

EDWARDS LIFESCIENCES CORP
Form 424B3
December 05, 2003

[QuickLinks](#) -- Click here to rapidly navigate through this document

Filed pursuant to Rule 424(b)(3)
Registration No. 333-107405

Prospectus

\$150,000,000

Edwards Lifesciences Corporation

3.875% Convertible Senior Debentures due 2033 and the Common Stock Issuable Upon Conversion of the Debentures

We issued \$150,000,000 principal amount of our 3.875% Convertible Senior Debentures due 2033 in a private offering in May 2003. This prospectus will be used by selling securityholders to resell the debentures and the common stock issuable upon conversion of the debentures. We will not receive any proceeds from these resales.

We will pay interest on the debentures on May 15 and November 15, of each year, beginning on November 15, 2003. Beginning with the six-month interest period commencing on May 15, 2008, we will pay contingent interest during a six-month interest period if the average trading price of a debenture is above a specified level as described in this prospectus.

Holders may convert their debentures into shares of our common stock only under the following circumstances and to the following extent:

holders may convert their debentures, in whole or in part, during any calendar quarter if the last reported sale price of our common stock for a specified period ending prior to that quarter exceeds a specified level as described in this prospectus;

holders may convert any of their debentures (and only those debentures) that have been called for redemption; or

holders may convert their debentures, in whole or in part, upon the occurrence of specified corporate transactions described in this prospectus.

Holders may convert their debentures into shares of our common stock initially at a conversion price of \$54.66 per share of common stock (equivalent to an initial conversion rate of approximately 18.2949 shares of common stock per \$1,000 principal amount of debentures). The conversion price is subject to adjustment from time to time as described in this prospectus.

For United States federal income tax purposes, the debentures constitute contingent payment debt instruments. You should read the discussion under "Certain United States federal income tax considerations" beginning on page 52.

The debentures will mature on May 15, 2033. We may redeem for cash all or part of the debentures, at any time and from time to time, on or after May 15, 2008 at a redemption price equal to 100% of the principal amount of the debentures to be redeemed, plus any accrued and

unpaid interest and contingent interest, if any, to, but excluding, the redemption date.

Holders of the debentures will have the right to require us to purchase all or a portion of their debentures at a price equal to 100% of the principal amount to be purchased, plus any accrued and unpaid interest and contingent interest, if any, to, but excluding, the purchase date, on May 15, 2008, May 15, 2013, and May 15, 2018 or if we undergo a Change in Control, as defined in this prospectus, prior to May 15, 2008. We will pay cash for all debentures so purchased on May 15, 2008. For any debentures purchased by us on May 15, 2013 or May 15, 2018 or upon a Change in Control, we may at our option choose to pay the purchase price for any such debentures in cash or in shares of our common stock or any combination thereof.

There is no public market for the debentures and we do not intend to apply for listing of the debentures on any securities exchange or for quotation of the debentures through any automated quotation system. The debentures currently trade in the Private Offerings, Resales and Trading through Automatic Linkages Market, commonly referred to as the PORTAL Market. However, once debentures are sold under this prospectus, those debentures will no longer trade on the PORTAL Market. Our common stock is listed on the New York Stock Exchange under the symbol "EW." The last reported sale price of our common stock on the New York Stock Exchange on December 4, 2003 was \$30.42 per share.

Investing in the debentures and the shares of common stock offered hereby involves risks. See "Risk factors" beginning on page 7 of this prospectus.

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 December 5, 2003.

You should rely only on the information contained or incorporated or deemed to be incorporated by reference in this prospectus. We have not authorized anyone to provide you with different information. Neither the debentures nor any shares of common stock issuable upon conversion of the debentures are being offered in any jurisdiction where the offer or sale is not permitted. The information contained in this prospectus speaks only as of the date of this prospectus and the information in the documents incorporated or deemed to be incorporated by reference in this prospectus speaks only as of the respective dates those documents were filed with the Securities and Exchange Commission (the "SEC").

Table of contents

	Page
Summary	1
Risk factors	7
Cautionary note regarding forward-looking statements and market data	19
Use of proceeds	20
Dividend policy	20
Ratio of earnings to fixed charges	21
Description of the debentures	21
Registration rights	44
Description of capital stock	47
Certain United States federal income tax considerations	52
Selling securityholders	58
Plan of distribution	62
Available information	64
Incorporation of documents by reference	65
Legal matters	65
Experts	65

This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been 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 "Available information" and "Incorporation of documents by reference."

Summary

This summary does not contain all of the information that may be important to you. You should read this entire prospectus and the documents incorporated and deemed to be incorporated by reference in this prospectus, including the financial statements and related notes, before making an investment decision. We sometimes refer to the offering being made by this prospectus as the "offering," we sometimes refer to the 3.875% convertible senior debentures due 2033 as the "debentures" and we sometimes refer to the persons who may offer or sell debentures or shares of common stock issued upon conversion of debentures pursuant to this prospectus as the "selling securityholders." Unless this prospectus indicates otherwise or the context otherwise requires, the terms "we," "our," "us" and "Edwards Lifesciences" refer to Edwards Lifesciences Corporation and its subsidiaries for periods on or after April 1, 2000 and to Baxter International Inc.'s CardioVascular Group for periods prior to April 1, 2000.

Edwards Lifesciences Corporation

Overview. We manufacture and sell products and technologies designed to treat advanced cardiovascular disease. We focus on providing products and technologies to address four main cardiovascular disease states: heart valve disease; coronary artery disease; peripheral vascular disease; and congestive heart failure. Our products and technologies that treat cardiovascular disease are categorized into the following five main areas:

Cardiac surgery. Our cardiac surgery portfolio is comprised primarily of products relating to heart valve therapy, transmyocardial revascularization, and cannulation used during open-heart surgery. We manufacture and sell tissue heart valves and repair products used to replace or repair a patient's diseased or defective heart valve.

Critical care. We manufacture and sell hemodynamic monitoring systems that are used to measure a patient's heart function in surgical and intensive care settings. Hemodynamic monitoring enables a clinician to balance the oxygen supply and demand of a critically ill patient and plays an important role in ensuring that the heart function of patients who have pre-existing cardiovascular conditions or other critical illnesses is optimized before they undergo a surgical procedure.

Vascular. We manufacture and sell a variety of products used to treat occlusive peripheral vascular disease, including a line of balloon-tipped, catheter-based products, surgical clips and inserts, angiography equipment, artificial implantable grafts, and an endovascular system used to treat abdominal aortic aneurysms less invasively than conventional surgical procedures.

Perfusion. We develop, manufacture and distribute, in regions outside the United States and Western Europe, a line of disposable products used during cardiopulmonary bypass procedures, including oxygenators, blood containers, filters and related devices.

Other distributed products. Other distributed products include sales of intra-aortic balloon pumps, pacemakers, angioplasty systems and other products sold through our distribution network in Japan, and miscellaneous pharmaceutical products sold in the United States.

Our principal executive offices are located at One Edwards Way, Irvine, California 92614. The telephone number at that address is (949) 250-2500.

Corporate background. Edwards Lifesciences was incorporated in Delaware on September 10, 1999 as a wholly owned subsidiary of Baxter International Inc. to assume the business and operations of Baxter's CardioVascular Group. Effective March 31, 2000, the business, assets and liabilities of Baxter's CardioVascular Group were transferred to Edwards Lifesciences and its subsidiaries and 100% of the common stock of Edwards Lifesciences was distributed to the stockholders of Baxter in a tax-free spin-off, which we sometimes refer to in this prospectus as the "Distribution." Since that time, Edwards Lifesciences has operated as an independent company.

The offering

Issuer	Edwards Lifesciences Corporation, a Delaware corporation.
Securities Offered	\$150 million aggregate principal amount of 3.875% Convertible Senior Debentures due 2033 and shares of our common stock issuable upon conversion of the debentures.
Maturity	May 15, 2033.
Interest	We will pay interest on the debentures semi-annually in arrears at an annual rate of 3.875%. The interest payment dates for the debentures are May 15 and November 15 of each year, commencing November 15, 2003.
Contingent Interest	Beginning with the six-month interest period commencing on May 15, 2008, we will pay contingent interest during a six-month interest period if the average trading price, as defined herein, of a debenture for the five trading days ending on and including the third trading day immediately preceding the first day of such six-month interest period equals or exceeds 120% of the principal amount of such debenture. The contingent interest payable per \$1,000 principal amount of a debenture in respect of any six-month interest period in which contingent interest is payable will accrue at the rate of 0.25% per six-month period of the average trading price per \$1,000 principal amount of such debenture for the applicable five trading day reference period ending on and including the third trading day immediately preceding the first day of such six-month interest period. For more information about contingent interest, see "Description of debentures Contingent interest."
Ranking	The debentures are our unsubordinated obligations and are not secured by any collateral or guaranteed by any of our subsidiaries. Your right to payment under the debentures is:
	effectively subordinated to the rights of our secured creditors, if any, to the extent of their security interests in our assets;
	equal with the rights of our creditors under our other unsecured, unsubordinated debt;
	senior to the rights of our creditors under any indebtedness we may issue in the future that is expressly subordinated to the debentures; and

2

effectively subordinated to all existing and future indebtedness and other liabilities of our subsidiaries. In that regard, our primary bank credit facilities require that borrowings under those facilities be guaranteed by domestic subsidiaries whose aggregate net revenues and aggregate net tangible assets equal or exceed 95% of our consolidated net revenues and consolidated net tangible assets.

At September 30, 2003, our consolidated subsidiaries had approximately \$271.7 million of outstanding indebtedness and other liabilities, excluding indebtedness and other liabilities owed to us or to other subsidiaries. See "Risk factors Risks related to the securities The debentures are effectively subordinated to the liabilities of our

subsidiaries."

Conversion Rights

Holders may convert their debentures into shares of our common stock only under the following circumstances and to the following extent:

holders may convert their debentures, in whole or in part, during any calendar quarter (beginning with the quarter ending September 30, 2003) if, as of the last day of the preceding calendar quarter, the last reported sale price of our common stock on at least 20 trading days (whether or not consecutive) in the period of 30 consecutive trading days ending on the last trading day of such immediately preceding calendar quarter exceeds 120% of the applicable conversion price, as defined below, on the last trading day of such immediately preceding calendar quarter;

holders may convert any of their debentures (and only those debentures) that have been called for redemption; or

holders may convert their debentures, in whole or in part, upon the occurrence of specified corporate transactions described under "Description of the debentures Conversion rights Conversion upon specified corporate transactions."

Holders may convert their debentures into shares of our common stock initially at a conversion price, subject to adjustment as set forth herein, of \$54.66 per share of our common stock. This represents an initial conversion rate of approximately 18.2949 shares of our common stock per \$1,000 principal amount of debentures. As described in this prospectus, the conversion price may be adjusted for certain reasons, but it will not be adjusted for accrued and unpaid interest or contingent interest, if any. The conversion price, as it may be so adjusted and as in effect at any given time, is sometimes referred to in this prospectus as the "applicable conversion price." See "Description of the debentures Conversion price adjustments." You will not receive any cash payment representing accrued and unpaid interest or contingent interest, if any, upon conversion of a debenture.

3

Optional Redemption

We may, at our option, redeem for cash all or part of the debentures, at any time and from time to time, on or after May 15, 2008, for a price equal to 100% of the principal amount of the debentures to be redeemed, plus any accrued and unpaid interest and contingent interest, if any, to, but excluding, the redemption date.

Purchase of Debentures by Us at the Option of the Holder

You have the right to require us to purchase all or a portion of your debentures on May 15, 2008, May 15, 2013 and May 15, 2018 (each, a "purchase date"). In each case, the purchase price payable will be equal to 100% of the principal amount of the debentures to be purchased plus any accrued and unpaid interest and contingent interest, if any, to, but excluding, the purchase date. Any debentures we purchase on May 15, 2008 will be paid for in cash. For any debentures purchased by us on May 15, 2013 or May 15, 2018, we may, at our option, pay the purchase price in cash or shares of our common stock (valued using the method set forth in "Description of the debentures Purchase of debentures by us at the option of the holder") or a combination of cash and shares of our common stock (valued using the method set forth in "Description of the

debentures Purchase of debentures by us at the option of the holder"), provided that we will pay accrued and unpaid interest, if any, and contingent interest, if any, in cash.

Purchase of Debentures by Us at Option of Holder upon Change in Control

If we undergo a Change in Control (as defined in this prospectus) prior to May 15, 2008, you will have the right, at your option, to require us to purchase all or any portion of your debentures. The Change in Control purchase price will be equal to 100% of the principal amount of the debentures to be purchased plus any accrued and unpaid interest and contingent interest, if any, to, but excluding, the Change in Control purchase date. We may, at our option, pay the Change in Control purchase price for such debentures in cash or shares of our common stock (valued using the method set forth in "Description of the debentures Purchase of debentures by us at the option of the holder") or a combination of cash and shares of our common stock (valued using the method set forth in "Description of the debentures Purchase of debentures by us at the option of the holder"), provided that we will pay accrued and unpaid interest, if any, and contingent interest, if any, in cash.

4

U.S. Federal Income Taxation

The debentures constitute contingent payment debt instruments for U.S. federal income tax purposes, and are subject to U.S. federal income tax regulations applicable to contingent payment debt instruments. Based on that treatment, holders of the debentures generally are required to accrue interest income on the debentures, which we refer to as tax original issue discount, in the manner described in this prospectus, regardless of whether the holder uses the cash or accrual method of tax accounting. You will be required, in general, to include tax original issue discount in income based on the rate at which we would issue a noncontingent, nonconvertible, fixed-rate debt instrument with terms and conditions otherwise similar to those of the debentures, which rate is expected to exceed the stated interest on the debentures. Accordingly, it is expected that you will be required to include interest in taxable income each year in excess of the accruals on the debentures for non-tax purposes (i.e., in excess of the stated semi-annual regular interest payments and any contingent interest payments) actually received in that year. Furthermore, upon a sale, purchase by us at your option, exchange, conversion or redemption of the debentures, you will recognize gain or loss equal to the difference between your amount realized and your adjusted tax basis in the debentures. The amount realized by you will include the fair market value of any common stock you receive. Any gain recognized on a sale, purchase by us at your option, exchange, conversion, or redemption of the debentures will be treated as ordinary interest income. You should consult your tax advisor as to the U.S. federal, state, local or other tax consequences, as well as any foreign tax consequences, of acquiring, owning, and disposing of the debentures. See "Certain United States federal income tax considerations."

Registration Rights

Pursuant to a registration rights agreement that we entered into in connection with the private offering of the debentures in May 2003, we have filed a shelf registration statement under the Securities Act of 1933 relating to the resale of the debentures and the common stock issuable upon conversion of the debentures. This prospectus constitutes a part of that registration statement. We filed the shelf registration statement solely to permit the resale of debentures issued in the May 2003 private offering and shares of common stock issued on conversion of those debentures, and investors who purchase debentures or shares of common stock from selling securityholders in this offering will not be entitled to any registration rights under the registration rights agreement. In

addition, under the registration rights agreement, selling securityholders may be required to discontinue the sale or other disposition of debentures and shares of common stock issued upon conversion of debentures pursuant to the shelf registration statement and to discontinue the use of this prospectus under certain circumstances specified in the registration rights agreement.

5

Use of Proceeds

We will not receive any of the proceeds from the sale by the selling securityholders of debentures or shares of common stock issued upon conversion of debentures.

Book-Entry Form

The debentures were issued in book-entry form and are represented by permanent global certificates without interest coupons, deposited with, or on behalf of, The Depository Trust Company, or "DTC," and registered in the name of a nominee of DTC. Beneficial interests in the debentures are shown on, and transfers are effected only through, records maintained by DTC or its nominee and any such interest may not be exchanged for certificated debentures, except in limited circumstances.

Trading

There is no public market for the debentures and we do not intend to apply for listing of the debentures on any securities exchange or for quotation of the debentures through any automated quotation system. The debentures currently trade in the PORTAL Market. However, once debentures are sold under this prospectus, those debentures will no longer trade on the PORTAL Market. No assurance can be given that a trading market for the debentures will exist or as to the liquidity of any trading market for the debentures that may exist. Our common stock is listed on the New York Stock Exchange under the symbol "EW."

6

Risk factors

You should carefully consider the risks described below, as well as other information contained in this prospectus and the documents incorporated or deemed to be incorporated by reference in this prospectus, before buying any of the debentures or shares of common stock offered by this prospectus. If any of the events described below occurs, our business, financial condition or results of operations could be materially harmed. In that case, the value of the debentures and the market price of our common stock could decline and you may lose part or all of your investment.

Risks related to our business

If we do not introduce new products in a timely manner, our products may become obsolete, and our operating results may suffer.

Edgar Filing: EDWARDS LIFESCIENCES CORP - Form 424B3

The cardiovascular products industry is characterized by rapid technological changes, frequent new product introductions and evolving industry standards. Without the timely introduction of new products and enhancements, our products will likely become technologically obsolete over time, in which case our revenue and operating results would suffer. Even if we are able to develop new technologies, these technologies may not be accepted quickly because of industry-specific factors, such as the need for regulatory clearance, unanticipated restrictions imposed on approved indications, entrenched patterns of clinical practice and uncertainty over third-party reimbursement.

Moreover, significant technical innovations generally will require a substantial investment before we can determine the commercial viability of these innovations. We may not have the financial resources necessary to fund these technical innovations. In addition, even if we are able to successfully develop enhancements or new generations of our products, these enhancements or new generations of products may not produce revenue in excess of the costs of development, and they may be quickly rendered obsolete by changing customer preferences or the introduction by our competitors of products embodying new technologies or features.

We may incur product liability losses that could adversely affect our operating results.

Our business exposes us to potential product liability risks that are inherent in the design, manufacture and marketing of medical devices. Our products are often used in surgical and intensive care settings with seriously ill patients. In addition, some of the medical devices manufactured and sold by us are designed to be implanted in the human body for long periods of time. We could be the subject of product liability suits alleging that component failures, manufacturing flaws, design defects or inadequate disclosure of product-related risks or product-related information could result in an unsafe condition or injury to patients. Product liability lawsuits and claims, safety alerts or product recalls in the future, regardless of their ultimate outcome, could have a material adverse effect on our business and reputation and on our ability to attract and retain customers.

We may experience supply interruptions that could harm our ability to manufacture products.

