ABIOMED INC Form 424B3 August 11, 2005

QuickLinks -- Click here to rapidly navigate through this document

Filed pursuant to Rule 424(b)(3) Registration No. 333-125926

PROSPECTUS

ABIOMED, Inc. 3,819,004 Shares of Common Stock

The shares of our common stock covered by this prospectus are being offered for sale by the selling stockholders identified in this prospectus on a delayed or continuous basis.

We will not receive any proceeds from the offering. We will bear the costs related to the registration of the shares covered by this prospectus, other than selling commissions.

The selling stockholders, or other pledgees, donees, transferees or other successors-in-interest of the selling stockholders, may offer and sell the shares from time to time in one or more transactions. Sales may be made on one or more exchanges, through the Nasdaq National Market, in the over-the-counter market or in privately negotiated transactions at prevailing market prices or at negotiated prices. The selling stockholders may sell the shares through broker-dealers or agents, who may receive compensation in the form of commissions, discounts or concessions.

Our common stock is traded on the Nasdaq National Market under the symbol "ABMD." The last reported sale price of our common stock on the Nasdaq National Market on August 1, 2005 was \$9.87 per share.

Investing in our common stock involves a high degree of risk. See "Risk Factors" beginning on page 2.

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 date of this prospectus is August 5, 2005

Table of Contents

	Page
SUMMARY	1
RISK FACTORS	2
SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS	2
USE OF PROCEEDS	3
SELLING STOCKHOLDERS	3
PLAN OF DISTRIBUTION	5
WHERE YOU CAN FIND MORE INFORMATION	7
INFORMATION INCORPORATED BY REFERENCE	7
LEGAL MATTERS	8
EXPERTS	8

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."

When used in this prospectus or in any supplement to this prospectus, the terms "ABIOMED," "we," "our" and "us" refer to ABIOMED, Inc. and its consolidated subsidiaries, unless otherwise specified. ABIOMED, the ABIOMED logo, BVS, ABIOCOR and ANGIOFLEX are our registered U.S. trademarks. ABIOFIT and AB5000 are trademarks of ABIOMED, Inc. This Report may also include trademarks of companies other than ABIOMED.

i

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 "shelf" registration statement that we filed with the SEC. Under this registration statement, the selling stockholders listed in the selling stockholder table included in this prospectus may from time to time offer up to 3,819,004 shares of our common stock owned by them, at prices and on terms to be determined at or prior to the time of sale. We will not receive any proceeds from the sale of common shares by the selling stockholders.

Upon receipt of notice from the selling stockholders, we will file any amendment or prospectus supplement that may be required in connection with any sale by a selling stockholder. You should carefully read both this prospectus and any applicable prospectus supplement, together with the additional information described under the heading "Where You Can Find More Information." If there is any inconsistency between the information in this prospectus and a prospectus supplement, you should rely on the information in that prospectus supplement.

About ABIOMED, Inc.

We are a leading developer, manufacturer and marketer of medical products designed safely and effectively to assist, recover or replace the pumping function of the failing heart. Our BVS 5000 Biventricular Support System is the most widely used advanced heart assist device for the treatment of all patients with failing but potentially recoverable hearts in the U.S. Our newer AB5000 Circulatory Support System incorporates a number of advanced features to facilitate patient mobility and transport and to better meet the needs of physicians and hospitals treating heart assist patients. The AB5000 is also designed to provide an adaptable common platform for a family of blood pumps which in the future, subject to FDA approval, will be able to support a broader population of patients for longer periods of time. Our AbioCor Implantable Replacement Heart, the world's first battery-powered implantable replacement heart system, was the subject of an initial clinical trial under an investigational device exemption from the FDA. The AbioCor has not been approved for commercial distribution, and is not available for use or sale outside of the initial clinical trial. The AbioCor, the development of which follows decades of fundamental and applied research, development and testing, is intended to extend life and provide an improved quality of life for end-stage acute and chronic heart failure patients. Another area of focused effort involves adaptation and development of the AbioCor II Heart, based on technology acquired in 2000 from The Pennsylvania State University. The AbioCor II Heart has a drive mechanism that is different than the AbioCor design, and is the only implantable heart system other than the AbioCor to survive the rigor of the replacement heart development program funded by the U.S. National Heart Lung and Blood Institute. We are also engaged in significant research and development related to other devices to assist, recover or replace the pumping function of the heart and we continue to investigate enhancements to our exiting product line in order to serve more patients who require mechanical heart assistance.

