of, engage in transactions with, or perform services for us or our affiliates in the ordinary course of business.

We may indemnify underwriters, dealers, or agents who participate in the distribution of securities against certain liabilities, including liabilities under the Securities Act, and may agree to contribute to payments that these underwriters, dealers, or agents may be required to make.

Our common stock is listed and traded on the NASDAQ Global Market.

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WHERE YOU CAN FIND MORE INFORMATION

Available Information

We file annual reports, quarterly reports, current reports, proxy statements and other information with the SEC. You may read and copy any of our SEC filings at the SEC s Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. You may call the SEC at 1-800-SEC-0330 for further information about the Public Reference Room. Our SEC filings are also available to the public on the SEC s web site at www.sec.gov.

Our principal internet address is www.abiomed.com. Information contained on our website is not incorporated by reference into this prospectus and, therefore, is not part of this prospectus or any accompanying prospectus supplement.

Information Incorporated by Reference

The SEC allows us to incorporate by reference information from some of our other SEC filings. This means that we can disclose information to you by referring you to those other filings, and the information incorporated by reference is considered to be part of this prospectus. In addition, some information that we file with the SEC after the date of this prospectus will automatically update, and in some cases supersede, the information contained or otherwise incorporated by reference in this prospectus. The following documents, which we filed with the Securities and Exchange Commission, are incorporated by reference in this registration statement:

(a) Our annual report on Form 10-K for the fiscal year ended March 31, 2006 (as filed on June 14, 2006);

(b) Our quarterly report on Form 10-Q for the fiscal quarter ended June 30, 2006 (as filed on August 9, 2006);

(c) Our current report on Form 8-K/A dated May 10, 2005 (as filed on July 27, 2005);

(d) Our current report on Form 8-K dated May 25, 2006 (as filed on May 25, 2006);

(e) Our current report on Form 8-K dated May 30, 2006 (as filed on June 1, 2006);

(f) Our current report on Form 8-K dated June 27, 2006 (as filed on June 28, 2006);

(g) Our current report on Form 8-K dated September 5, 2006 (as filed on September 5, 2006);

(h) Our current report on Form 8-K dated September 5, 2006 (as filed on September 8, 2006);

(i) Portions of our proxy statement on Schedule 14A filed with the SEC on July 10, 2006 that have been incorporated by reference into our annual report on Form 10-K; and

(j) The description of our common stock contained in our registration statement on Form 8-A filed with the SEC under Section 12 of the Securities Exchange Act of 1934, including any amendment or report filed for the purpose of updating such description.

Also incorporated by reference into this prospectus are all documents that we may file with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Exchange Act either (1) after the initial filing of this prospectus and before the date the registration statement is declared effective and

(2) after the date of this prospectus and before we stop offering the securities described in this prospectus. These documents include periodic reports, such as annual reports on Form 10-K, quarterly reports on Form 10-Q, and current reports on Form 8-K, as well as proxy statements. Pursuant to General Instruction B of Form 8-K, any information submitted under Item 2.02, Results of Operations and Financial Condition, or Item 7.01, Regulation FD Disclosure, of Form 8-K is not deemed to be filed for the purpose of Section 18 of the Exchange Act, and we are not subject to the liabilities of Section 18 with respect to information submitted under Item 2.02 or Item 7.01 of Form 8-K. We are not incorporating by reference any information submitted under Item 2.02 or Item 7.01 of Form 8-K into any filing under the

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Securities Act or the Exchange Act or into this prospectus. Any statement, contained herein or in a document incorporated or deemed to be incorporated by reference herein, shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement, contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein, modifies or supersedes such statement.

You may request copies of these filings, at no cost, by writing to or calling our Investor Relations department at:

ABIOMED, Inc.

22 Cherry Hill Drive

Danvers, Massachusetts 01923

Telephone: (978) 777-5410

This prospectus is part of a registration statement on Form S-3 that we filed with the SEC under the Securities Act. This prospectus does not contain all of the information contained in the registration statement. For further information about us and our securities, you should read the prospectus and the exhibits filed with the registration statement, as well as all prospectus supplements.

LEGAL MATTERS

Unless otherwise indicated in the prospectus supplement, the validity of the shares of common stock offered hereby will be passed upon for us by Foley Hoag LLP, Boston, Massachusetts.

EXPERTS

The financial statements included in this Prospectus and management s assessment of the effectiveness of internal control over financial reporting (which is included in Management s Report on Internal Control over Financial Reporting) incorporated in this Prospectus by reference to the Annual Report on Form 10-K of ABIOMED, Inc. for the year ended March 31, 2006 and the audited historical financial statements included in Exhibit 99.2 of ABIOMED, Inc. s Current Report on Form 8-K/A filed on July 27, 2005 have been so incorporated in reliance on the reports of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

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