We use a diverse and broad range of raw and organic materials and other items in the design and manufacture of our products. Our non-implantable products are manufactured from man-made raw materials including resins, chemicals, electronics and metals. Our heart valve therapy products are manufactured from treated natural animal tissue and man-made materials. We purchase certain of the materials and components used in the manufacture of our products from external suppliers. In addition, we purchase certain supplies from single sources for reasons of quality assurance, cost-effectiveness or constraints resulting from regulatory requirements. We work closely with our suppliers to assure continuity of supply while maintaining high quality and reliability. Alternative supplier options are generally considered and identified, although we do not typically pursue regulatory qualification of alternative sources due to the strength of our existing supplier relationships and the time and expense associated with this regulatory process. Although a change in suppliers could require

7

significant effort or investment by us in circumstances where the items supplied are integral to the performance of our products or incorporate unique technology, management does not believe that the loss of any existing supply contract would have a material adverse effect on us.

In an effort to reduce potential product liability exposure, in the past certain suppliers have announced that they might limit or terminate sales of certain materials and parts to companies that manufacture implantable medical devices. In some cases, we have been required to indemnify suppliers for product liability expenses in order to continue to receive materials or parts. There can be no assurance that an indemnity from us will be satisfactory to these suppliers in the future. If we are unable to obtain these raw materials or there is a significant increase in the price of materials or components, our business could be harmed.

We may be required to recognize additional charges in connection with the write-down of some of our investments, the disposition of some of our businesses or for other reasons.

We have made investments in the equity instruments of other companies, and may make further such investments in the future. To the extent that the value of any such investment declines, we may be required to recognize charges to write down the value of that investment. For example, in September 2002, we recorded a \$67.4 million pretax charge related to the impairment of our investment in the preferred stock of World Heart Corporation. See "Disposition of assets and other non-recurring charges, net" under "Management's discussion and analysis of financial condition and results of operations" in our Annual Report on Form 10-K for the year ended December 31, 2002.

In the case of some of the companies in which we have invested, the value of their equity securities has declined since the time of our original investment. As a result, we may be required to recognize additional charges, which could be substantial, to write down our investments. At September 30, 2003, in addition to our investment in World Heart, which was \$8.4 million, we had approximately \$20.1 million of investments in equity instruments of other companies and had recorded unrealized losses on these investments of approximately \$4.0 million,

net of tax, on our balance sheet under "accumulated other comprehensive income."

As part of the ongoing evaluation of our various businesses and product lines, we from time to time identify businesses or product lines that are not performing at a level commensurate with the rest of our business. We may from time to time seek to dispose of these underperforming businesses or product lines, and may also seek to dispose of businesses or product lines from time to time for strategic or other business reasons. If we are unable to dispose of a business or product line on terms we consider acceptable, we may voluntarily terminate that business or cease providing that product. Any of these events may result in charges, which could be substantial and which could adversely affect our results of operations.

We have entered into interest rate swap agreements in connection with some of our indebtedness, and expect that we will continue to do so from time to time in the future. In the event that we elect to terminate a swap agreement prior to its maturity, we may be required to make cash payments to the counterparty and to recognize a charge in connection with that termination, which could adversely affect our results of operations.

We may not successfully identify and complete acquisitions or strategic alliances on favorable terms or achieve anticipated synergies relating to any acquisitions or alliances.

As part of our growth strategy, we regularly review potential acquisitions of complementary businesses, technologies, services or products and potential strategic alliances. We may be unable to find suitable acquisition candidates or appropriate partners with which to form partnerships or strategic alliances. Even if we identify appropriate acquisition or alliance candidates, we may be unable to complete such acquisitions or alliances on favorable terms, if at all. In addition, the process of integrating an acquired business, technology, service or product into our existing business and

operations may result in unforeseen operating difficulties and expenditures. Integration of an acquired company also may require significant management resources that otherwise would be available for ongoing development of our business. Moreover, we may not realize the anticipated benefits of any acquisition or strategic alliance, and such transactions may not generate anticipated financial results. In addition, we may be required to take charges or write-downs in connection with acquisitions we have made or may make in the future. Future acquisitions could also require issuances of equity securities, the incurrence of debt, contingent liabilities or amortization expenses related to other intangible assets, any of which could harm our business.

Our business is subject to economic, political and other risks associated with international sales and operations.

Because we sell our products in a number of foreign countries, our business is subject to risks associated with doing business internationally. Our net sales originating outside of the United States, as a percentage of total net sales, were 45.6% in 2002. We anticipate that sales from international operations will continue to represent a substantial portion of our total sales. In addition, many of our manufacturing facilities and suppliers are located outside of the United States. Our management expects to increase our sales efforts internationally, which could expose us to greater risks associated with international sales and operations. Accordingly, our future results could be harmed by a variety of factors, including:

changes in foreign medical reimbursement policies and programs;

unexpected changes in foreign regulatory requirements;

changes in foreign currency exchange rates;

changes in a specific country's or region's political or economic conditions, particularly in emerging regions;

trade protection measures and import or export licensing requirements;

potentially negative consequences from changes in tax laws;

difficulty in staffing and managing foreign operations;

changes in the international political situation;

differing labor regulations; and

differing protection of intellectual property.

We are subject to risks arising from currency exchange rate fluctuations.

We generated 45.6% of our 2002 net sales outside of the United States. Substantially all of our sales outside of the United States are denominated in local currencies. Measured in local currency, a substantial portion of our foreign generated sales were generated in Europe (and primarily denominated in the Euro) and in Japan. The United States dollar value of our foreign-generated sales varies with currency exchange rate fluctuations. Significant increases in the value of the United States dollar relative to the Euro or the Japanese yen, as well as other currencies, could have a material adverse effect on our results of operations. We have a hedging policy that attempts to manage currency exchange rate risks to an acceptable level based on management's judgment of the appropriate trade-off between risk, opportunity and cost; however, this hedging policy does not completely eliminate the effects of currency exchange rate fluctuations.

Fluctuations in our quarterly operating results may cause our stock price to decline.

Our sales and operating results may vary significantly from quarter to quarter. A high proportion of our costs are fixed, due in part to significant sales, research and development and manufacturing

costs. Thus, small declines in revenue could disproportionately affect operating results in a quarter, and the price of our common stock may fall, which could in turn adversely affect the value of the debentures. Other factors that could affect quarterly operating results include:

demand for and clinical acceptance of products;

the timing and execution of customer contracts, particularly large contracts that would materially affect our operating results in a given quarter;

the timing of sales of products;

changes in foreign currency exchange rates;

unanticipated delays or problems in introducing new products;

competitors' announcements of new products, services or technological innovations;

changes in our pricing policies or the pricing policies of our competitors;

Edgar Filing: EDWARDS LIFESCIENCES CORP - Form 424B3

increased expenses, whether related to sales and marketing, raw materials or supplies, product development or administration;

adverse changes in the level of economic activity in the United States and other major regions in which we do business;

costs related to possible acquisitions of technologies or businesses;

our ability to expand our operations; and

the amount and timing of expenditures related to expansion of our operations.

Our inability to protect our intellectual property could have a material adverse effect on our business.

Our success and competitive position are dependent, in part, upon our proprietary intellectual property. We rely on a combination of patents, trade secrets and nondisclosure agreements to protect our proprietary intellectual property, and will continue to do so. Although we seek to protect our proprietary rights through a variety of means, we cannot guarantee that the protective steps we have taken are adequate to protect these rights. We have instituted legal proceedings against other companies alleging infringement of patents owned by or licensed to us and we may find it necessary to institute similar proceedings in the future, and there can be no assurance that we will prevail in any current or future such proceedings. Moreover, patents issued to or licensed by us in the past or in the future may be challenged and held invalid or not infringed by third parties. Competitors may also challenge our patents. In addition, certain of our patents are due to expire within the next six years and we may be unsuccessful in our efforts to extend these patents through improvement patents, modifications or line extensions. The failure to maintain or to prevent infringement of our patents could have a material adverse effect on us.

We also rely on confidentiality agreements with certain employees, consultants and other parties to protect, in part, trade secrets and other proprietary information. These agreements could be breached and we may not have adequate remedies for any breach. In addition, others may independently develop substantially equivalent proprietary information or gain access to our trade secrets or proprietary information. We spend significant resources to monitor and enforce our intellectual property rights. However, we may not be able to detect infringement and may lose our competitive position in the industry. In addition, competitors may design around our technology or develop competing technologies. Intellectual property rights may also be unavailable or limited in some foreign countries, which could make it easier for competitors to capture increased market position.

10

Third parties may claim we are infringing their intellectual property, and we could suffer significant litigation or licensing expenses or be prevented from selling products.

During recent years, our competitors have been involved in substantial litigation regarding patent and other intellectual property rights in the medical device industry generally. In the future, we may be forced to defend ourselves against other claims and legal actions alleging infringement of the intellectual property rights of others. Because intellectual property litigation can be costly and time consuming, our intellectual property litigation expenses could be significant. Adverse determinations in any such litigation could subject us to significant liabilities to third parties, could require us to seek licenses from third parties and could, if such licenses are not available, prevent us from manufacturing, selling or using certain of our products, any one of which could have a material adverse effect on us.

Third parties could also obtain patents that may require us to either redesign our products or, if possible, negotiate licenses to conduct our business. If we are unable to redesign our products or obtain a license, we may have to exit a particular product offering.

We face intense competition and consolidation within our industry, and if we do not compete effectively, our business will be harmed.

The cardiovascular medical device industry is highly competitive. We compete with many companies, some of which have longer operating histories, better brand or name recognition and greater access to financial and other resources than us. Furthermore, the industry is characterized by intensive development efforts and rapidly advancing technology. Our present and future products could be rendered obsolete or uneconomical by technological advances by one or more of our current or future competitors or by alternative therapies, including drug therapies. See "Business Competition" in our Annual Report on Form 10-K for the year ended December 31, 2002. Our future success will

depend, in large part, on our ability to develop and acquire new products and technologies, anticipate technology advances and keep pace with other developers of cardiovascular therapies and technologies.

The medical device industry has been consolidating and as a result, transactions with customers are larger, more complex and tend to involve more long-term contracts. The enhanced purchasing power of these larger customers may also increase downward pressure on product pricing. In addition, many existing and potential domestic customers for our products have combined to form group purchasing organizations, or "GPOs." GPOs negotiate pricing arrangements with medical supply manufacturers and distributors and these negotiated prices are made available to members of GPOs. If we are not one of the providers selected by a GPO, we may be precluded from making sales to members of a GPO for several years. Even if we are one of the selected providers, we may be at a disadvantage relative to other selected providers that are able to offer volume discounts based on purchases of a broader range of medical equipment and supplies. Further, we may be required to commit to pricing that has a material adverse effect on our sales and profit margins, business, financial condition and results of operations.

We and our customers are subject to various governmental regulations, and we may incur significant expenses to comply with these regulations and develop our products to be compatible with these regulations.

The medical devices manufactured and marketed by us are subject to rigorous regulation by the U.S. Food and Drug Administration, or "FDA," and numerous other federal, state and foreign governmental authorities. The process of obtaining regulatory approvals to market a medical device, particularly from the FDA and certain foreign governmental authorities, can be costly and time consuming, and approvals might not be granted for future products on a timely basis, if at all. Delays in receipt of, or failure to obtain, approvals for future products could result in delayed realization of product revenues or in substantial additional costs, which could have material adverse effects on our business or results of operations. In addition, there can be no assurance that we will be or will continue to be in compliance with applicable FDA and other material regulatory requirements. If the FDA were

to conclude that we were not in compliance with applicable laws or regulations, it could institute proceedings to detain or seize our products, issue a recall, impose operating restrictions, enjoin future violations and assess civil penalties against us, our officers or our employees and could recommend criminal prosecution to the Department of Justice. Moreover, the FDA could proceed to ban, or request recall, repair, replacement or refund of the cost of, any device or product manufactured or distributed by us. Furthermore, both the FDA and foreign government regulators have become increasingly stringent, and we may be subject to more rigorous regulation by governmental authorities in the future.

We are subject to risks arising from concerns and/or regulatory actions relating to "mad cow disease."

Certain of our products, including pericardial tissue valve products, are manufactured using bovine tissue. Concerns relating to the potential transmission of bovine spongiform encephalopathy, or "BSE," commonly known as "mad cow disease," from cows to humans may result in reduced acceptance in certain geographies of bovine products. In addition, various governmental bodies are considering stricter regulation of such products. We obtain our bovine tissue only from sources within the United States, where strong control measures and surveillance programs exist and where no BSE cases have been reported. In addition, the bovine tissue used in our pericardial tissue valve products are from tissue types considered by global health and regulatory organizations to have shown no risk of infectibility. We have not experienced any adverse impact on our sales as a result of concerns regarding BSE, but no assurance can be given that such an impact may not occur in the future.

If third-party payors decline to reimburse our customers for our products or reduce reimbursement levels, our ability to profitably sell our products will be harmed.

We sell our products and technologies to hospitals, doctors and other health care providers, all of which receive reimbursement for the health care services provided to their patients from third-party payors, such as government programs (both domestic and international), private insurance plans and managed care programs. These third-party payors may deny reimbursement if they determine that a device used in a procedure was not used in accordance with cost-effective treatment methods as determined by such third-party payor, or was used for an unapproved indication. Third-party payors may also decline to reimburse for experimental procedures and devices. We believe that many of our existing and future products are cost-effective because they are intended to reduce overall health care costs over a long period of time. We cannot be certain whether these third-party payors will recognize these cost savings or will merely focus on the lower initial costs associated with competing therapies. If our products are not considered cost-effective by third-party payors, our customers may not be reimbursed for our products.

In addition, third-party payors are increasingly attempting to contain health care costs by limiting both coverage and the level of reimbursement for medical products and services. There can be no assurance that levels of reimbursement, if any, will not be decreased in the

future, or that future legislation, regulation or reimbursement policies of third-party payors will not otherwise adversely affect the demand for and price levels of our products. In Japan, customers are reimbursed for our products under a government-operated insurance system. Under this system, the Japanese government annually reviews the reimbursement levels for products. The Japanese government is also considering other reimbursement regulation. If the Japanese government decides to reduce reimbursement levels for our products, our product pricing may be adversely affected.

We are, or may be, subject to lawsuits related to products or services manufactured or performed by us.

We are, or may be, a party to, or may be otherwise responsible for, pending or threatened lawsuits or other claims related to products and services currently or formerly manufactured or performed, as applicable, by us or other matters. Such cases and claims may raise difficult and complex factual and legal issues and may be subject to many uncertainties and complexities, including, but not limited to,

12

the facts and circumstances of each particular case or claim, the jurisdiction in which each suit is brought, and differences in applicable law. Upon resolution of any pending legal matters or other claims, we may incur charges in excess of presently established reserves. While such a charge could have a material adverse impact on our net income or net cash flows in the period in which it is recorded or paid, management believes that no such charge relating to any currently pending lawsuit would have a material adverse effect on our consolidated financial position.

The market price for our common stock may be volatile.

The market price of our common stock could fluctuate substantially in the future in response to a number of factors, including the following:

quarterly variations in operating results, as discussed above under " Fluctuations in our quarterly operating results may cause our stock price to decline,"

announcements of innovations, new products, strategic developments or business combinations by us or our competitors,

changes in our expected operating expense levels or income and losses,

changes in financial estimates and recommendations of securities analysts,

the operating and securities price performance of other companies that investors may deem comparable to us, and

changes in general conditions in the economy, the financial markets, the domestic or international political situation, particularly in light of the conflict in Iraq, or the medical device industry.

In addition, in recent years the stock market has experienced extreme price and volume fluctuations. This volatility has had a significant effect on the market prices of securities issued by many companies for reasons unrelated to their operating performance. These broad market fluctuations may materially adversely affect our stock price, regardless of our operating results.

Our stockholder rights plan, charter and bylaws, as well as provisions of Delaware law and the change in control provisions of the debentures, could make it difficult for a third party to acquire our company.

We have a stockholder rights plan that may have the effect of discouraging unsolicited takeover proposals. The rights issued under the stockholder rights plan would cause substantial dilution to a person or group that attempts to acquire us on terms not approved in advance by our board of directors. In addition, Delaware corporate law and our charter and bylaws contain provisions that could delay, deter or prevent a change in control of our company or our management. These provisions could also discourage proxy contests and make it more difficult for our stockholders to elect directors and take other corporate actions without the concurrence of our management or board of directors. These

provisions:

authorize our board of directors to issue "blank check" preferred stock, which is preferred stock that can be created and issued by our board of directors, without stockholder approval, with rights senior to those of common stock;

provide for a staggered board of directors and three-year terms for directors, so that no more than one-third of our directors could be replaced at any annual meeting;

provide that directors may be removed only for cause;

provide that stockholder action may be taken only at a special or regular meeting and not by written consent;

provide for super-majority voting requirements for some provisions of our charter; and

13

establish advance notice requirements for submitting nominations for election to the board of directors and for proposing matters that can be acted upon by stockholders at a meeting.

We are also subject to anti-takeover provisions under Delaware law, which could also delay or prevent a change of control. For information about these provisions and laws, see "Description of capital stock" in this prospectus. Together, these provisions of our charter and bylaws, Delaware law and our stockholder rights plan may discourage transactions that otherwise could provide for the payment of a premium over prevailing market prices of our common stock and, possibly, the debentures, and also could limit the price that investors are willing to pay in the future for shares of our common stock and the debentures. In addition, if we undergo a Change in Control, as defined, prior to May 15, 2008, holders of the debentures have the right, at their option, to require us to purchase all or a portion of their debentures. In addition, certain change in control events relating to us may constitute or otherwise result in events of default under some of our other debt instruments and one of our receivables facilities as described below under " We may be unable to repurchase debentures at the option of the holders and in other circumstances," which could result in borrowings outstanding and other amounts due under those debt instruments and that receivables facility becoming immediately due and payable. These features of the debentures and these other debt instruments and that receivables facility may also discourage a person or a group from attempting to acquire us.

Our issuance of preferred stock could adversely affect holders of our common stock and the debentures and discourage a takeover.

Our board of directors is authorized to issue up to 50,000,000 shares of preferred stock without any action on the part of our stockholders. Our board of directors also has the power, without stockholder approval, to set the terms of any series of preferred stock that may be issued, including voting rights, dividend rights, preferences over our common stock with respect to dividends or in the event of a dissolution, liquidation or winding up and other terms. In the event that we issue preferred stock in the future that has preference over our common stock with respect to payment of dividends or upon our liquidation, dissolution or winding up, or if we issue preferred stock with voting rights that dilute the voting power of our common stock, the rights of the holders of our common stock or the market price of our common stock and, possibly, the value of the debentures could be adversely affected. In addition, the ability of our board of directors to issue shares of preferred stock without any action on the part of our stockholders may impede a takeover of us and prevent a transaction favorable to the holders of our common stock and the debentures.