In May 2005, we completed our acquisition of Impella CardioSystems AG (Impella), located in Aachen, Germany. Impella manufactures, sells and supports the world's smallest, minimally invasive, high performance micro blood pumps with integrated motors and sensors for use in interventional

1

cardiology and heart surgery. Impella has CE marks for each of its devices and currently markets them throughout Europe.

We are a Delaware corporation 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 Relations section of our web site all reports filed with the Securities and Exchange Commission. We include our web site address in this Registration Statement on Form S-3 only as an inactive textual reference and do not intend it to be an active link to our web site.

RISK FACTORS

Investing in our common stock involves a high degree of risk. Please see the risk factors described under the heading "Risk Factors" in our annual report on Form 10-K/A for the fiscal year ended March 31, 2005, 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. 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.

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 connection 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 2 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.

USE OF PROCEEDS

We will not receive any proceeds from the sale by the selling stockholders of the securities offered by this prospectus.

SELLING STOCKHOLDERS

The selling stockholders acquired the shares covered by this prospectus from us in connection with our acquisition of Impella CardioSystems AG. The shares are subject to transfer restrictions set forth in a registration rights and stock restriction agreement dated May 10, 2005 between us and the selling stockholders. The following table sets forth information with respect to the beneficial ownership of our common stock by the selling stockholders as of August 1, 2005 and upon completion of the sale of all the shares being registered. However, this does not necessarily mean that any of the selling stockholders will sell any or all of the shares being registered. For purposes of this table, we have assumed that the selling stockholders will sell all of the shares being offered by this prospectus.

For purposes of the following table, beneficial ownership is determined in accordance with rules promulgated by the SEC. Under the rules, shares of our common stock issuable under options that are currently exercisable or exercisable within 60 days after August 1, 2005, are deemed outstanding and are included in the number of shares beneficially owned by a person or entity named in the table and are used to compute the percentage ownership of that person or entity. These shares are not, however, deemed outstanding for computing the percentage ownership of any other person or entity. The inclusion of shares listed as beneficially owned does not constitute an admission of beneficial ownership. We have calculated the percentage beneficially owned based upon 26,204,765 shares of common stock outstanding as of August 1, 2005.

	Shares beneficially owned before offering**					Shares to be beneficially owned after offering**			
	Outstanding	Right to acquire	Total	Percent	Number of shares to be offered	Outstanding	Right to acquire Total	Percent	
Oxford Bioscience									
Partnership IV Limited									
Partnership(1).	927,119		927,119	3.54%	878,796	48,323	48,323	*	
ABN Amro Participaties									
B.V.(2)	793,667		793,667	3.03%	752,300	41,367	41,367	*	
Medica II Investments									
(International) LP(3)(4)	628,705		628,705	2.40%	595,936	32,769	32,769	*	
Giza GE Venture Fund III									
L.P.(5)	287,677		287,677	1.10%	272,683	14,994	14,994	*	
Medica II Investments (Israel)									
L.P.(3)(4)	192,999		192,999	*	182,940	10,059	10,059	*	
Rolf Kaese(6)	128,748		128,748	*	122,038	6,710	6,710	*	
Thorsten Siess(7)	128,748		128,748	*	122,038	6,710	6,710	*	
Richard Geoffrion(8)	126,135		126,135	*	119,561	6,574	6,574	*	
Arthur Pergament	111,106		111,106	*	105,315	5,791	5,791	*	
Medica II Investments (P.F.)									
(Israel) L.P.(3)(4)	93,737		93,737	*	88,852	4,885	4,885	*	
Martin Leon	86,270		86,270	*	81,774	4,496	4,496	*	
Paul Spence(9)	62,464		62,464	*	59,209	3,255	3,255	*	
Giza Alpinvest Venture Fund									
III L.P.(5)	60,775		60,775	*	57,608	3,167	3,167	*	
Mark Maguire(9)	58,035		58,035	*	55,011	3,024	3,024	*	
Daniel Burkhoff	58,035		58,035	*	55,011	3,024	3,024	*	
Giza Venture Fund III L.P.(5)	49,525		49,525	*	46,944	2,581	2,581	*	
Donald Baim	29,015		29,015	*	27,503	1,512	1,512	*	
Paul Teirstein	29,015		29,015	*	27,503	1,512	1,512	*	
Peter Fitzgerald(10)	29,015		29,015	*	27,503	1,512	1,512	*	
Eberhard Grube	29,012		29,012	*	27,500	1,512	1,512	*	

The Estate of Dr. Helmut							
Reul	24,361	24,361	*	23,092	1,269	1,269	*
Gunter Rau	16,241	16,241	*	15,395	846	846	*
Giza Executive Venture Fund							
III L.P.(5)	15,166	15,166	*	14,376	790	790	*
Christoph Nix(11)	11,984	11,984	*	11,360	624	624	*
Giza Gmulot Venture Fund III							
L.P.(5)	10,144	10,144	*	9,616	528	528	*
Guido Derjung(11)	9,454	9,454	*	8,962	492	492	*
Sebastian Schwandter(11)	9,454	9,454	*	8,962	492	492	*
mRNA Fund II L.P.	9,304	9,304	*	8,820	484	484	*
Dirk Michels(11)	6,827	6,827	*	6,472	355	355	*
Paolo Cremascoli	6,246	6,246	*	5,921	325	325	*
Accelerated Technologies,							
Inc(9)	3	3	*	3			*
Total	4,028,986	4,028,986	15.38%	3,819,004	209,982	209,982	*

Less than one percent.

- The shares beneficially owned before and after the offering include each selling stockholder's whole share, pro rata interest in 210,000 shares of our common stock that have been issued in escrow for the benefit of the selling stockholders, in accordance with the terms of our acquisition of Impella CardioSystems AG.
- ORP Management IV LP is the general partner of Oxford Bioscience Partners IV LP and mRNA Fund II L.P. Jeffrey Barnes, the general partner of ORP Management IV LP was a member of the Board of Directors of Impella CarioSystems AG prior to our acquisition of Impella on May 10, 2005. Collectively, Oxford Bioscience Partners IV LP and mRNA Fund II L.P. beneficially own 3.57% of our outstanding shares prior to the offering.
- (2)
 Martin van Osch, an employee of ABN AMRO Bank NV, was a member of the Supervisory Board of Impella Cardiosystems AG prior to our acquisition of Impella on May 10, 2005.
- (3)
 Collectively, Medica II Investments (International) LP, Medica II Investments (Israel) L.P. and Medica II Investments (P.F) (Israel) L.P. beneficially own 3.49% of our outstanding shares prior to the offering.
- (4)
 Medica II Investments (International) LP, Medica II Investments (Israel) L.P. and Medica II Investments (P.F.)(Israel) L.P. are controlled by Yuval Binur, who was a member of the Supervisory Board of Impella CardioSystems AG prior to our acquisition of Impella on May 10, 2005.
- (5)
 Giza Alpinvest Venture Fund III L.P, Giza Executive Venture Fund III L.P., Giza GE Venture Fund III L.P., Giza Gmulot Venture Fund III L.P. and Giza Venture Fund III L.P. all have the same managing directors. Combined, these entities beneficially own approximately 1.62% of our outstanding shares prior to the offering.
- (6)
 Served as the Chief Executive Officer of Impella CardioSystems AG prior to our acquisition of Impella on May 10, 2005.
- (7)
 Served as Chief Technology Officer of Impella CardioSystems AG prior to our acquisition of Impella on May 10, 2005 and continues to be employed by Impella.
- (8)
 Served as Chairman of the Supervisory Board of Impella CardioSystems AG prior to our acquisition of Impella on May 10, 2005.
- (9)
 Served as a consultant to Impella CardioSystems AG prior to our acquisition of Impella on May 10, 2005 and may continue to do consulting work for Impella in the future.
- (10)