Risks related to the securities

Future sales of our common stock in the public market could adversely affect the trading price of our common stock and the value of the debentures and our ability to raise funds in new stock offerings.

Future sales of substantial amounts of our common stock in the public market, or the perception that such sales could occur, could adversely affect prevailing trading prices of our common stock and the value of the debentures and could impair our ability to raise capital through future offerings of equity or equity-related securities. As of September 30, 2003, we had

Edgar Filing: EDWARDS LIFESCIENCES CORP - Form 424B3

59,027,688 shares of common stock outstanding,

11,517,270 shares of common stock reserved for issuance upon exercise of options outstanding under our stock option plans with a weighted average exercise price of \$22.49 per share and

in addition to the shares reserved for issuance upon the exercise of options referred to in the preceding bullet point, 3,006,376 additional shares reserved for future issuance under stock option plans and employee stock purchase plans.

No prediction can be made as to the effect, if any, that future sales of shares of common stock or the availability of shares of common stock for future sale, will have on the trading price of our

14

common stock or the value of the debentures prevailing from time to time. Sales of substantial amounts of common stock (including shares issued upon the exercise of stock options, upon conversion of the debentures or, under the circumstances described in the following paragraph, upon repurchase by us of debentures), or the perception that such sales could occur, may adversely affect prevailing market prices for our common stock and the value of the debentures.

The debentures will be convertible at the option of the holders into shares of our common stock, subject to the conditions described under "Description of the debentures Conversion rights." We have registered the debentures and the shares of common stock issuable upon conversion of the debentures pursuant to a registration statement filed with the SEC of which this prospectus is a part. Accordingly, any shares of common stock issued on conversion of the debentures and subsequently sold pursuant to the registration statement will be freely tradable in the public markets without restriction. In addition, if we are required to repurchase debentures following specified change in control events relating to us as described below under "Description of the debentures Purchase of debentures by us at option of holder upon a Change in Control," we will have the option of paying the purchase price either in cash or in shares of our common stock (valued using the method set forth in "Description of the debentures Purchase of debentures by us at the option of the holder") or both; provided that we will be required to pay any accrued interest and contingent interest, if any, in cash. Likewise, holders may require us to purchase all or a portion of their debentures on May 15, 2008, May 15, 2013 and May 15, 2018 as described below under "Description of the debentures Purchase of debentures by us at the option of the holder," in which case we will also have the option, except in the case of the purchase in year 2008, of paying the purchase price either in cash or in shares of our common stock (valued using the method set forth in "Description of the debentures Purchase of debentures by us at the option of the holder") or both; provided that we will be required to pay any accrued interest and contingent interest, if any, in cash. The conversion of debentures into common stock or the issuance of common stock to pay the purchase price of any debentures could result in the issuance of a substantial number of shares and substantial dilution to our stockholders.

We may be unable to repurchase debentures at the option of the holders and in other circumstances.

Upon the occurrence of specified kinds of change in control events relating to us prior to May 15, 2008, holders of the debentures being offered hereby may, at their option, require us to repurchase all or a portion of their debentures at a price of 100% of the principal amount, plus accrued interest, if any, and contingent interest, if any, payable at our option in cash or in shares of our common stock (valued using the method set forth in "Description of the debentures Purchase of debentures by us at the option of the holder") or both; provided that we will be required to pay any accrued interest and contingent interest, if any, in cash. In addition, holders may require us to purchase all or a portion of their debentures on May 15, 2008, May 15, 2013 and May 15, 2018 a price equal to 100% of the principal amount, plus accrued interest, if any, and contingent interest, if any, payable, in the case of the purchase in year 2008, in cash and, in the case of any purchase in the subsequent years, at our option in cash or in shares of common stock (valued using the method set forth in "Description of the debentures Purchase of debentures by us at the option of the holder") or both; provided that we will be required to pay any accrued interest and contingent interest, if any, in cash. See "Description of the debentures Purchase of debentures by us at the option of the holder upon Change in Control" and " Purchase of debentures by us at the option of the holder."

We are currently a party to an unsecured revolving credit agreement providing for aggregate borrowings of up to \$430 million and expiring on March 30, 2005 (the "Five Year Credit Facility") and a second unsecured revolving credit facility providing for aggregate borrowings of up to \$100 million and expiring on March 25, 2004 (the "364 Day Facility" and, together with the Five Year Credit Facility, the "Credit Facilities"). We are also a party to two securitization facilities, one dollar-denominated (the "U.S. Receivables Facility") and one yen-denominated (the "Japan Receivables Facility") whereby we are permitted to sell undivided interests in certain eligible pools of trade

accounts receivable in an aggregate amount of up to \$40 million under the U.S. Receivables Facility and six billion yen (or approximately \$53.5 million based on currency exchange rates in effect on September 30, 2003) under the Japan Receivables Facility. The Japan Receivables Facility expires on December 3, 2005 and the U.S. Receivables Facility expires in December 2003. Certain change in control events may constitute or otherwise result in events of default under our Credit Facilities, our U.S. Receivables Facility and other instruments and agreements to which we and our subsidiaries are or may in the future become a party. These events of default could result in borrowings outstanding and other amounts due under our Credit Facilities, the U.S. Receivables Facility and any such other instruments and agreements becoming immediately due and payable. We cannot assure you that we would have the financial resources or otherwise be able to arrange financing to pay the amounts that may become due if we are required to purchase the debentures for cash under the circumstances described above or if our obligations under the Credit Facilities, the U.S. Receivables Facility or these or other instruments or agreements were accelerated.

Our holding company structure may adversely affect our ability to meet our debt service obligations under the debentures.

Substantially all of our consolidated assets are held by our subsidiaries. Accordingly, our cash flow and our ability to service our debt, including the debentures, depends on the results of operations of our subsidiaries and upon the ability of our subsidiaries to provide us cash, whether in the form of dividends, loans or otherwise, to pay amounts due on our obligations, including the debentures. Our subsidiaries are separate and distinct legal entities, have not guaranteed the debentures and have no obligation, contingent or otherwise, to make payments on the debentures or to make any funds available for that purpose. In addition, dividends, loans or other distributions from our subsidiaries to us may be subject to contractual and other restrictions, are dependent upon the results of operations of our subsidiaries, may be subject to tax or other laws limiting our ability to repatriate funds from foreign subsidiaries, and are subject to other business considerations.

The debentures are effectively subordinated to the liabilities of our subsidiaries.

Because of our holding company structure, the debentures are effectively subordinated to all existing and future liabilities of our subsidiaries. These liabilities may include indebtedness, trade payables, guarantees, lease obligations and letter of credit obligations. Therefore, our rights and the rights of our creditors, including the holders of the debentures, to participate in the assets of any subsidiary upon that subsidiary's liquidation or reorganization will be subject to the prior claims of the subsidiary's creditors and of the holders of any indebtedness or other obligations guaranteed by that subsidiary, except to the extent that we may ourselves be a creditor with recognized claims against the subsidiary. However, even if we are a creditor of one of our subsidiaries, our claims would still be effectively subordinated to any security interests in, or mortgages or other liens on, the assets of that subsidiary and would be subordinate to any indebtedness of the subsidiary senior to that held by us. Although some of our debt instruments impose limitations on the incurrence of additional indebtedness, our subsidiaries retain the ability to incur substantial additional indebtedness and other obligations.

As discussed above, we have a \$430 million Five Year Credit Facility and a \$100 million 364 Day Facility. The Five Year Credit Facility permits borrowings to be made by both Edwards Lifesciences Corporation and some of its subsidiaries. As of September 30, 2003, we had total borrowings of approximately \$143.1 million outstanding under the Five Year Credit Facility and no borrowings outstanding under the 364 Day Facility. Of the borrowings outstanding under the Five Year Credit Facility, \$50.0 million had been borrowed by Edwards Lifesciences Corporation and \$93.1 million had been borrowed by some of its subsidiaries. Edwards Lifesciences Corporation has guaranteed the borrowings by its subsidiaries under the Five Year Credit Facility.

At September 30, 2003, our consolidated subsidiaries had approximately \$271.7 million of outstanding indebtedness and other liabilities, excluding indebtedness and other liabilities owed to us or to other subsidiaries but including \$93.1 million of borrowings under the Five Year Credit Facility. In addition, our Credit Facilities require that domestic subsidiaries whose aggregate net revenue and aggregate net tangible assets equal or exceed 95% of our consolidated net revenues and consolidated net tangible assets, as defined under the Credit Facilities, respectively, guarantee all borrowings, letters of credit and other obligations under our Credit Facilities, including, in the case of the Five Year Credit Facility, borrowings and other obligations of our subsidiaries under the Five Year Credit Facility. In addition, at December 31, 2002 our consolidated subsidiaries were obligated under operating lease agreements to make future minimum lease payments aggregating approximately \$18.5 million through 2007.

The debentures are not protected by restrictive covenants.

Edgar Filing: EDWARDS LIFESCIENCES CORP - Form 424B3

The indenture governing the debentures does not contain any financial or operating covenants or restrictions on the payments of dividends, the incurrence of indebtedness or other liabilities or the issuance or repurchase of securities by us or any of our subsidiaries. Although some of our other debt instruments contain provisions that limit our incurrence of additional indebtedness, we retain the ability to incur substantial additional indebtedness and other obligations. As of September 30, 2003, we would have been permitted to incur approximately \$189.7 million of additional indebtedness under the most restrictive of these provisions. Any significant amounts of additional indebtedness or other obligations that we incur in the future may harm our ability to service our indebtedness, including the debentures, and pay our other obligations. Although the holders of the debentures will have the right, upon the occurrence of specified kinds of change in control events, to require us to repurchase all or a portion of their debentures, there can be no assurance that this right will afford protection to holders of the debentures in the event of a business combination, highly leveraged transaction or change of control event affecting us.

We have increased our indebtedness.

As a result of the sale of \$150,000,000 aggregate principal amount of the debentures in May 2003, we increased our total debt and debt service obligations. We may incur substantial additional indebtedness in the future. The level of our indebtedness, among other things, could:

make it difficult for us to make payments on the debentures;

make it difficult for us to obtain any necessary future financing for working capital, capital expenditures, acquisitions or other purposes;

limit our flexibility in planning for, or reacting to changes in, our business; and

make us more vulnerable in the event of a downturn in our business.

There can be no assurance that we will be able to meet our debt service obligations, including our obligations under the debentures.

In addition, we may need to incur debt in the future to fund our business, including any acquisitions we may make, but there can be no assurance that we will be able to incur debt or other financing, on favorable terms or at all, necessary to fund our operations or effect any acquisitions.

Any adverse rating of the debentures may cause the value of the debentures to fall.

The debentures have not been rated by any credit rating agencies. In the future, one or more rating agencies may rate the debentures. If the rating agencies rate the debentures, they may assign a lower rating than expected by investors. Rating agencies may also lower ratings on the debentures in the future. If the rating agencies assign a lower than expected rating or reduce their ratings on the

debentures in the future or indicate that they have their ratings on the debentures under surveillance or review with possible negative implications, the value of the debentures would likely decline. In addition, a ratings downgrade could adversely affect our ability to access capital.

Absence of market for the debentures.

We issued the debentures in May 2003 in a private offering made to "qualified institutional buyers," as defined in Rule 144 under the Securities Act. The offering was made through a group of investment banks, which we refer to as the "initial purchasers," for which J.P. Morgan Securities Inc. acted as sole book-running manager. Prior to that offering there was no trading market for the debentures. Although the initial purchasers advised us at the time of that offering that they intended to make a market in the debentures, they are not obligated to do so and may discontinue such market making at any time without notice. Accordingly, there can be no assurance that any market for the debentures will develop or, if one does develop, that it will be maintained. If an active market for the debentures fails to develop or be sustained, the value of the debentures could be materially adversely affected.

There is no public market for the debentures and we do not intend to apply for listing of the debentures on any securities exchange or for quotation of the debentures through any automated quotation system. The debentures issued to qualified institutional buyers in the May 2003 offering currently trade on the PORTAL Market. However, once debentures are sold under this prospectus, those debentures will no longer trade on the PORTAL market.

You should consider the United States federal income tax consequences of owning the debentures, including, among other things, the requirement to include tax original issue discount, as defined below, on the debentures in your taxable income and the characterization of any gain you may recognize on the sale, purchase by us at your option, exchange, conversion or redemption of the debentures as ordinary income.

The debentures constitute indebtedness for U.S. federal income tax purposes. Accordingly, you will be required to include, in your income, interest with respect to the debentures.

The debentures constitute contingent payment debt instruments for U.S. federal income tax purposes, and are subject to U.S. federal income tax regulations applicable to contingent payment debt instruments. Under that characterization and treatment, you will be required to include amounts in income, as interest income, in advance of your receipt of the cash or other property attributable to the debentures. The amount of interest income required to be included by you in income for each year, which we refer to as tax original issue discount, generally will be in excess of the accruals on the debentures for non-tax purposes (i.e., in excess of the stated semi-annual regular interest payments and any contingent interest payments) actually received in that year.

You will recognize gain or loss on the sale, purchase by us at your option, exchange, conversion or redemption of a debenture in an amount equal to the difference between the amount realized, including the fair market value of any of our common stock received, and your adjusted tax basis in the debenture. Any gain recognized by you on the sale, purchase by us at your option, exchange, conversion or redemption of a debenture will be treated as ordinary interest income. A discussion of the U.S. federal income tax consequences of ownership of the debentures is contained in this prospectus under the heading "Certain United States federal income tax considerations."

Cautionary note regarding forward-looking statements and market data

This prospectus and the documents incorporated or deemed to be incorporated by reference in this prospectus contain "forward-looking statements" within the meaning of Section 27A of the Securities Act and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). We intend the forward-looking statements to be covered by the safe harbor provisions for forward-looking statements in these sections. All statements other than statements of historical fact in this prospectus and the documents incorporated or deemed to be incorporated by reference in this prospectus are "forward-looking statements" for purposes of these sections, including, without limitation, any predictions of earnings, revenues, expenses or other financial items, any statements of the plans, strategies and objectives of management for future operations, any statements concerning proposed new products, any statements regarding future economic conditions, any statements concerning our future operations, financial conditions and prospects, and any statement of assumptions underlying any of the foregoing. These statements can sometimes be identified by the use of forward-looking words such as "may," "will," "anticipate," "estimate," "project," "seek," "expect," "continue," "pro forma," "plan" or "intend" or similar words, or expressions of the negative thereof. These forward-looking statements are subject to substantial risks, uncertainties and assumptions. Some of the factors that could cause actual results to differ materially from the forward-looking statements we make or incorporate by reference in this prospectus are described under "Risk factors" in this prospectus and in the documents incorporated or deemed to be incorporated by reference in this prospectus. These factors include, but are not limited to:

our ability to successfully develop, obtain regulatory approvals for and market new products;

our ability to generate and maintain sufficient cash resources to increase investment in our business or repay debt;

the contribution of new product launches;

the impact of currency exchange rates;

the timing or results of pending or future clinical trials;

actions by the U.S. Food and Drug Administration and other regulatory agencies;

technological advances in the medical field;

product demand and market acceptance; and

the effect of changing economic conditions.

If one or more of these risks or uncertainties materialize, or if any underlying assumptions proves incorrect, our actual results, performance or achievements may vary materially from future results, performance or achievements expressed or implied by these forward-looking statements. All forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by the cautionary statements in this section. We undertake no obligation to update or revise any forward-looking statements to reflect future events or developments.

The information in this prospectus and the documents incorporated or deemed to be incorporated by reference in this prospectus includes statements concerning our position in certain markets and other demographic, statistical and similar information. These statements, which reflect the belief of our management based upon the sources of information described below, include statements that we are a leader or the leader or a leading or the leading company or manufacturer in some of our markets or globally or with respect to some of our products, systems, therapies or technologies, that one of our heart valve products is more widely prescribed than other heart valves worldwide, regarding the number of patients using some of our products, regarding the number of patients affected by certain diseases or

19

that use certain of our products, regarding whether patients undergoing surgical treatment for cardiovascular disease are likely to encounter our products and technologies or are candidates to have their cardiac function monitored by our products, regarding the factors that cause certain diseases, regarding the absence of reportings of "mad cow" disease cases in the United States, regarding the risk of infectibility of tissue types used in our pericardial tissue valve products, regarding the number of deaths caused by cardiovascular disease and its ranking compared to other diseases in terms of healthcare spending, regarding the increasing number of "beating heart" coronary artery bypass surgeries, that one of our products is the only pericardial valve available in the U.S., that certain of our products are widely-known or recognized as an or the industry standard, regarding the level of the engagement of our workforce, that we are a pioneer of certain products, regarding market share data, regarding the medical device industry, the healthcare industry and the cardiovascular products market, and similar matters.

The information reflected in the statements described above is based on, among other things, publicly available information, industry publications, data compiled by market research firms and similar sources. Although we believe that this information is reliable, we have not independently verified any of this information and we cannot assure you that it is accurate. In addition, most of this information relates to years or periods prior to 2002. Statements that we are a leader or the leader, or that we are a leading or the leading company or manufacturer in some of our markets or globally or with respect to some of our products, systems, therapies or technologies, are generally based on our net sales or units sold. The statement that cardiovascular disease is among the top three diseases in terms of healthcare spending that is incorporated by reference into this prospectus is based on data for the U.S.

Use of proceeds

We will not receive any of the proceeds from the sale by any selling securityholders of debentures or the common stock issued upon conversion of the debentures.

Dividend policy

We have never paid any dividends on our common stock and have no current plans to pay any dividends on our common stock. Our current policy is to retain any future earnings for use in our business.

Ratio of earnings to fixed charges

The following table presents the ratio of earnings to fixed charges for Edwards Lifesciences Corporation and its consolidated subsidiaries for each of the periods indicated. Edwards Lifesciences was incorporated on September 10, 1999 as a wholly owned subsidiary of Baxter International Inc. to assume the business and operations of Baxter's CardioVascular Group. Effective March 31, 2000, the business, assets and liabilities of Baxter's CardioVascular Group were transferred to us and our subsidiaries and 100% of our common stock was distributed to the stockholders of Baxter in a tax-free spin-off (the "Distribution"). As a result, the following information for periods prior to April 1, 2000 presents Edwards Lifesciences on a divisional basis as we had historically been operated as a part of Baxter, and has been prepared using Baxter's historical bases in the assets and liabilities and the historical results of operations of Baxter's CardioVascular Group prior to the Distribution. The following information does not necessarily reflect what our ratio of earnings to fixed charges would have been had we operated as a stand-alone entity during the periods prior to the Distribution.