 It is anticipated that the shares held beneficially by Mr. Fitzgerald will be transferred to Fitz Partners, a California partnership of which Mr. Fitzgerald has sole beneficial ownership.
- (11) Served as an employee of Impella CardioSystems AG prior to our acquisition of Impella on May 10, 2005 and continues to be employed by Impella.

PLAN OF DISTRIBUTION

We are registering the shares covered by this prospectus on behalf of the selling stockholders. All costs, expenses and fees connected with the registration of these shares will be borne by us. Any brokerage commissions and similar expenses connected with selling the shares will be borne by the selling stockholders. The selling stockholders may offer and sell the shares covered by this prospectus from time to time in one or more transactions. The term "selling stockholder" includes pledgees, donees, transferees and other successors-in-interest who may acquire shares through a pledge, gift, partnership distribution or other non-sale related transfer from the selling stockholders. The selling stockholders will act independently of the Company in making decisions with respect to the timing, manner and size of each sale and they may sell shares on one or more exchanges, through the Nasdaq National Market, in the over-the-counter market or in privately negotiated transactions at prevailing market prices at the time of sale, at fixed prices, at varying prices determined at the time of the sale or at negotiated prices. These transactions include:

ordinary brokerage transactions and transactions in which the broker solicits purchasers;

purchases by a broker-dealer as principal and resale by the broker-dealer for its own account pursuant to this prospectus;

exchange or over-the-counter distributions in accordance with the rules of the exchange or the Nasdaq National Market;

block trades in which the broker-dealer attempts to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;

a combination of any such method of sale; and

any other method permitted pursuant to applicable law.

In connection with distributions of the shares or otherwise, the selling stockholders may:

sell the shares short and redeliver the shares to close out short positions;

enter into option or other transactions with broker-dealers or other financial institutions which require the delivery to them of shares covered by this prospectus, which they may in turn resell;

enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the shares in the course of hedging the positions they assume; and

pledge shares to broker-dealers or other financial institutions, which, upon a default, they may in turn resell.

The selling stockholders may also sell any shares under Rule 144 rather than with this prospectus if the sale meets the requirements of that rule.

In effecting sales, the selling stockholders may engage broker-dealers or agents, who may in turn arrange for other broker-dealers to participate. Broker-dealers or agents may receive commissions, discounts or concessions from the selling stockholders and/or from the purchasers of shares for whom the broker-dealers may act as agents or to whom they sell as principal, or both. The compensation to a particular broker-dealer may be in excess of customary commissions. To our knowledge, there is currently no plan, arrangment or understanding between any selling stockholder and any broker-dealer or agent regarding the sale of any shares by the selling stockholders.

The selling stockholders, any broker-dealers or agents and any participating broker-dealers that act in connection with the sale of the shares covered by this prospectus may be "underwriters" under the Securities Act with respect to those shares and will be subject to the prospectus

delivery requirements of that act. Any profit that the selling stockholders realize, and any compensation that any broker-

dealer or agent may receive in connection with any sale, including any profit realized on resale of shares acquired as principal, may constitute underwriting discounts and commissions. If the selling stockholders are deemed to be underwriters, the selling stockholders may be subject to certain liabilities under statutes including, but not limited to, Section 11, 12 and 17 of the Securities Act and Section 10(b) and Rule 10b-5 under the Exchange Act.