	Years ended December 31,					Nine months ended September 30, 2003
	1998	1999	2000	2001	2002	
Ratio of earnings to fixed charges(1)(4)	(2)	(2)	(3)	(3)	5.7x	7.6x

- (1) The ratio of earnings to fixed charges is unaudited for all periods presented. For the purpose of calculating the ratio of earnings to fixed charges, earnings consist of net income (loss) plus the provision for income taxes and fixed charges, and excludes the cumulative effect of a change in accounting principle. Fixed charges consist of interest expense, amortization of debt issuance costs and the estimated portion of rental expenses deemed to be equivalent to interest.
- (2) Until March 31, 2000 (the date of the Distribution), we were operated as a division of Baxter and our business and operations were therefore funded with monies provided by Baxter.
- (3) For the years ended December 31, 2000 and 2001, fixed charges exceeded earnings by \$258.4 million and \$8.4 million, respectively.
- (4) As of September 30, 2003, we had applied approximately \$119.6 million of the net proceeds we received from the offering of the debentures to repay indebtedness outstanding under a revolving credit facility. On a pro forma basis, assuming we had issued all of the debentures and used that amount of the net proceeds to repay that indebtedness as of the first day of the respective periods referred to below, our ratio of earnings to fixed charges would have been 4.5x for the year ended December 31, 2002 and 7.2x for the nine months ended September 30, 2003. Indebtedness that we repaid under this credit facility may be reborrowed, subject to compliance with customary conditions. These pro forma ratios do not necessarily reflect what our actual ratios of earnings to fixed charges would have been had these transactions occurred as of those dates or to predict our ratios of earnings to fixed charges for any future periods.

Description of the debentures

The debentures were issued under an indenture dated as of May 9, 2003 between us and JPMorgan Chase Bank, as trustee. The following summary of certain provisions of the indenture and the debentures does not purport to be complete, and is subject to, and is qualified in its entirety by reference to, all of the provisions of the debentures and the indenture. Because the following is only a summary, it does not contain all information that you may find useful. Copies of the indenture and the form of debenture have been 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 "Available information" and "Incorporation of documents by reference."

As used in this "Description of the debentures," unless otherwise expressly stated or the context otherwise requires, the words "Edwards Lifesciences," "we," "our" and "us" refer to Edwards Lifesciences Corporation, excluding its subsidiaries.

General

The debentures are our unsecured and unsubordinated obligations and were issued in, and are limited to, an aggregate principal amount of \$150,000,000. The debentures will mature on May 15, 2033, unless earlier converted, redeemed by us at our option or repurchased by us at the option of the holders. The debentures are issuable only in fully registered form without coupons in denominations of \$1,000 and integral multiples of \$1,000 principal amount.

You have the option, subject to certain conditions described below, to convert your debentures into shares of our common stock, initially at a conversion price of \$54.66 per share of common stock. This is equivalent to an initial conversion rate of approximately 18.2949 shares of common stock per \$1,000 principal amount of debentures. The conversion price is subject to adjustment from time to time if certain events described below occur. Upon conversion, you will receive only shares of our common stock and a cash payment in lieu of any fractional shares. You will not receive any cash payment for interest or contingent interest, if any, accrued and unpaid to the conversion date.

If any interest payment date, maturity date, redemption date or purchase date (including a purchase date in connection with the occurrence of a Change in Control, as described below) of a debenture falls on a day that is not a business day, the required payment will be made on the next succeeding business day and no interest or contingent interest, if any, will accrue on that payment for the period from and after the interest payment date, maturity date, redemption date or purchase date (including a purchase date in connection with the occurrence of a Change in Control), as the case may be, to the date of that payment on such next succeeding business day. The term "business day" means any day other than a Saturday, a Sunday or a day on which banking institutions in The City of New York are authorized or required by law, regulation or executive order to close.

The debentures constitute debt instruments that are subject to the contingent payment debt regulations. Therefore, the debentures were issued with original issue discount for U.S. federal income tax purposes, which we refer to as tax original issue discount. In general, beneficial owners of the debentures will be required to accrue interest income on the debentures for U.S. federal income tax purposes in the manner described herein, regardless of whether such owners use the cash or accrual method of tax accounting. Beneficial owners are required, in general, to accrue interest each year, as tax original issue discount, based on the rate at which we would issue a noncontingent, nonconvertible, fixed-rate debt instrument with terms and conditions otherwise similar to those of the debentures, rather than at a lower rate based on the accruals on the debentures for non-tax purposes (i.e., in excess of the stated semi-annual regular interest payments and any contingent interest payments) actually received in that year. Accordingly, owners of debentures generally will be required to include tax original issue discount as interest in taxable income in each year in excess of the accruals on the debentures for non-tax purposes. Furthermore, upon a sale, purchase by us at your option, exchange, conversion or redemption of a debenture, you will recognize gain or loss equal to the difference between your amount realized and your adjusted tax basis in the debenture. The amount realized by you will include the fair market value of the stock you receive. Any gain on a sale, purchase by us at your option, exchange, conversion or redemption of a debenture will be treated as ordinary interest income. You are expected to consult your own tax advisor as to the United States federal, state, local or other tax consequences of acquiring, owning and disposing of the debentures. A discussion of some of the U.S. federal income tax consequences of ownership of the debentures is contained in this prospectus under the heading "Certain United States federal income tax considerations."

Interest

The debentures accrue interest at a rate of 3.875% per year from May 9, 2003 or from the most recent date to which interest has been paid or duly provided, payable semi-annually in arrears on May 15 and November 15 of each year, beginning November 15, 2003. We will also pay contingent interest on the debentures in certain circumstances described below under "Contingent interest." Except as set forth in the immediately succeeding sentence, we will pay interest and contingent interest, if any, to the person in whose name a debenture is registered at the close of business on May 1 or November 1, as the case may be (each, a "record date"), immediately preceding the relevant interest payment date. However, in the case of debentures called for redemption on a redemption date or purchased by us on a purchase date (including a purchase date in connection with the occurrence of a Change in Control) during the period from the close of business on a record date to the opening of business on the next succeeding interest payment date, accrued and unpaid interest and contingent interest, if any, will be paid (unless such debenture is converted) to the holders of such debentures so redeemed or purchased. Interest on the debentures will be computed on the basis of a 360-day year composed of twelve 30-day months.

Contingent interest

Beginning with the six-month interest period commencing on May 15, 2008, we will pay contingent interest during a six-month interest period if the average trading price, as defined below, of a debenture for the five trading days ending on and including the third trading day immediately preceding the first day of such six-month interest period equals or exceeds 120% of the principal amount of such debenture.

The contingent interest payable per \$1,000 principal amount of a debenture in respect of any six-month interest period in which contingent interest is payable will accrue at the rate of 0.25% per six-month period of the average trading price per \$1,000 principal amount of such debenture for the applicable five trading day reference period ending on and including the third trading day immediately preceding the first day of such six-month interest period.

The "trading price" of a debenture on any date of determination shall be determined by us and shall be the average of the secondary market bid quotations per \$1,000 principal amount of debentures obtained by the bid solicitation agent for \$5 million aggregate principal amount of debentures at approximately 4:00 p.m., New York City time, on such determination date from three recognized securities dealers we select, provided that if:

at least three such bid quotations are not obtained by the bid solicitation agent; or

in our reasonable judgment, the bid quotations are not indicative of the secondary market value of debentures as of such determination date,

then the trading price for such determination date will equal (1) the applicable conversion rate (as defined below) of the debentures as of such determination date multiplied by (2) the average last reported sale price, as defined below, of our common stock on the five trading days ending on such determination date, subject to certain adjustments provided in the indenture.

The "applicable conversion rate" means, as of any date, the amount obtained by dividing \$1,000 by the applicable conversion price as of such date, as calculated by us as provided in the indenture.

If we determine that holders will be entitled to receive contingent interest during a six-month interest period, we will mail a notice to holders of debentures or issue a press release promptly after we make that determination.

If contingent interest is payable in respect of any debenture, then it will, in general, be payable on the same dates and to the same persons entitled to receive the interest otherwise payable on that

debenture. Contingent interest, if payable, will accrue from and including the first day of the applicable six-month interest period to, but excluding, the date of payment (including payment on any interest payment date, maturity date, redemption date, purchase date or Change in Control purchase date).

We have appointed JPMorgan Chase Bank as the initial bid solicitation agent. However, we may at any time or from time to time change the bid solicitation agent.

Ranking

The debentures are our unsubordinated and unsecured obligations and rank senior in right of payment to any of our future indebtedness that is, by its terms, expressly subordinated in right of payment to the debentures. The debentures rank *pari passu* in right of payment with all of our existing and future unsecured indebtedness that is not so subordinated. Your right to payment under the debentures is limited by the rights of our secured creditors, if any, to the extent of their security interest in our assets. In addition, our rights and the rights of our creditors, including the holders of the debentures offered by this prospectus, to participate in the assets of any subsidiary during its liquidation or reorganization will be effectively subordinated to all existing and future liabilities of that subsidiary. See "Risk factors Risks related to the securities Our holding company structure may adversely affect our ability to meet our debt service obligations under the debentures" and " The debentures are effectively subordinated to the liabilities of our subsidiaries."

Conversion rights

Subject to the satisfaction of the conditions and during the periods set forth below, holders may convert their debentures into shares of our common stock initially at a conversion price of \$54.66 per share of common stock (equivalent to an initial conversion rate of approximately 18.2949 shares of common stock per \$1,000 principal amount of debentures). The conversion price will be subject to adjustment from time to time as described below and the conversion price, as so adjusted and as in effect at any given time, is referred to in this prospectus as the "applicable conversion price." A holder may convert fewer than all of such holder's debentures so long as the principal amount of debentures converted is an integral multiple of \$1,000.

Holders may convert their debentures into shares of our common stock only in the following circumstances, which are described in more detail below, and to the following extent:

holders may convert their debentures, in whole or in part, during any calendar quarter (beginning with the quarter ending September 30, 2003) if, as of the last day of the preceding calendar quarter, the last reported sale price (as defined under "Conversion upon satisfaction of sale price condition" below) of our common stock on at least 20 trading days (whether or not consecutive) in the period of 30 consecutive trading days ending on the last trading day of such immediately preceding calendar quarter exceeds 120% of the applicable conversion price on the last trading day of such immediately preceding calendar quarter;

holders may convert any of their debentures (and only those debentures) that have been called for redemption; or

holders may convert their debentures, in whole or in part, upon the occurrence of specified corporate transactions described below.

You will not receive any cash payment representing accrued and unpaid interest, contingent interest, if any, or liquidated damages (as defined below under "Registration rights"), if any, upon conversion of a debenture. Upon conversion we will deliver to you a whole number of shares of our common stock and a cash payment to account for fractional shares, if any. A cash payment for fractional shares will be based on the last reported sale price of our common stock on the trading day immediately prior to the conversion date. With respect to debentures being converted by any holder, so

long as one of the circumstances set forth above exists, the conversion date shall be the business day on which the conversion agent receives a duly completed and executed conversion notice, together with the debentures to be converted and any required funds and any other required documents. Delivery of shares of common stock will be deemed to satisfy our obligation to pay the principal amount of the debentures, and to satisfy our obligation to pay accrued and unpaid interest and contingent interest, if any, and liquidated damages, if any, attributable to the period from the most recent interest payment date through the conversion date and our obligation to pay accrued tax original issue discount through the conversion date. As a result, accrued and unpaid interest, contingent interest, if any, and liquidated damages, if any, and accrued tax original issue discount through the conversion date is deemed to be paid in full rather than cancelled, extinguished or forfeited. We will not adjust the conversion price to account for accrued and unpaid interest, contingent interest, if any, or liquidated damages, if any, or for dividends, if any, on any shares of common stock. The trustee will initially act as the conversion agent. As discussed below under "Registration rights," liquidated damages, if any, will not be payable in respect of any debentures that have been sold or otherwise transferred pursuant to the registration statement of which this prospectus is a part. Accordingly, our obligation to pay liquidated damages, if any, in respect of any debentures will terminate when those debentures are sold to investors by selling securityholders in this offering, and will also terminate under other circumstances described below under "Registration rights."

If a holder converts debentures into shares of common stock, we will pay any documentary, stamp or similar issue or transfer tax due on the issue of such shares of our common stock upon the conversion, unless the tax is due because the holder requests the shares to be issued in a name other than the holder's name, in which case the holder will pay that tax.

If a holder of debentures wishes to exercise its conversion right, such holder must deliver an irrevocable conversion notice, substantially in the form set forth in the indenture, deliver the debentures to the conversion agent along with appropriate endorsements and transfer documents, if required, and pay any transfer or similar tax, if required as set forth above. The holder may also be required to pay the amount of interest,

contingent interest, if any, and liquidated damages, if any, due on the next succeeding interest payment date on the debentures as described below. The conversion agent will, on the holder's behalf, convert the debentures into shares of our common stock. Holders may obtain copies of the required form of the conversion notice from the conversion agent. The number of full shares of our common stock into which any debentures are converted, together with any cash payment for fractional shares, will be delivered through the conversion agent as soon as practicable following the conversion date.

If a holder of debentures has already delivered a purchase notice as described under either " Purchase of debentures by us at the option of the holder" or " Purchase of debentures by us at option of holder upon Change in Control" with respect to a debenture, the holder may not surrender that debenture for conversion until the holder has withdrawn the notice in accordance with the indenture.

Holders of debentures at the close of business on a record date will receive payment of interest and contingent interest, if any, payable on the corresponding interest payment date (notwithstanding the conversion of such debentures at any time after the close of business on such record date), unless such debentures have been called for redemption on a redemption date or are purchased by us at the option of the holder on a purchase date during the period from the close of business on the record date to the opening of business on the corresponding interest payment date. Debentures surrendered for conversion by a holder during the period from the close of business on any record date to the opening of business on the next interest payment date, except for debentures to be redeemed within this period, must be accompanied by payment by the holder of an amount in cash equal to the amount of interest and contingent interest, if any, and liquidated damages, if any, payable on that interest payment date with respect to the principal amount of debentures so converted.

Holders may surrender their debentures for conversion into shares of our common stock only under the following circumstances:

Conversion upon satisfaction of sale price condition. A holder may convert any of its debentures into shares of common stock during any calendar quarter, and only during such calendar quarter (beginning with the calendar quarter ending September 30, 2003), if, as of the last day of the preceding calendar quarter, the last reported sale price of our common stock on at least 20 trading days (whether or not consecutive) in the period of 30 consecutive trading days ending on the last trading day of such immediately preceding calendar quarter exceeds 120% of the applicable conversion price on the last trading day of such immediately preceding calendar quarter. Not later than the third business day of each calendar quarter (beginning with the quarter ending September 30, 2003), we will notify the conversion agent as to whether the foregoing sale price condition has been satisfied. We are not required by the indenture to notify holders of debentures if this condition has been satisfied. Accordingly, holders of debentures that are interested in determining whether this condition has been satisfied should contact the conversion agent.

As used in this prospectus, the "last reported sale price" of our common stock on any date means the closing sale price per share (or if no closing sale price is reported, the average of the bid and ask prices or, if more than one in either case, the average of the average bid and the average ask prices) on that date as reported in composite transactions for the principal United States national or regional securities exchange on which our common stock is traded or, if our common stock is not listed on a United States national or regional securities exchange, as reported by the National Association of Securities Dealers Automated Quotation System.

If our common stock is not listed for trading on a United States national or regional securities exchange and not reported by the National Association of Securities Dealers Automated Quotation System on the relevant date, the "last reported sale price" will be the last quoted bid price for our common stock in the over-the-counter market on the relevant date as reported by the National Quotation Bureau or similar organization.

If our common stock is not so quoted, the "last reported sale price" will be the average of the mid-point of the last bid and ask prices for our common stock on the relevant date from each of at least three nationally recognized independent investment banking firms selected by us for this purpose.

"Trading day" means a day on which trading in securities generally occurs on the New York Stock Exchange or, if the common stock is not listed on the New York Stock Exchange, on the principal other national or regional securities exchange on which the common stock is then listed or, if the common stock is not listed on a national or regional securities exchange, on the National Association of Securities Dealers Automated Quotation System, or, if the common stock is not quoted on the National Association of Securities Dealers Automated Quotation System, in the over-the-counter market.

Conversion upon notice of redemption. If we issue a notice that we intend to redeem debentures, holders may convert any of their debentures that have been called for redemption (and only those debentures) into our common stock at any time prior to the close of business on the business day prior to the redemption date.

Conversion upon specified corporate transactions. If we elect to make:

a distribution to all holders of our common stock of rights that allow the holders to purchase shares of our common stock for a period expiring within 60 days from the record date for such distribution at less than the last reported sale price on the trading day immediately preceding the date of declaration of such distribution; or

26

a distribution to all holders of our common stock of our assets, debt securities or rights to purchase our securities (other than rights referred to in the preceding bullet point), if that distribution has a value (as determined by our board of directors or a committee thereof) exceeding 15% of the product of (a) the last reported sale price of our common stock on the trading day immediately preceding the date of the declaration of such distribution multiplied by (b) the number of shares of our common stock outstanding on such trading day,

we must notify the holders of the debentures at least 10 business days prior to the ex-dividend date for such distribution. Once we have given such notice, holders may convert their debentures at any time until the close of business on the earlier of the business day immediately preceding the ex-dividend date and the date on which we announce that such distribution will not take place. The ex-dividend date is the first trading day upon which a sale of the common stock does not automatically transfer the right to receive the relevant distribution from the seller of the common stock to its buyer.

In addition, if we are party to a consolidation, merger, binding share exchange or a transfer of all or substantially all of the consolidated assets of us and our subsidiaries, taken as a whole, in each case pursuant to which shares of our common stock would be converted into cash, securities or other property, a holder may convert debentures at any time from and after the date which is 15 days prior to the anticipated effective date of the transaction (as set forth in a notice mailed by us to holders) until the close of business on the tenth business day after the actual effective date of such transaction (or, if earlier, the close of business of the business day immediately preceding the date on which we announce that the transaction will not take place). If the transaction occurs, then, from and after the effective time of the transaction, the right to convert a debenture into shares of common stock will be changed into a right to convert the debenture into the kind and amount of cash, securities or other property which the holder would have received if the holder had converted its debentures immediately prior to the effective time of the transaction. If we engage in any transaction described in the second preceding sentence, the conversion price will not be adjusted. If the transaction also constitutes a Change in Control, as defined below, a holder will be entitled to require us to purchase all or a portion of its debentures as described below under "Purchase of debentures by us at option of holder upon Change in Control" instead of converting its debentures.

Notwithstanding anything to the contrary, no debentures may be surrendered for conversion pursuant to the immediately preceding paragraph and no corporate transaction requiring an adjustment to the conversion price will be deemed to have occurred by reason of a merger, consolidation or other transaction effected with one of our affiliates for the purpose of changing our jurisdiction of organization or effecting a corporate reorganization.

As set forth in the second preceding paragraph, holders may be entitled to convert their debentures if, among other things, we transfer "all or substantially all" of the consolidated assets of us and our subsidiaries, taken as a whole. There is no precise, established definition of the phrase "substantially all" under applicable law. Accordingly, the ability of a holder of debentures to convert its debentures as a result of the transfer of less than all of our consolidated assets may be uncertain.

Conversion price adjustments. The conversion price is subject to adjustment upon the following events:

the payment to all holders of our common stock of dividends and other distributions on our common stock payable in shares of our common stock;

the distribution to all holders of our common stock of rights that allow the holders to purchase shares of our common stock for a period expiring within 60 days from the record date for such distribution at less than the last reported sale price on the trading day immediately preceding the date of declaration of such distribution;

subdivisions or combinations of our common stock; and

the distribution to all holders of our common stock of our assets, debt securities or rights to purchase our securities (other than rights referred to in the second preceding bullet point), if that distribution (the "reference distribution"), together with all other distributions, if any, to all holders of our common stock of our assets, debt securities or rights to purchase our securities (other than rights referred to in the second preceding bullet point) made during the 12-month period ending on the date of the reference distribution (and for which no previous adjustment to the conversion price has been made), have an aggregate value (as determined by our board of directors or a committee thereof) exceeding 10% of the product of (a) the last reported sale price of our common stock on the trading day immediately preceding the date of the declaration of the reference distribution multiplied by (b) the number of shares of our common stock outstanding on such trading day.

In addition to these adjustments, we may decrease the conversion price as our board of directors considers advisable to avoid or diminish any income tax to holders of our common stock or rights to purchase our common stock resulting from any dividend or distribution of stock (or rights to acquire stock) or from any event treated as such for income tax purposes. We may also, from time to time, decrease the conversion price by any amount for any period of at least 20 days if our board of directors has determined that such decrease would be in our best interests. If our board of directors makes such a determination, it will be conclusive. We will mail to holders of debentures notice of such decrease in the conversion price at least 15 days prior to the date such decrease in the conversion price will be in effect.

To the extent we have a stockholder rights plan in effect upon the conversion of the debentures into shares of our common stock and rights are issuable thereunder at such time, the holder will receive, in addition to the shares of our common stock, the rights under the rights plan pertaining to those shares of our common stock whether or not the rights have separated from the common stock at the time of conversion. In no event will any adjustment to the conversion price be made for the issuance of rights under any stockholder rights plan. We currently have a stockholder rights plan in effect as described below under "Description of capital stock Rights agreement."

Notwithstanding anything in this prospectus to the contrary, no adjustment to the conversion price will be made in respect to any payment, distribution or other transaction referred to above if we make proper provision so that each holder who thereafter converts debentures is entitled to receive, upon that conversion, the same amount and kind of assets or other property that the holder would have received if the holder had converted debentures into common stock at the relevant time.

The applicable conversion price will not be adjusted:

upon or with respect to the issuance of any shares of our common stock pursuant to any present or future plan providing for the reinvestment of dividends or interest payable on our securities or the investment of additional optional amounts in shares of our common stock under any plan;

upon or with respect to the issuance of any shares of our common stock or options or rights to purchase those shares pursuant to any present or future employee, officer, director or consultant stock option, stock purchase or other benefit plan or program of or assumed by us or any of our subsidiaries;

upon or with respect to the issuance of any shares of our common stock pursuant to any option, warrant, right or exercisable, exchangeable or convertible security outstanding as of the date of the indenture;

upon or with respect to any purchase of shares of our common stock, including, without limitation, purchases with the proceeds of this offering of the debentures, whether under our stock repurchase program or otherwise;

upon or with respect to the issuance to holders of our common stock of rights ("stockholder rights") under any existing or future shareholder rights plan or similar arrangement (including, without limitation, the rights agreement dated March 31, 2000, as the same may be amended or restated from time to time);

Edgar Filing: EDWARDS LIFESCIENCES CORP - Form 424B3

upon the exercise of stockholder rights by holders thereof and upon the issuance of securities as a consequence thereof;

in the event that the stockholder rights detach from the shares of our common stock and become separately tradable;

for a change in the par value or no par value of our common stock; or

for accrued and unpaid interest, contingent interest, if any, or liquidated damages, if any, on the debentures.

No adjustment in the applicable conversion price will be required unless the adjustment would require an increase or decrease of at least one percent of the applicable conversion price. If the adjustment is not made because the adjustment does not change the applicable conversion price by more than one percent, then the adjustment that is not made will be carried forward and taken into account in any future adjustment.

Optional redemption

The debentures do not have the benefit of a sinking fund. Prior to May 15, 2008, the debentures are not be redeemable at our option. On or after May 15, 2008, we may redeem, at our option, at any time in whole, or from time to time in part, for cash, then outstanding debentures, by mailing notice to each holder of debentures to be redeemed not less than 30 nor more than 60 days before the redemption date, for a price payable to the holders of the debentures to be redeemed equal to 100% of the principal amount of the debentures to be redeemed plus accrued and unpaid interest, if any, and contingent interest, if any, to, but excluding, the redemption date; provided that payments of interest and contingent interest, if any, that are due and payable on any interest payment date falling on or prior to a redemption date will be payable on such interest payment date to the persons that were the registered holders of the debentures at the close of business on the relevant record date.

If we decide to redeem fewer than all of the outstanding debentures, the trustee will select the debentures to be redeemed (in principal amounts of \$1,000 or integral multiples thereof) by lot, on a pro rata basis or by another method the trustee considers fair and appropriate.

If the trustee selects a portion of your debenture for partial redemption and you convert a portion of the same debenture, the converted portion will be deemed to be from the portion selected for redemption.

Purchase of debentures by us at the option of the holder

Each holder has the right to require us to purchase its debentures on May 15, 2008, May 15, 2013 and May 15, 2018 (each, a "purchase date"). We will be required to purchase, at a purchase price payable to the holders of the debentures to be purchased equal to 100% of the principal amount thereof, plus accrued and unpaid interest, if any, thereon and accrued and unpaid contingent interest, if any, with respect thereto to, but excluding, the purchase date, any outstanding debentures that have been delivered to the paying agent, duly endorsed for transfer (or, in the case of debentures in book-entry form, delivered pursuant to the applicable procedures of DTC), together with a duly completed written purchase notice from the holders in the form specified in the indenture, subject to certain additional conditions; provided that payments of interest and contingent interest, if any, that are due and payable on any interest payment date falling on or prior to such purchase date will be payable

on such interest payment date to the persons that were the registered holders of the debentures at the close of business on the related record date. This purchase notice must be delivered by holders during the period beginning at the opening of business on the date that is 25 business days immediately preceding the relevant purchase date until 5:00 p.m. (New York City time) on the fifth business day prior to the purchase date. If the purchase notice is given and withdrawn during such period, we will not be obligated to purchase the related debentures. Debentures surrendered for repurchase must be surrendered in a principal amount equal to \$1,000 or in an integral multiple of \$1,000. Our purchase obligation is subject to some additional conditions as described in the indenture.

In the case of any debentures purchased by us on May 15, 2008, we are required to pay the purchase price in cash. For the May 15, 2013 and May 15, 2018 purchase dates, we may choose to pay the purchase price in cash or shares of our common stock or a combination of cash and shares of our common stock, provided that, in any such event, we will pay any accrued and unpaid interest and contingent interest, if any, in cash. Our right to pay all or any of the purchase price in shares of our common stock is subject to specified conditions.

Edgar Filing: EDWARDS LIFESCIENCES CORP - Form 424B3

If we elect, for either the May 15, 2013 or May 15, 2018 purchase date, to pay the purchase price, in whole or in part, in shares of common stock, the number of shares of common stock to be delivered by us will be equal to the portion of the purchase price to be paid in shares of common stock divided by the market price of our common stock. The market price of our common stock will be determined prior to the applicable purchase date, as described in the definition of "market price" below. If we elect to pay the purchase price, in whole or in part, in shares of our common stock, we will pay cash for all fractional shares of our common stock in an amount based on the market price of our common stock.

As used under this caption "Description of the debentures", "market price" means, with respect to any purchase date (including upon the occurrence of a Change in Control) or other date of determination, the average of the last reported sale price of our common stock for the 20 consecutive trading days ending on the third business day prior to the applicable purchase date (including upon the occurrence of a Change in Control) or date of determination, as the case may be (if the third business day prior to the applicable purchase date or the date of determination is a trading day, or if not, then on the last trading day prior to such third business day), appropriately adjusted to take into account the occurrence, during the period commencing on the first of the trading days during the 20 consecutive trading day period and ending on such purchase date or date of determination, as the case may be, of any event requiring an adjustment of the conversion price under the indenture.

Because the market price of our common stock is determined prior to the applicable purchase date, you will bear the market risk with respect to the value of shares of our common stock, if any, to be received from the date the market price is determined to the purchase date. In addition, as set forth in the definition of "market price" above, the market price of our common stock is an average price rather than the price as of a single date.

On or before the 25th business day prior to each purchase date, we will mail to holders of the debentures at their addresses shown in the register of the security registrar a notice stating, among other things:

whether we will pay the purchase price of the debentures in cash, in shares of our common stock, or any combination thereof, specifying the percentages or amounts of each;

if we elect to pay with shares of our common stock for either the May 15, 2013 or May 15, 2018 purchase date, the method of calculating the market price of our common stock; and

the procedures that holders must follow to require us to purchase their debentures.

30

A notice from you electing to require us to purchase your debentures must state:

if your debentures are certificated, the certificate numbers of the debentures to be delivered for purchase, or if not certificated, such information as may be required under applicable DTC procedures;

the portion of the principal amount of debentures to be purchased, which must be \$1,000 or an integral multiple of \$1,000;

that the debentures are to be purchased by us pursuant to the applicable provisions of the debentures and the indenture; and

for the May 15, 2013 and May 15, 2018 purchase dates, in the event we elect, pursuant to the notice that we are required to give, to pay the purchase price in shares of our common stock, in whole or in part, but the purchase price is ultimately to be paid to the holder entirely in cash because any of the conditions to payment of the purchase price or portion of the purchase price in shares of our common stock is not satisfied prior to the close of business on the business day immediately preceding the purchase date, whether you elect:

(1)

to withdraw the purchase notice as to some or all of the debentures to which it relates; or

(2)

Edgar Filing: EDWARDS LIFESCIENCES CORP - Form 424B3

to receive cash in respect of the entire purchase price for all debentures or portions of debentures subject to the purchase notice.

If you fail to indicate your choice with respect to the election described in the final bullet point above, you will be deemed to have elected to receive cash in respect of the entire purchase price for all debentures subject to the purchase notice in these circumstances. For a discussion of the tax treatment of a holder receiving cash, shares of common stock or any combination thereof, see "Certain United States federal income tax considerations."

No debentures may be purchased at the option of holders if there has occurred and is continuing an event of default under the indenture other than an event of default that is cured by the payment of the purchase price of the debentures.

You may withdraw any purchase notice in whole or in part by a written notice of withdrawal delivered to the paying agent prior to 5:00 p.m. (New York City time) on the fifth business day immediately preceding the purchase date. The notice of withdrawal must state:

the principal amount of the withdrawn debentures;

if certificated debentures have been issued, the certificate numbers of the withdrawn debentures or, if not, such information as may be required under applicable DTC procedures; and

the principal amount, if any, of debentures that remains subject to the purchase notice.

Our right to purchase debentures, in whole or in part, with common stock is subject to various conditions, including:

our providing timely written notice, as described above, of our election to purchase all or part of the debentures with our common stock;

our common stock then being listed on a national or regional securities exchange or quoted on the National Association of Securities Dealers Automated Quotation System;

information necessary to calculate the market price of our common stock being published in a daily newspaper of national circulation or being otherwise readily publicly available;

registration of the shares of common stock under the Securities Act or the Exchange Act, in each case if required; and

our obtaining any necessary qualification or registration under applicable state securities law or the availability of an exemption from such qualification and registration.

If the required conditions are not satisfied with respect to a holder prior to the close of business on the business day immediately preceding the purchase date, we will pay the purchase price of the debentures of the holder entirely in cash. See "Certain United States federal income tax considerations Sale, exchange, conversion or redemption." We may not change the form or components or percentages or amounts of components of consideration to be paid for the debentures once we have given the notice that we are required to give to holders of debentures, except as described in the first sentence of this paragraph.

You must either effect book-entry transfer of or deliver the debentures to be purchased, together with necessary endorsements, to the office of the paying agent after delivery of your purchase notice to receive payment of the purchase price. You will receive payment promptly following the later of the purchase date and the time of book-entry transfer or the delivery of the debentures. If the paying agent holds money or securities sufficient to pay the purchase price of the debentures on the purchase date, then from and after the purchase date (whether or not

book-entry transfer of the debentures is made or whether or not the debenture is delivered to the paying agent):

such debentures will cease to be outstanding and interest and contingent interest, if any, will cease to accrue; and

all other rights of the holder will terminate (other than the right to receive the purchase price upon delivery or transfer of the debentures).

In connection with any purchase of debentures on a purchase date, we will comply with the provisions of all tender offer rules under the Exchange Act which may then be applicable, and file a Schedule TO or any other required schedule under the Exchange Act, in each case if required. Anything herein to the contrary notwithstanding, if we are required by applicable law to extend a purchase date to a date that is later than May 15, 2008, May 15, 2013 or May 15, 2018, as the case may be, then all references to the purchase date shall mean such extended date.

Our ability to repurchase the debentures for cash may be limited by various factors. We cannot assure you that we would have the financial resources, or would be able to arrange financing, to pay the purchase price in cash for all the debentures that might be delivered by holders of debentures seeking to exercise their right to do so. See "Risk factors Risks relating to the securities We may be unable to repurchase debentures at the option of the holders and in other circumstances."

Purchase of debentures by us at option of holder upon Change in Control

If a Change in Control (as defined below) occurs at any time prior to May 15, 2008, you will have the right, at your option, subject to the terms and conditions of the indenture, to require us to purchase any or all of your debentures in a principal amount thereof that is equal to \$1,000 or an integral multiple of \$1,000. The price we are required to pay to holders of the debentures so purchased is equal to 100% of the principal amount of the debentures to be purchased plus any accrued and unpaid interest and contingent interest, if any, to, but excluding, the date (the "Change in Control purchase date") specified by us in the notice described below; provided that payments of interest, if any, and contingent interest, if any, that are due and payable on any interest payment date falling on or prior to a Change in Control purchase date will be payable on such interest payment date to the persons that were the registered holders of those debentures at the close of business on the related record date. The Change in Control purchase date will be determined by us and will be on or before the 55th business day following the date of the applicable Change in Control. If a Change in Control occurs on or after May 15, 2008, no holder will have a right to require us to purchase any debentures as a result of such Change in Control.

We may, at our option, pay the Change in Control purchase price in cash, or in shares of our common stock, or a combination of cash and shares of our common stock, but we are required to pay any accrued and unpaid interest and contingent interest, if any, in cash. Our right to pay all or any of the Change in Control purchase price in shares of our common stock is subject to specified conditions.

If we elect to pay the Change in Control purchase price, in whole or in part, in shares of common stock, the number of shares of common stock to be delivered by us will be equal to the portion of the Change in Control purchase price to be paid in common stock divided by the market price of our common stock. The market price of our common stock will be determined prior to the applicable Change in Control purchase date, as described in the definition of "market price" above. If we elect to

pay the Change in Control purchase price, in whole or in part, in shares of our common stock, we will pay cash based on the market price of our common stock for all fractional shares.

Because the market price of our common stock is determined prior to the applicable Change in Control purchase date, you will bear the market risk with respect to the value of the shares of our common stock, if any, to be received from the date when the market price is determined to the Change in Control purchase date. In addition, as set forth in the definition of "market price" above, the market price is an average price rather than the price determined as of a single date.

Our ability to repurchase debentures for cash may be limited by various factors. We cannot assure you that we would have the financial resources, or would be able to arrange financing, to pay the Change in Control purchase price in cash for all debentures that might be delivered by holders of debentures seeking to exercise their right to do so. See "Risk factors Risks relating to the securities We may be unable to repurchase debentures at the option of the holders and in other circumstances."

A "Change in Control" will be deemed to have occurred at the time after the date of the indenture that any of the following occurs:

a "person" or "group" within the meaning of Section 13(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), other than us, our subsidiaries or any employee benefit plan, employee stock purchase plan, employee stock ownership plan, 401(k) plan or other similar plan maintained by us or any of our subsidiaries or for the benefit of any of the officers, directors or employees of us or any of our subsidiaries, files a Schedule TO or Schedule 13D (or any successor thereto) under the Exchange Act disclosing that such person or group has become the direct or indirect "beneficial owner", as defined in Rule 13d-3 under the Exchange Act, of our common voting equity, as defined below, representing more than 50% of the total voting power of all of our outstanding common voting equity;

consummation of any share exchange, consolidation or merger of us pursuant to which our common stock will be converted into cash, securities or other property or any sale, lease or other transfer in one transaction or a series of transactions of all or substantially all of the consolidated assets of us and our subsidiaries, taken as a whole, to any person other than one of our subsidiaries; provided, however, that a transaction where the holders of more than 50% of the total voting power of all of our outstanding common voting equity immediately prior to such transaction own, directly or indirectly, more than 50% of the total voting power of all of the outstanding common voting equity of the continuing, successor, surviving or transferee entity immediately after such event shall not constitute a Change in Control; or

continuing directors, as defined below, cease to constitute at least a majority of our board of directors.

A Change in Control will not be deemed to have occurred, however, if either:

the last reported sale price of our common stock for any five trading days (whether or not consecutive) within the 10 consecutive trading days ending immediately before the later of the date of the Change in Control or the date of the announcement thereof, equals or exceeds 105% of the applicable conversion price per share of common stock in effect on each of those trading days, or

at least 90% of the consideration, excluding cash payments for fractional shares, in the transaction or transactions constituting the Change in Control consists (or, when issued or exchanged in connection with the Change in Control, will consist) of shares of common stock or other common equity securities traded on a national securities exchange or quoted on the National Association of Securities Dealers Automated Quotation System or which will be so traded or quoted when issued or exchanged in connection with the Change in Control (these

securities being referred to as "publicly traded securities") and as a result of this transaction or transactions the debentures become convertible into such publicly traded securities, excluding cash payments for fractional shares.