The securities laws of some states may require the selling stockholders to sell the shares in those states only through registered or licensed brokers or dealers. These laws may also require that we register or qualify the shares for sale in those states unless an exemption from registration and qualification is available and the selling stockholders and we comply with that exemption. In addition, the anti-manipulation rules of Regulation M under the Securities Exchange Act of 1934 may apply to sales of shares in the market and to the activities of the selling stockholders and their affiliates. Regulation M may restrict the ability of any person engaged in the distribution of the shares to engage in market-making activities with respect to the shares. All of the foregoing may affect the marketability of the shares and the ability of any person to engage in market-making activities with respect to the shares.

If the selling stockholder notifies us that he has entered into any material arrangement with a broker-dealer for the sale of shares through a block trade, special offering, exchange distribution, over-the-counter distribution or secondary distribution, or a purchase by a broker or dealer, we will file any necessary supplement to this prospectus to disclose:

the number of shares involved in the arrangement;

the terms of the arrangement, including the names of any underwriters, dealers or agents who purchase shares, as required;

the proposed selling price to the public;

any discount, commission or other underwriting compensation;

the place and time of delivery for the shares being sold;

any discount, commission or concession allowed, reallowed or paid to any dealers; and

In addition, if the selling stockholder notifies us that a donee, pledgee, transferee or other successor-in-interest of the selling stockholder intends to sell more than 500 shares, we will file a supplement to this prospectus.

The selling stockholders will pay any underwriting discounts and commissions, any expenses incurred by the selling stockholders for brokerage, accounting, tax or legal services, and any other expenses incurred by the selling stockholders in disposing of the shares. We will pay the expenses we have incurred in connection with preparing and filing the registration statement and this prospectus. The selling stockholders may indemnify any broker-dealer or agent that participates in transactions involving the sale of the shares against liabilities, including liabilities under the Securities Act.

Pursuant to the registration rights rights and stock restriction agreement filed as an exhibit to this registration statement, we and the selling stockholders will be indemnified by the other against certain liabilities, including certain liabilities under the Securities Act or, if the indemnity is unavailable, will be entitiled to contribution in connection with these liabilities.

Our common stock trades on the Nasdaq National Market under the symbol "ABMD."

any other material terms of the distribution of shares.

WHERE YOU CAN FIND MORE 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 450 Fifth Street, N.W., 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 http://www.sec.gov.

Our principal internet address is www.abiomed.com.

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/A for the fiscal year ended March 31, 2005 (as filed on June 17, 2005);
- (b) Our current report on Form 8-K dated April 20, 2005 (as filed on April 26, 2005);
- (c)
 Our current reports on Form 8-K and 8-K/A dated April 27, 2005 (as filed on May 3, 2005 and May 9, 2005, respectively);
- (d)
 Our current report on Form 8-K dated April 28, 2005 (as filed on May 5, 2005);
- (e)
 Our current reports on Form 8-K and 8-K/A dated May 10, 2005 (as filed on May 16, 2005 and July 27, 2005, respectively);
- (f)
 Our current report on Form 8-K dated June 10, 2005 (as filed on June 15, 2005);
- (g)
 Our current report on Form 8-K dated June 23, 2005 (as filed on June 30, 2005); and
- (h)
 The description of our common stock contained in our registration statement on Form 8-A filed with the Securities and Exchange Commission 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 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

The validity of the shares of common stock offered in this prospectus will be passed upon for us by Foley Hoag LLP, Boston, Massachusetts.

EXPERTS

The consolidated financial statements 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/A for the year ended March 31, 2005 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

The consolidated financial statements of Impella CardioSystems AG incorporated in this Prospectus by reference to our Current Report on Form 8-K/A filed on July 27, 2005 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

QuickLinks

Table of Contents

SUMMARY

About This Prospectus

About ABIOMED, Inc.

RISK FACTORS

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

USE OF PROCEEDS

SELLING STOCKHOLDERS

PLAN OF DISTRIBUTION

WHERE YOU CAN FIND MORE INFORMATION

INFORMATION INCORPORATED BY REFERENCE

LEGAL MATTERS

EXPERTS