"Continuing director" means a director who either was a member of our board of directors on the date of this prospectus or who becomes a director of Edwards Lifesciences subsequent to that date and whose election, appointment or nomination for election by our stockholders, is duly approved by a majority of the continuing directors on the board of directors of Edwards Lifesciences at the time of such approval, either by a specific vote or by approval of the proxy statement issued by Edwards Lifesciences on behalf of the entire board of directors of Edwards Lifesciences in which such individual is named as nominee for director. In the event that we do not have directors, then references in the preceding sentence to our "directors" shall be deemed to mean our trustees, managing members or other persons holding similar positions with us; references in the preceding sentence and in the definition of Change in Control to our "board of directors" shall mean our board of trustees, managing members or similar group; and references in the preceding sentence to our "stockholders" shall mean the holders of our equity securities entitled to elect our trustees, managing members or other persons holding similar positions.

"Common voting equity" means, with respect to any person, any class or series of common stock or other common equity of such person (i) which has no preference in respect of dividends or of amounts payable in the event of any voluntary or involuntary liquidation, dissolution or winding up of such person and which is not subject to redemption by such person and (ii) which is ordinarily, in the absence of contingencies, entitled to vote for the election of, or to appoint or to approve the appointment of, the directors, trustees or managing members of, or other persons holding similar positions with, such person.

On or before the 20th business day after the occurrence of a Change in Control, we will mail to all holders of the debentures at their addresses shown in a register of the security registrar a notice of the occurrence of the Change in Control and of the resulting purchase right.

Edgar Filing: EDWARDS LIFESCIENCES CORP - Form 424B3

Such notice shall state, among other things:

the Change in Control purchase date, which shall be not more than 35 business days nor fewer than 25 business days after the day of such notice;

whether we will pay the Change in Control purchase price of debentures in cash, common stock or a combination thereof, specifying the percentages or amounts of each;

if we elect to pay in common stock, the method of calculating the market price of the common stock;

the procedures that holders must follow to require us to purchase their debentures; and

the last date and time on which, if you have delivered a notice requesting us to purchase, you may withdraw such notice, which date and time will be 5:00 p.m. (New York City time) on the fifth business day immediately preceding the Change in Control purchase date specified in our notice of the Change in Control.

To exercise the purchase right, you must deliver, on or before 5:00 p.m. (New York City time) on the fifth business day immediately preceding the Change in Control purchase date, a duly completed written purchase notice in the form specified in the indenture, to the paying agent and must not have withdrawn such notice. Your purchase notice must state:

if your debentures are certificated, the certificate numbers of your debentures to be delivered for purchase;

34

if your debentures are not certificated, such information as may be required under applicable DTC procedures;

the portion of the principal amount of debentures to be purchased, which must be \$1,000 or an integral multiple thereof;

that the debentures are to be purchased by us pursuant to the applicable provisions of the debentures and the indenture; and

in the event we elect, pursuant to the notice that we are required to give, to pay the Change in Control purchase price in common stock, in whole or in part, but the Change in Control purchase price is ultimately to be paid to the holder entirely in cash because any condition to payment of the Change in Control purchase price or portion of the Change in Control purchase price in common stock is not satisfied prior to the close of business on the business day immediately preceding the Change in Control purchase date, whether you elect:

- (1) to withdraw the purchase notice as to some or all of the debentures to which it relates, or
- (2) to receive cash in respect of the entire Change in Control purchase price for all debentures or portions of debentures subject to the purchase notice.

If you fail to indicate your choice with respect to the election described in the final bullet point above, you will be deemed to have elected to receive cash in respect of the entire Change in Control purchase price for all debentures subject to the purchase notice in these circumstances. For a discussion of the tax treatment of a holder receiving cash, shares of common stock or any combination thereof, see "Certain United States federal income tax considerations."

Edgar Filing: EDWARDS LIFESCIENCES CORP - Form 424B3

No debentures may be purchased at the option of holders upon a Change in Control if there has occurred and is continuing an event of default under the indenture other than an event of default that is cured by the payment of the Change in Control purchase price of the debentures.

You may withdraw any Change in Control purchase notice (in whole or in part) by a written notice of withdrawal delivered to the paying agent prior to 5:00 p.m. (New York City time) on the fifth business day immediately preceding the Change in Control purchase date. The notice of withdrawal must state:

the principal amount of the withdrawn debentures;

if certificated debentures have been issued, the certificate numbers of the withdrawn debentures, or if the debentures are not certificated, the information required under applicable DTC procedures; and

the principal amount of debentures, if any, which remains subject to the Change in Control purchase notice.

We will be required to purchase debentures that have been duly surrendered for purchase as described above and not duly withdrawn on the Change in Control purchase date. You must either effect book-entry transfer of or deliver the debentures to be purchased, together with necessary endorsements, to the office of the paying agency after delivery of your purchase notice to receive payment of the Change in Control purchase price. You will receive payment of the Change in Control purchase price promptly following the later of the Change in Control purchase date or the time of book-entry transfer or the delivery of the debentures. If the paying agent holds money or securities sufficient to pay the Change in Control purchase price of the debentures on the Change in Control

35

purchase date, then, from and after the Change in Control purchase date (whether or not book-entry transfer of the debentures is made and whether or not the debenture is delivered to the paying agent):

such debentures will cease to be outstanding and interest and contingent interest, if any, will cease to accrue; and

all other rights of the holder will terminate (other than the right to receive the Change in Control purchase price upon delivery or transfer of the debentures).

In connection with any purchase offer in the event of a Change in Control, we will comply with the provisions of all tender offer rules under the Exchange Act which may then be applicable, and file a Schedule TO or any other required schedule under the Exchange Act, if required. Anything herein to the contrary notwithstanding, if we are required by applicable law to extend the Change in Control purchase date to a date that is later than the Change in Control purchase date specified in our notice to holders, then all references to that Change in Control purchase date shall mean such extended date.

Our right to pay the Change in Control purchase price for debentures, in whole or in part, with common stock is subject to various conditions, including:

our providing timely written notice, as described above, of our election to purchase all or part of the debentures with our common stock;

our common stock then being listed on a national or regional securities exchange or quoted on the National Association of Securities Dealers Automated Quotation System;

information necessary to calculate the market price of our common stock being published in a daily newspaper of national circulation or being otherwise publicly available;

registration of the shares of common stock under the Securities Act or the Exchange Act, in each case if required; and

obtaining any necessary qualification or registration under applicable state securities law or the availability of an exemption from such qualification and registration.

If those conditions are not satisfied with respect to a holder prior to the close of business on the business day immediately preceding the Change in Control purchase date, we will pay the Change in Control purchase price of the debentures of the holder entirely in cash. We may not change the form or components or percentages or amounts of components of consideration to be paid for the debentures once we have given the notice that we are required to give to holders of debentures, except as described in the first sentence of this paragraph.

The Change in Control feature could discourage a potential acquirer of us. The Change in Control purchase feature, however, is not the result of management's knowledge of any specific effort to obtain control of us by any means or part of a plan by management to adopt a series of anti-takeover provisions. Instead, the Change in Control purchase feature is contained in securities similar to the debentures.

The term Change in Control is limited to specified transactions and may not include other events that might adversely affect our financial condition. In addition, the requirement that we offer to purchase the debentures upon a Change in Control may not protect holders in the event of a highly leveraged transaction, reorganization, merger or similar transaction involving us.

The definition of Change in Control includes a phrase relating to the sale, lease or other transfer of "all or substantially all" of our consolidated assets. There is no precise, established definition of the phrase "substantially all" under applicable law. Accordingly, the ability of a holder of the debentures to

require us to purchase its debentures as a result of the sale, lease or other transfer of less than all of our consolidated assets may be uncertain.

Consolidation, merger and sale of assets

We may not consolidate with or merge into any other person or convey, transfer or lease our properties and assets substantially as an entirety to any person unless:

we are the surviving person or the person, if other than us, formed by such consolidation or into which we are merged or the person to which our properties and assets substantially as an entirety are conveyed, transferred or leased is a corporation, limited liability company, partnership, trust or other entity organized and existing under the laws of the United States, any state thereof or the District of Columbia and expressly assumes our obligations under the debentures and the indenture; and

immediately after giving effect to the transaction, there is no event of default under the indenture or event that, with notice or lapse of time or both, would be an event of default under the indenture.

Upon any permitted consolidation, merger, conveyance, transfer or lease described in the preceding paragraph, the successor entity shall succeed to and be substituted for us, and may exercise our rights and powers under the indenture and the debentures, and after any such contemplated transaction, we will be relieved of all obligations and covenants under the indenture and the debentures.

Events of default; notice and waiver

Each of the following constitutes an event of default under the indenture:

default in payment of the principal amount with respect to any debentures when that payment becomes due and payable;

default in payment when due of any accrued and unpaid interest or accrued and unpaid contingent interest, if any, on the debentures or any accrued and unpaid liquidated damages with respect to the debentures due to a breach of the registration rights agreement as described below under "Registration rights," which default continues for 30 days;

a failure to comply in any material respect with any of our other agreements contained in the debentures or the indenture for a period of 60 days after notice to us of such default by the trustee or to us and the trustee by the holders of at least 25% in aggregate principal amount of the outstanding debentures;

the occurrence of an event of default within the meaning of another mortgage, indenture or debt instrument under which there may be issued, or by which there may be secured or evidenced, any of our indebtedness for borrowed money, other than the debentures, in an amount in excess of \$20 million and which results in such indebtedness in an amount in excess of \$20 million becoming or being declared due and payable prior to the date on which it would otherwise become due and payable, and we have not remedied or cured the default or the default has not been waived by the holders of the indebtedness or the acceleration is not rescinded or annulled or the indebtedness has not been repaid, in each case within 60 days after written notice to us from the trustee or to us and to the trustee from the holders of at least 25% in aggregate principal amount of the outstanding debentures; provided, however, that if, prior to a declaration of acceleration of the maturity of the debentures or the entry of judgment in favor of the trustee in a suit pursuant to the indenture, the default has been remedied or cured or waived by the holders of the indebtedness or such acceleration has been rescinded or annulled

37

or such indebtedness has been repaid, then the event of default under the indenture shall be deemed to have been remedied, cured and waived; and

the occurrence of specified events of bankruptcy, insolvency or reorganization with respect to us or any of our significant subsidiaries.

"Significant subsidiary" means any subsidiary of ours that is a "significant subsidiary," as defined in Rule 1-02(w) of Regulation S-X as such Rule is in effect on the date of the indenture.

In general, the indenture obligates the trustee to give notice of a default with respect to the debentures to the holders of those debentures. We are required by the indenture to deliver to the trustee, annually, an officers' certificate stating whether or not to the knowledge of the signers thereof we are in default in the performance of any of the terms of the indenture. The trustee may withhold notice of any default, except a default in the payment of interest or contingent interest, if any, or principal on any debentures, if the trustee determines in good faith it is in the best interests of the holders of the debentures to do so.

If there is a continuing event of default, other than an event of default described in the final bullet point above, either the trustee or the holders of at least 25% in aggregate principal of debentures then outstanding may require us to repay immediately the unpaid principal plus any accrued and unpaid interest and contingent interest, if any, through the date of acceleration on all debentures. In the case of an event of default resulting from events of bankruptcy, insolvency or reorganization with respect to us or any of our significant subsidiaries, the principal amount of the debentures plus any accrued interest and contingent interest, if any, through the date of such acceleration on all debentures will become immediately payable without any act on the part of the trustee or any holder of debentures.

After acceleration, the holders of a majority in aggregate principal amount of the outstanding debentures may rescind and annul the acceleration if:

all existing events of defaults, other than the non-payment of accelerated amounts, have been cured or waived;

the rescission would not conflict with any final and unappealable judgment or order of a court of competent jurisdiction; and

all payments due the trustee have been made.

Edgar Filing: EDWARDS LIFESCIENCES CORP - Form 424B3

The holders of a majority in aggregate principal amount of the outstanding debentures may waive, on behalf of all of the holders of all of the debentures, any default and its consequences, except that such holders of a majority in aggregate principal amount of the debentures may not waive:

a default in payment of the principal amount with respect to any debentures when that payment becomes due and payable;

a default in payment when due of any accrued and unpaid interest or contingent interest, if any, on the debentures or any accrued and unpaid liquidated damages with respect to the debentures, which default continues for 30 days;

a default with respect to a provision of the indenture which cannot be amended without the consent of each holder affected by the amendment; or

a default which constitutes a failure to convert any debenture in accordance with its terms and the terms of the indenture.

Other than the duty to act with the required care during an event of default, under the terms of the indenture, the trustee may refuse to enforce the indenture or the debentures unless it first receives satisfactory security or indemnity from the holders of debentures. Subject to limitations specified in the indenture, the holders of a majority in aggregate principal amount of the outstanding debentures have

38

the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee or exercising any trust or power conferred on the trustee.

No holder of debentures has any right to institute any proceeding, judicial or otherwise, with respect to the indenture or for the appointment of a receiver or trustee, or for any other remedy under the indenture, unless:

the holder has previously given to the trustee written notice of a continuing event of default with respect to the debentures;

the holders of at least 25% in aggregate principal amount of the outstanding debentures have made written request to the trustee to institute such proceeding as trustee and have offered security or indemnity satisfactory to the trustee;

the trustee has not received from the holders of a majority in aggregate principal amount of the outstanding debentures a direction inconsistent with such request; and

the trustee has failed to institute the proceeding within 60 days after receipt of the written request and offer of indemnity.

Notwithstanding the foregoing, the holder of any debenture has a right to institute suit to enforce the payment of the principal of, interest or contingent interest, if any, and liquidated damages, if any, on the debenture on or after the respective due dates and to convert any debenture into shares of our common stock.

Modification and amendment

The indenture permits us and the trustee to amend the indenture without the consent of the holders of debentures to, among other things:

evidence the succession of another person and the assumption by the successor of our obligations under the indenture and the debentures;

Edgar Filing: EDWARDS LIFESCIENCES CORP - Form 424B3

add to our covenants or surrender any right or power conferred upon us in the indenture;

cure any ambiguity, omission, defect or inconsistency or to correct or supplement any provision of the indenture or the debentures that may be inconsistent with any other provision of the indenture;

make any changes or modifications to the indenture necessary in connection with the registration of the debentures under the Securities Act or the qualification of the indenture under the Trust Indenture Act of 1939;

secure the debentures;

evidence and provide for the acceptance of an appointment by a successor trustee with respect to the debentures or to facilitate the administration of the trust thereunder by the trustee in accordance with such indenture;

provide any additional events of default;

modify any provision of the indenture or the debentures in order to conform that provision to the description thereof set forth in the offering memorandum dated May 6, 2003 prepared in connection with the private offering of the debentures; and

make any other changes that would not adversely affect in any material respect the holder of any outstanding debentures.

39

The indenture also permits us and the trustee, with the consent of the holders of a majority in aggregate principal amount of the outstanding debentures, to add any provisions to or change or eliminate any of the provisions of the indenture or the debentures or to modify the rights of the holders of debentures.

The immediately preceding paragraph notwithstanding, no amendment made pursuant to such immediately preceding paragraph may, without the consent of the holder of each of the debentures so affected:

reduce the principal amount, or extend the stated maturity, of any debenture;

reduce the redemption price, purchase price or Change in Control purchase price of any debenture;

adversely affect the right of the holder to convert any debenture;

except as otherwise provided in the indenture, alter the manner or rate of accrual of interest or contingent interest, if any, on any debenture or extend the time for payment of interest or contingent interest, if any, on any debenture;

change our obligation to maintain a paying agency for the debentures in The City of New York or the currency in which the debentures are payable;

reduce the percentage in principal amount of affected debentures, the consent of whose holders is required for amendment of the indenture or for waiver of compliance with some provisions of the indenture or for waiver of certain defaults thereunder, except to increase the percentage required for consent or to provide that additional provisions of the indenture may not be modified or waived without the consent of the holder of each debenture affected; or

Edgar Filing: EDWARDS LIFESCIENCES CORP - Form 424B3

impair the right to institute suit for the enforcement of any payment due under the debentures.

The holders of a majority in aggregate principal amount of the outstanding debentures may waive compliance by us with certain restrictive provisions of the indenture. The holders of a majority in aggregate principal amount of the outstanding debentures may also waive certain past defaults under the indenture.

Discharge

We may satisfy and discharge our obligations under the indenture by delivering to the trustee for cancellation all outstanding debentures or by depositing with the trustee, the paying agent or the conversion agent, as applicable, after the debentures have become due and payable, cash or shares of common stock, as the case may be, in accordance with the terms of the indenture, sufficient to pay all of the outstanding debentures and paying all other sums payable under the indenture by us. Notwithstanding the foregoing, all amounts due and payable at stated maturity, upon acceleration, upon redemption or on the May 15, 2008 purchase date will be paid in cash.

Governing law

The indenture and the debentures are governed by, and construed in accordance with, the laws of the State of New York.

Trustee

JPMorgan Chase Bank, an affiliate of J.P. Morgan Securities Inc., one of the initial purchasers in the original private offering of the debentures, is the trustee, security registrar, paying agent and conversion agent.

40

If an event of default occurs and is continuing, the trustee will be required to use the degree of care and skill of a prudent person in the conduct of its own affairs. The trustee will become obligated to exercise any of its powers under the indenture at the request of any of the holders of any debentures only after those holders have offered the trustee indemnity satisfactory to it.

Form, exchange, registration and transfer

The debentures are in registered form, without interest coupons. We will not charge a service charge for any registration of transfer or exchange of the debentures. We may, however, require the payment of any tax or other governmental charge payable for that registration.

The debentures are exchangeable for other debentures, for the same total principal amount and with the same terms but in different authorized denominations in accordance with the indenture. Holders may present debentures for conversion, registration of transfer and exchange at the office maintained by us for such purpose in The City of New York, which is initially the office or agency of the trustee. The security registrar may require a holder, among other things, to furnish appropriate endorsements and transfer documents, and to pay any taxes and fees required by law or permitted by the indenture. However, as noted below, the debentures are in book-entry form and holders are not entitled to receive certificated debentures except in limited circumstances.

We have appointed the trustee as security registrar for the debentures. We may at any time rescind that designation or approve a change in the location through which any security registrar acts. We are required to maintain an office or agency for transfers and exchanges in The City of New York. We may at any time designate additional security registrars for the debentures.

The security registrar is not required to register the transfer or exchange of any debentures:

during a period of 15 days before any selection of debentures for redemption;

selected for redemption in whole or in part, except the unredeemed portion of any debentures being redeemed in part; or

in respect of which a purchase notice or Change in Control purchase notice has been given and not withdrawn, except the portion of the debenture not to be purchased of any debenture being purchased in part.

The registered holder of a debenture may be treated as the owner of it for all purposes.

Payment and paying agent

Payments on the debentures will be made in U.S. dollars at the office of the paying agent. At our option, however, we may make payments by check mailed to the holder's registered address or by wire transfer.

The trustee has initially been designated as our paying agent for payments on the debentures. We may at any time designate additional paying agents or rescind the designation of any paying agent or approve a change in the office through which any paying agent acts, except that we will maintain at least one paying agent in The City of New York.

The trustee and paying agent shall pay to us upon written request any money or property held by them for payments on the debentures that remain unclaimed for two years after the date upon which that payment has become due. After payment to us, holders entitled to the money must look to us for payment. In that case, all liability of the trustee or paying agent with respect to that money will cease.

Notices

Except as otherwise described herein, notice to holders of the debentures will be given by mail to the addresses as they appear in the security register. Notices will be deemed to have been given on the date of such mailing.

Replacement of debentures

We will replace any debentures that become mutilated, destroyed, stolen or lost at the expense of the holder upon delivery to the trustee of the mutilated debentures or evidence of the loss, theft or destruction satisfactory to us and the trustee. In the case of a lost, stolen or destroyed debenture, indemnity satisfactory to the trustee and us may be required at the expense of the holder of the debenture before a replacement debenture will be issued.

Payment of stamp and other taxes

We will pay all stamp and similar duties, if any, which may be imposed by the United States or any political subdivision thereof or taxing authority thereof or therein with respect to the original issuance of the debentures in May 2003. We are not required to make any payment with respect to any other tax, assessment or governmental charge imposed by any government or any political subdivision or taxing authority.

Book-entry system

The debentures are represented by global debentures, which we refer to as "global securities." Each global security has been deposited with, or on behalf of, DTC and registered in the name of a nominee of DTC. Except under circumstances described below, the debentures will not be issued in certificated form. Investors may hold their interests in a global security directly through DTC if they are DTC participants, or indirectly through organizations that are DTC participants.

Ownership of beneficial interests in a global security is limited to persons that have accounts with DTC or its nominee ("participants") or persons that may hold interests through participants. Owners of beneficial interests in the debentures represented by the global securities hold their interests pursuant to the procedures and practices of DTC. Ownership of beneficial interests in a global security are shown on, and the transfer of that ownership is effected only through, records maintained by DTC (with respect to the interests of participants) and records maintained by DTC's direct and indirect participants (with respect to interests of persons other than participants). The laws of some states require that some purchasers of securities take physical delivery of the debentures in certificated form. Such limits and such laws may impair the ability to transfer or pledge beneficial interests in a global security.

So long as DTC or its nominee is the registered holder of a global security, DTC or its nominee, as the case may be, will be considered the sole owner or holder of the debentures represented by that global security for all purposes under the indenture. Except as provided below, owners of beneficial interests in a global security are not entitled to have debentures represented by that global security registered in their names, will not receive or be entitled to receive physical delivery of debentures in certificated form and are not considered the owners or holders thereof under the indenture. Principal and interest payments, if any, and contingent interest payments, if any, on debentures registered in the name of DTC or its nominee will be made to DTC or its nominee, as the case may be, as the registered owner of the relevant global security. Neither we,

the trustee, any paying agent or the security registrar for the debentures has or will have any responsibility or liability for any aspect of the records relating to nor payments made on account of beneficial interests in a global security or for maintaining, supervising or reviewing any records relating to such beneficial interests.

42

We expect that DTC or its nominee, upon receipt of any payment of principal or interest, if any, or contingent interest, if any, will credit immediately participants' accounts with payments in amounts proportionate to their respective beneficial interests in the principal amount of the relevant global security as shown on the records of DTC or its nominee. We also expect that payments by participants to owners of beneficial interests in a global security held through these participants will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of the participants.

If you would like to convert your debentures into common stock or to surrender your debentures for purchase on a purchase date or Change in Control purchase date, you must contact your broker or other direct or indirect DTC participant through which you own your debentures to obtain information on procedures, including proper forms and cut-off times, for taking those actions. As long as the debentures are in book-entry form, you will not be entitled to take those actions directly, but will be able to do so only through your broker or other direct or indirect DTC participants.

Neither we nor the trustee nor any security registrar, paying agent or conversion agent has or will have any responsibility for the performance by DTC or direct or indirect DTC participants of their obligations under the rules and procedures governing their operations. It is our understanding that DTC will take any action permitted to be taken by a holder of debentures, including the presentation of debentures for conversion or repurchase as described above, only at the direction of one or more direct DTC participants to whose account with DTC interests in the global securities are credited and only for the principal amount of the debentures for which directions have been given.

Transfers between participants in DTC will be effected in the ordinary way in accordance with DTC rules and are settled in same-day funds.

If DTC at any time notifies us in writing that it is unwilling or unable to continue as a depository for the debentures or if DTC ceases to be a "clearing agency" registered under the Securities Exchange Act, if so required by applicable law or regulation, and a successor depository is not appointed by us within 90 days of our receiving such notification or of our becoming aware that DTC has ceased to be so registered, as the case may be, or if an Event of Default has occurred and is continuing with respect to the debentures, we will issue debentures in certificated form in exchange for the global securities relating to the debentures. In addition, we may at any time and in our sole discretion determine not to have the debentures or portions of the debentures represented by one or more global securities and, in that event, will issue debentures in certificated form in exchange for the global security or securities representing the debentures. In any such instance, an owner of a beneficial interest in a global security will be entitled to physical delivery in certificated form of debentures represented by the global security equal in principal amount to the beneficial interest, and to have the debentures registered in its name. Debentures so issued in certificated form will be issued as registered debentures without interest coupons in denominations of \$1,000 and integral multiples thereof.

We obtained the information in this section concerning DTC from sources we believe to be reliable, but we take no responsibility for the accuracy of that information.

43

Registration rights

On May 9, 2003, we entered into a registration rights agreement with the initial purchasers of the debentures pursuant to which we agreed for the benefit of the holders of the debentures and the common stock issuable upon conversion of the debentures to, at our cost:

use our reasonable best efforts to file, no later than the 90th day after May 9, 2003, which was the original date of issuance of the debentures, a shelf registration statement, of which this prospectus is a part, covering resales of the debentures and the common stock issuable upon the conversion of the debentures pursuant to Rule 415 under the Securities Act;

Edgar Filing: EDWARDS LIFESCIENCES CORP - Form 424B3

use commercially reasonable efforts to cause the shelf registration statement to be declared effective under the Securities Act no later than the 180th day after May 9, 2003, which was the original date of issuance of the debentures; and

subject to certain rights to suspend use of the shelf registration statement and the related prospectus, use commercially reasonable efforts to keep the shelf registration statement effective until the earlier of (i) May 9, 2005, which is the second anniversary of the date of the original issuance of the debentures, and (ii) such time as there are no longer any "registrable securities" outstanding.

As described above, our obligation to use commercially reasonable efforts to keep the shelf registration statement effective under the Securities Act will terminate upon the earlier of May 9, 2005 and such time as there are no longer any "registrable securities" outstanding, and no owner of registrable securities may use this prospectus in connection with any resale or other transfer of those securities, or sell any of those securities pursuant to the shelf registration statement, at any time after that obligation terminates. The registration rights agreement defines "registrable securities" as the debentures and shares of common stock issued upon conversion of debentures, except that a debenture or share of common stock issued upon conversion of a debenture shall cease to be a registrable security when, in general, (a) it has been sold or otherwise transferred pursuant to an effective registration statement; (b) it has been sold or otherwise transferred pursuant to Rule 144 (or any successor provision) under the Securities Act; (c) the holding period applicable to it under Rule 144(k) (or any successor thereto) under the Securities Act, assuming it is not held by any "affiliate" of ours, has expired; and (d) it ceases to be outstanding.

Accordingly, upon a sale or other transfer of any debentures or shares of common stock issued upon conversion of debentures pursuant to the registration statement of which this prospectus is a part or pursuant to Rule 144 under the Securities Act, or upon the expiration of the holding period specified in Rule 144(k) under the Securities Act applicable to any debentures or shares of common stock issued upon conversion of debentures (assuming those debentures or shares of common stock are not held by any "affiliate" of ours), such debentures or shares of common stock, as the case may be, shall cease to be registrable securities and the holders thereof will not be entitled to require us to register those debentures or shares of common stock, as the case may be, under the Securities Act or to resell or otherwise transfer those debentures or shares of common stock pursuant to the shelf registration statement. In addition, our obligation to pay liquidated damages, if any, in respect of any debentures or shares of common stock issuable upon conversion of debentures will terminate when those debentures or shares of common stock, as the case may be, cease to be registrable securities.

Under the registration rights agreement, we are required from time to time to require holders of debentures and holders of shares of our common stock issued upon conversion of debentures to discontinue the sale or other disposition of debentures and of such shares of our common stock pursuant to the shelf registration statement and to discontinue the use of this prospectus under certain circumstances specified in the registration rights agreement, including circumstances relating to possible acquisitions or business combinations or other transactions, business developments or other events or

44

circumstances that we determine, in our sole and absolute discretion, make it advisable to suspend the availability of the shelf registration statement and this prospectus, or because the shelf registration statement or this prospectus contains an untrue statement of a material fact or omits to state a material fact necessary to make the statement therein not misleading; provided that the period during which we may require holders to discontinue the sale or other disposition of debentures and such shares of common stock pursuant to the shelf registration statement and suspend the use of this prospectus without our incurring the obligation to pay liquidated damages as described below shall not be more than 45 days (which need not be consecutive) in the aggregate in any three-month period or 120 days (which need not be consecutive) in the aggregate in any 12-month period. We need not specify the nature of the event giving rise to a suspension to holders of the debentures or holders of shares of our common stock issued upon conversion of debentures or otherwise. In the registration rights agreement, each holder of registrable securities is deemed to have agreed that, upon receipt of a notice from us to discontinue the sale or other disposition of debentures or shares of common stock pursuant to the shelf registration statement, it will do so until such time as we give notice that sales or other dispositions may be resumed.

Under the registration rights agreement, we have agreed to pay predetermined liquidated damages ("liquidated damages") as described herein (1) to all holders of registrable securities if the shelf registration statement is not timely filed or made effective as described above and (2) after the shelf registration statement has been declared effective, to holders of registrable securities that have completed, executed and delivered to us a notice and questionnaire substantially in the form specified in the registration rights agreement (and that have provided us such other information as required pursuant to the registration rights agreement) and that have been named as selling security holders in this prospectus, as amended or supplemented from time to time, if this prospectus is unavailable for use in connection with resales of such registrable securities for periods in excess of those permitted above (each, a "registration default") until such time as all registration defaults have been cured or cease to exist. We filed the shelf registration statement of which this prospectus is a part prior to the date specified in the registration rights agreement and the shelf registration statement was declared effective prior to the date specified in the registration rights agreement and,

accordingly, no liquidated damages were or will be payable as a result of any failure to make that filing or have the shelf registration statement declared effective on a timely basis as described in clause (1) above. However, if the applicable registration default results from this prospectus being unavailable for use in connection with resales of registrable securities for periods in excess of those permitted above as described in clause (2) above, then such registration default shall be deemed to have occurred on the first day on which this prospectus is unavailable for use in connection with resales of the applicable registrable securities for periods in excess of those permitted above, and liquidated damages shall accrue from and including the first day that this prospectus is unavailable for use in connection with resales of the applicable registrable securities for periods in excess of those permitted above to, but excluding, the date on which this prospectus becomes available for use in connection with resales of the applicable registrable securities. Liquidated damages will be calculated as follows:

in respect of any debentures that are registrable securities, at a rate per year equal to 0.25% of the outstanding principal amount thereof for the first 90 days from and including the date of the occurrence of the applicable registration default and 0.50% of the outstanding principal amount thereof thereafter (provided that such rate per year shall not in any event exceed 0.50% with respect to all registration defaults that have occurred and are continuing); and

in respect of any shares of common stock issued upon conversion of debentures and that are registrable securities, at a rate per year equal to 0.25% of the then applicable conversion price (determined as described below) for the first 90 days from and including the date of the occurrence of the applicable registration default and 0.50% of the then applicable conversion price (determined as described below) thereafter (provided that such rate per year shall not in

45

any event exceed 0.50% with respect to all registration defaults that have occurred and are continuing).

The liquidated damages will accrue from and including the date on which any registration default occurs to, but excluding, the date on which all registration defaults have been cured or cease to exist. We will pay the required liquidated damages in cash on May 15 or November 15, as applicable, to the holders of record of the applicable debentures or shares of common stock on the May 1 or November 1, as the case may be, immediately preceding such payment dates, subject to specified exceptions. For purposes of computing liquidated damages payable on any liquidated damages payment date in respect of any shares of common stock issued upon conversion of debentures as described in the second bullet point of the immediately preceding paragraph, the applicable conversion price shall be determined as of the May 1 or November 1, as the case may be, immediately preceding that liquidated damages payment date and such applicable conversion price shall be deemed to have been in effect on each day of the period as to which the liquidated damages payable on such payment date are being calculated, except that, if liquidated damages shall be payable on any date other than May 15 or November 15, then the applicable conversion price shall be determined as of the 15th calendar day (whether or not a business day) immediately preceding such payment date and such applicable conversion price shall be deemed to have been in effect on each day of the period as to which the liquidated damages payable on such payment date are being calculated. The exclusive remedy of a holder of registrable securities with respect to any registration default will be the liquidated damages provided above.

Liquidated damages shall in no event be payable in respect of any debentures or shares of common stock issued on conversion of debentures unless those debentures or shares of common stock, as the case may be, are registrable securities. A holder's right to receive liquidated damages, if any, in respect of any debentures or shares of common stock issued upon conversion of debentures will terminate when such debentures or shares of common stock, as the case may be, cease to be registrable securities. Moreover, as described above, only holders of registrable securities who have been named in this prospectus and have satisfied certain other conditions will be entitled to receive any liquidated damages which may be payable because this prospectus is unavailable for use in connection with resales of registrable securities for periods in excess of those permitted above. **As described above, upon any sale or other transfer of any debentures or shares of common stock issued upon conversion of debentures pursuant to the registration statement of which this prospectus is a part, such debentures or shares of common stock, as the case may be, will cease to be registrable securities, and our obligation to pay liquidated damages, if any, in respect of those debentures or shares of common stock will terminate.**

The foregoing summary of certain provisions of the registration rights agreement does not purport to be complete and is subject to, and is qualified in its entirety by reference to, all of the provisions of the registration rights agreement. Because the foregoing is only a summary, it does not contain all the information that you may find useful. For further information you should read the registration rights agreement. The registration rights agreement is incorporated by reference as an exhibit to the registration statement of which this prospectus is a part and you may obtain a copy of that agreement as described below under "Available information" and "Incorporation of documents by reference."

46

Description of capital stock

Authorized capital stock

Our authorized capital stock consists of 350,000,000 shares of common stock, par value \$1.00 per share, and 50,000,000 shares of preferred stock, par value \$.01 per share. As of September 30, 2003, there were 59,027,688 shares of common stock outstanding and there were no shares of preferred stock outstanding. However, our board of directors has authorized the issuance of a series of our preferred stock, initially consisting of 3,500,000 shares, designated as the Series A Junior Participating Preferred Stock (the "Series A Preferred Stock"). The Series A Preferred Stock is issuable upon the exercise of rights issued under our stockholder rights plan. See "Rights agreement" below. The following is a summary of some of the provisions of our certificate of incorporation, bylaws and rights agreement (as defined below) and the Delaware General Corporation Law. This summary is not complete and is subject to, and is qualified in its entirety by reference to, our certificate of incorporation, bylaws and rights agreement. For more complete information, you should read our certificate of incorporation, bylaws and rights agreement, copies of which have been filed or incorporated by reference as exhibits to the registration statement of which this prospectus is a part and may be obtained as described below under "Available information" and "Incorporation of documents by reference."

Common stock

The holders of our common stock are entitled to one vote for each share of common stock on all matters submitted to a vote of the holders of our common stock. The affirmative vote of a majority of the shares present in person or represented by proxy and entitled to vote at the meeting is required for all actions to be taken by the holders of our common stock, except for the election of directors, which requires a plurality of the shares present in person or represented by proxy and entitled to vote at the meeting, and amendments of certain provisions of the certificate of incorporation and bylaws as described below under "Certain anti-takeover effects of our certificate of incorporation and bylaws Amendment of certain provisions of the certificate of incorporation and bylaws." Our stockholders do not have cumulative voting rights in the election of directors.

The holders of our common stock are entitled to such dividends as may be declared by our board of directors out of funds legally available for dividends, subject to any preferential dividend rights of any outstanding shares of our preferred stock. However, our current policy is not to pay cash dividends on our common stock. See "Dividend policy." If there is a liquidation, dissolution or winding-up of Edwards Lifesciences, we will distribute our assets that are legally available for distribution to stockholders ratably among the holders of our common stock outstanding at that time, subject to prior distribution rights of creditors and to any preferential rights of any outstanding shares of our preferred stock, and subject to the rights of the Series A Preferred Stock, if issued and outstanding.

Preferred stock

Under our certificate of incorporation, our board of directors is authorized, without stockholder approval, to cause the issuance of preferred stock, in one or more series. Our board of directors is authorized to determine the designations, powers, preferences and rights of any series of preferred stock, and any qualifications, limitations or restrictions of any series of preferred stock to the extent permitted by Delaware law. As described below under "Rights agreement," our board of directors has designated a series of preferred stock, the Series A Preferred Stock, in connection with our rights agreement.

Rights agreement

We are a party to a rights agreement dated as of March 31, 2000 (the "rights agreement") with EquiServe Trust Company, N.A., as rights agent. Each share of outstanding common stock currently has associated therewith one preferred share purchase right (each, a "right") issued pursuant to the rights agreement. In addition, each share of common stock that is issued after the date of this prospectus but

before the earlier of the Rights Distribution Date (as defined below), the date, if any, that the rights are redeemed or exchanged or the date the rights expire, including each share of common stock issued upon conversion of the debentures prior to the earlier of the Rights Distribution Date, the date, if any, that the rights are redeemed or exchanged or the date the rights expire, will also have an associated right. Upon the occurrence of specified events, each right will entitle the registered holder to purchase from us 1/100th of a share of the Series A Preferred Stock for \$80, subject to the adjustments specified in the rights agreement. No shares of Series A Preferred Stock are currently outstanding. The terms of the rights are set forth in the rights agreement.

The rights are not currently exercisable. The rights become exercisable upon the earliest to occur of:

Edgar Filing: EDWARDS LIFESCIENCES CORP - Form 424B3

10 days after the date of first public announcement that any Person, as defined, who or which, together with all Affiliates and Associates, each as defined, of such Person has become the Beneficial Owner, as defined, of 15% or more of the shares of our common stock then outstanding, subject to certain exceptions (an "Acquiring Person"); and

10 business days, or such later date as may be determined by our board of directors prior to the time any Person becomes an Acquiring Person, after a tender or exchange offer by such Person is first published, sent or given if, upon the consummation of the tender or exchange offer, that Person would be the Beneficial Owner, as defined, of 15% or more of the shares of our common stock then outstanding.

The earliest of the dates specified in the preceding sentence is called the "Rights distribution date."

Until the rights become exercisable, they will only be represented by the stock certificates for our common stock and will not trade independently of our common stock. If the rights become exercisable, separate certificates representing the rights will be distributed to holders and the rights will then trade independently from our common stock. Until a right is exercised, the holder of the right, as such, will have no rights as a stockholder of Edwards Lifesciences, including, without limitation, the right to vote or to receive dividends, if any. The rights will expire in 2010, unless the expiration date is extended or unless the rights are earlier redeemed or exchanged by us, as described below. The rights are protected by certain anti-dilution adjustments.

Subject to the rights of any series of preferred stock ranking prior and superior to the Series A Preferred Stock with respect to dividends, holders of Series A Preferred Stock will be entitled to receive, when, as and if declared by our board of directors out of funds legally available for the purpose, quarterly dividends in an amount per share equal to the greater of (a) \$0.01 and (b) subject to specified possible adjustments, 100 times the aggregate per share amount of all dividends (subject to certain exceptions) declared on our common stock since the immediately preceding quarterly dividend payment date or, with respect to the first quarterly dividend, since the first issuance of any Series A Preferred Stock. Subject to specified possible adjustments, each share of Series A Preferred Stock will entitle the holder to 100 votes on all matters submitted to a vote of our stockholders. Except as otherwise provided in our certificate of incorporation or bylaws, the holders of shares of Series A Preferred Stock and the holders of shares of our common stock will vote collectively as one class on all matters submitted to a vote of our stockholders. If at any time dividends on any Series A Preferred Stock are in arrears in an amount equal to six quarterly dividends on the Series A Preferred Stock, then, until all accrued and unpaid dividends for all previous quarterly dividend periods and for the then current quarterly dividend period on all outstanding shares of Series A Preferred Stock shall have been declared and paid or set apart for payment, all holders of our preferred stock (including holders of our Series A Preferred Stock) with dividends in arrears in an amount equal to six quarterly dividends thereon, voting as a class, will have the right to elect two of our directors. Whenever quarterly dividends or other distributions on the Series A Preferred Stock are in arrears, we may not, among other things, pay dividends on, redeem or purchase any shares of capital stock ranking junior (either as to dividends or upon liquidation, dissolution or winding up) to the Series A Preferred Stock. The Series A Preferred Stock ranks junior to all other series of our preferred stock as to the payment of dividends and distribution of assets, unless the terms of such other series provide otherwise.

48

If we enter into a consolidation, merger, combination or other transaction in which shares of our common stock are exchanged for or changed into other stock or securities, cash or other property, then the Series A Preferred Stock will be exchanged for or changed into an amount per share equal to 100 times (subject to specified possible adjustments) the aggregate amount of stock, securities, cash or other property for which a share of common stock is exchanged or changed.

Upon any liquidation, dissolution or winding up of Edwards Lifesciences, no distribution will be made to the holders of shares of capital stock ranking junior (either as to dividends or upon liquidation, dissolution or winding up) to the Series A Preferred Stock unless the holders of the Series A Preferred Stock have received \$100 per share, plus accrued and unpaid dividends, whether or not declared, to the date of payment. Following the payment of such liquidating distribution to the holders of our Series A Preferred Stock, no additional distributions shall be made to holders of Series A Preferred Stock unless the holders of our common stock shall have received an amount per share equal to 1/100th(subject to specified possible adjustments) of the liquidating distribution paid per share of Series A Preferred Stock. Following the payment of this amount to the holders of our common stock and the payment of any liquidation preferences of any other capital stock ranking prior to or on a parity with the Series A Preferred Stock, holders of Series A Preferred Stock and holders of our common stock shall receive their ratable and proportionate share of our remaining assets, if any, to be distributed in such proportion as each share of Series A Preferred Stock shall receive 100 times (subject to specified possible adjustments) of the amount distributed per share of common stock.

The Series A Preferred Stock will be protected by specified anti-dilution adjustments and is not be redeemable.

If any Person becomes an Acquiring Person, each holder of a right, other than rights beneficially owned by the Acquiring Person which will be void, will have the right to receive upon exercise of the right the number of shares of our common stock having a market value of two times the exercise price of the right. If we are acquired in a merger or other business combination transaction or 50% or more of our aggregate assets, cash flow or earning power are sold after a person or group of affiliated or associated persons has become an Acquiring Person, each holder of a right will have the right to receive, upon the exercise of the right, the number of shares of common stock of the acquiring company that at the time of the transaction has a market value of two times the exercise price of the right.

At any time after any Person becomes an Acquiring Person and prior to the acquisition by such Person, together with its Affiliates and Associates, of 50% or more of the then outstanding shares of our common stock, our board of directors may exchange the rights, other than rights that have become void, in whole or in part, at an exchange ratio of one share of our common stock per right, or 1/100th of a share of Series A Preferred Stock (or of a share of a class or series of our preferred stock having equivalent rights, preferences and privileges) per right, subject to adjustment.

In general, we may redeem the rights in whole, but not in part, at a price of \$.01 per right at any time until the earlier of the tenth day following the first date of public announcement that an Acquiring Person has become such and the expiration date of the rights. Immediately upon the board of directors' authorization of a redemption, the rights will terminate and the only right of the holders of the rights will be to receive the redemption price.

The rights will have an anti-takeover effect because the rights will cause substantial dilution to a person or group that attempts to acquire us on terms not approved by our board of directors. The rights should not interfere with any merger or other business combination approved by our board of directors because the rights may be redeemed by us under certain circumstances.

Certain anti-takeover effects of our certificate of incorporation and bylaws

Our certificate of incorporation and bylaws contain provisions that could make it more difficult for a third party to acquire us by means of a tender offer, proxy contest or otherwise.

Classified board of directors

Our certificate of incorporation provides that our directors, other than those who may be elected by the holders of any series of preferred stock under specified circumstances, will be divided into three classes of directors, as nearly equal in number as possible, and with each class serving a staggered three-year term. The classification of directors will make it more difficult to change the composition of our board of directors. At least two annual meetings of stockholders, instead of one, will be required to change a majority of our board of directors. The classification provisions could have the effect of discouraging a third party from initiating a proxy contest, making a tender offer or otherwise attempting to obtain control of us, even though such an attempt might be beneficial to us and the holders of our common stock and the debentures. In addition, the classification of our board of directors could increase the likelihood that incumbent directors will retain their positions. Accordingly, holders of our common stock and, possibly, of the debentures being sold in this offering could be deprived of certain opportunities to sell their shares or debentures at a higher market price than they might otherwise obtain.

Number of directors; filling vacancies; removal

Our certificate of incorporation provides that our board of directors will fix the number of directors, subject to any rights of holders of preferred stock or any series thereof to elect additional directors under specified circumstances. In addition, the certificate of incorporation provides that any vacancy that results from an increase in the number of directors, or for any other reason, may be filled by a majority of directors then in office, although less than a quorum, or by a sole remaining director, subject to any rights of holders of our preferred stock. Accordingly, our board of directors could prevent a holder of our common stock from increasing the size of the board of directors and filling the newly created directorships with that stockholder's own nominees. Our certificate of incorporation provides that, subject to the rights of the holders of any series of preferred stock, a director may be removed from office only for cause and only by the affirmative vote of at least a majority of the then outstanding shares entitled to vote for the election of that director.

No stockholder action by written consent; special meetings

Our certificate of incorporation prohibits stockholder action by written consent in lieu of a meeting. Our bylaws do not permit stockholders to call special meetings of the stockholders.

Edgar Filing: EDWARDS LIFESCIENCES CORP - Form 424B3

The provisions of our certificate of incorporation prohibiting stockholder action by written consent may have the effect of delaying or preventing consideration of a stockholder proposal. These provisions would also prevent the holders of a majority of our common stock from unilaterally using the written consent procedure to take stockholder action. Moreover, a stockholder could not force stockholder consideration of a proposal by calling a special meeting of stockholders.

Advance notice of stockholder nominations and stockholder proposals required

Our bylaws establish an advance notice procedure for stockholders to make nominations of candidates for election as directors or to bring other business before an annual meeting of stockholders. These provisions also state that only stockholders of record, or beneficial owners of common stock, as of specified dates may make nominations for directors or propose other business for consideration at a meeting.

These provisions may preclude a contest for the election of directors or the consideration of stockholder proposals if the proper procedures are not followed. In addition, these procedures may discourage or deter a third party from conducting a solicitation of proxies to elect its own slate of directors or to approve its own proposal.

Amendment of certain provisions of the certificate of incorporation and bylaws

Our certificate of incorporation provides that the affirmative vote of the holders of at least 80% of the voting power of the outstanding shares of our capital stock entitled to vote generally in the election of

50

directors, voting together as a single class, is required for any stockholder-initiated proposal to amend, repeal, or adopt any provisions inconsistent with the provisions of our bylaws or certificate of incorporation relating to:

- the prohibition of stockholder action without a meeting;
- the ability of the board of directors to fix the number of directors and to fill certain vacancies on the board of directors;
- the inability of stockholders to remove directors other than for cause; and
- the classified board of directors.

Our bylaws may be amended by the affirmative vote of a majority of the directors present at any meeting at which a quorum is present or by the affirmative vote of the holders of at least 80% of our outstanding shares of capital stock entitled to vote in elections of our directors considered as one class.

These super-majority voting requirements have the effect of making more difficult any amendment by stockholders of the bylaws or of any of the provisions of the certificate of incorporation described above, even if a majority of our stockholders believe that an amendment would be in their best interests.

Delaware takeover statute

We are subject to Section 203 of the Delaware General Corporation Law. Section 203 provides that, in general and subject to the exceptions specified in that section, a corporation may not engage in any business combination with any interested stockholder, as defined, for a three-year period following the time that such stockholder became an interested stockholder unless:

prior to that time, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;

Edgar Filing: EDWARDS LIFESCIENCES CORP - Form 424B3

upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced (excluding certain shares); or

at or subsequent to that time, the business combination is approved by the board of directors of the corporation and authorized at an annual or special meeting or stockholders by the affirmative vote of at least two-thirds of the outstanding voting stock of the corporation that is not owned by the interested stockholder.

Subject to exceptions specified in Section 203 of the Delaware General Corporation Law, an "interested stockholder" is defined, in general, to include:

any person that is the owner of 15% or more of the outstanding voting stock of the corporation, or is an affiliate or associate of the corporation and was the owner of 15% or more of the outstanding voting stock of the corporation at any time within the three-year period immediately prior to the date on which it is sought to be determined whether that person is an interested stockholder; and

the affiliates and associates of any person described in the preceding bullet point.

Section 203 of the Delaware General Corporation Law may make it more difficult for a person who would be an interested stockholder to effect various business combinations with us.

Transfer agent and registrar

Equiserve Trust Company, N.A. is the transfer agent and registrar for the common stock.

51

Certain United States federal income tax considerations

General

This is a summary of the material United States federal income tax consequences relevant to holders of debentures. This summary is based upon laws, regulations, rulings and decisions in effect on the date of this prospectus, all of which are subject to change (including retroactive changes) or possible differing interpretations. The discussion below deals only with debentures held as capital assets and does not purport to deal with persons in special tax situations, such as financial institutions, insurance companies, regulated investment companies, dealers in securities or currencies, tax-exempt entities, persons holding debentures in a tax-deferred or tax-advantaged account, or persons holding debentures as a hedge against currency risks, as a position in a "straddle" or as part of a "hedging" or "conversion" transaction for tax purposes.

We do not address all of the tax consequences that may be relevant to an investor in debentures. In particular, we do not address:

the United States federal income tax consequences to shareholders in, or partners or beneficiaries of, an entity that is a holder of debentures;

the United States federal estate, gift or alternative minimum tax consequences of the purchase, ownership or disposition of debentures;

U.S. holders (as defined below) whose functional currency is not the United States dollar;

any state, local or foreign tax consequences of the purchase, ownership or disposition of debentures; or

Edgar Filing: EDWARDS LIFESCIENCES CORP - Form 424B3

any United States federal, state, local or foreign tax consequences of owning or disposing of our common stock.

Persons considering the purchase of the debentures should consult their own tax advisors concerning the application of the United States federal income tax laws to their particular situations as well as any consequences of the purchase, ownership and disposition of the debentures arising under the laws of any other taxing jurisdiction.

A U.S. holder is a beneficial owner of the debentures who or which is:

a citizen or individual resident of the United States, as defined in section 7701(b) of the Internal Revenue Code of 1986, as amended (which we refer to as the Code);

a corporation or partnership, including any entity treated as a corporation or partnership for United States federal income tax purposes, created or organized in or under the laws of the United States, any state thereof or the District of Columbia;

an estate if its income is subject to United States federal income taxation regardless of its source; or

a trust if (1) a United States court can exercise primary supervision over its administration, and (2) one or more United States persons have the authority to control all of its substantial decisions.

Notwithstanding the preceding sentence, certain trusts in existence on August 20, 1996, and treated as U.S. persons prior to such date, may also be treated as U.S. holders. A non-U.S. holder is a beneficial owner of debentures other than a U.S. holder.

We urge prospective investors to consult their own tax advisors with respect to the tax consequences to them of the purchase, ownership and disposition of the debentures and our common stock in light of their own particular circumstances, including the tax consequences under state, local,

52

foreign and other tax laws and the possible effects of changes in United States federal or other tax laws.

Classification of the debentures

In connection with the issuance of the debentures in May 2003, our counsel, Sidley Austin Brown & Wood LLP, rendered an opinion, subject to customary assumptions and representations, that the debentures will be treated as indebtedness for United States federal income tax purposes and that the debentures will be subject to the special regulations governing contingent payment debt instruments (which we refer to as the "CPDI" regulations). Pursuant to the terms of the indenture, we agreed, and by acceptance of a beneficial interest in a debenture each holder of a debenture is deemed to have agreed, for United States federal income tax purposes, to treat the debentures as debt instruments that are subject to the CPDI regulations. In addition, under the indenture, each holder is deemed to have agreed to treat the fair market value of our common stock received by such holder upon conversion or upon a purchase by us at the holder's option as a contingent payment and to accrue interest with respect to the debentures as original issue discount for United States federal income tax purposes according to the "noncontingent bond method," set forth in section 1.1275-4(b) of the Treasury Regulations, using the comparable yield (as defined below) compounded semiannually and the projected payment schedule (as defined below) determined by us.

Recently, the Internal Revenue Service (which we refer to as the "IRS") issued Revenue Ruling 2002-31 and Notice 2002-36 addressing the United States federal income tax classification and treatment of instruments substantially similar, although not identical, to the debentures, and concluded that the instruments addressed in that published guidance were subject to the CPDI regulations. In addition, the IRS clarified various aspects of the potential applicability of certain other provisions of the Code to instruments addressed in that published guidance. However, Revenue Ruling 2002-31 is limited to its particular facts. In addition, no rulings have been sought or are expected to be sought from the IRS with respect to any of the United States federal income tax consequences discussed below. As a result, no assurance can be given that the IRS or a court will agree with the tax characterizations and the tax treatment described below. The remainder of this discussion assumes that the

debentures are subject to the CPDI regulations. Any differing treatment could affect the amount, timing and character of income, gain or loss in respect of an investment in the debentures. In particular, a holder might be required to accrue interest income at a higher or lower rate, might not recognize income, gain or loss upon conversion of the debentures into common stock, and might recognize capital gain or loss upon a taxable disposition of the debentures. Holders should consult their tax advisors concerning the tax treatment of holding the debentures.

Accrual of interest on the debentures

Pursuant to the CPDI regulations, a U.S. holder is required to accrue interest income on the debentures, in the amounts described below, regardless of whether the U.S. holder uses the cash or accrual method of tax accounting. Accordingly, U.S. holders are required to include interest, which we refer to as tax original issue discount, in taxable income in each year in excess of the accruals on the debentures for non-tax purposes (i.e., in excess of the stated semi-annual regular interest payments and any contingent interest payments) actually received in that year.

The CPDI regulations provide that a U.S. holder must accrue an amount of ordinary interest income, as original issue discount for United States federal income tax purposes, for each accrual period prior to and including the maturity date of the debentures that equals:

- (1) the product of (i) the adjusted issue price (as defined below) of the debentures as of the beginning of the accrual period, and (ii) the comparable yield to maturity (as defined below) of the debentures, adjusted for the length of the accrual period;

53

- (2) divided by the number of days in the accrual period; and

- (3) multiplied by the number of days during the accrual period that the U.S. holder held the debentures.

A debenture's issue price is the first price at which a substantial amount of the debentures is sold to the public, excluding sales to bond houses, brokers or similar persons or organizations acting in the capacity of underwriters, placement agents or wholesalers. The adjusted issue price of a debenture is its issue price increased by any interest income previously accrued, determined without regard to any adjustments to interest accruals described below, and decreased by the amount of any projected payments, as defined below, previously made on the debentures.

Sidley Austin Brown & Wood LLP, our counsel, has advised us that the term "comparable yield" means the annual yield we would pay, as of the initial issue date, on a noncontingent, nonconvertible, fixed-rate debt instrument with terms and conditions otherwise similar to those of the debentures. Based in part on that advice, we intend to take the position that the comparable yield for the debentures is 4.85%, compounded semiannually. The precise manner of calculating the comparable yield is not entirely clear. If the comparable yield were successfully challenged by the IRS, the redetermined yield could be materially greater or less than the comparable yield provided by us. Moreover, in such event, the projected payment schedule could differ materially from the projected payment schedule provided by us.

The CPDI regulations require that we provide to U.S. holders, solely for United States federal income tax purposes, a schedule of the projected amounts of payments, which we refer to as projected payments, on the debentures. This schedule must produce the comparable yield. The projected payment schedule includes the stated semi-annual regular interest payments, estimates for certain contingent interest payments and an estimate for a payment at maturity taking into account the conversion feature. In this connection, the fair market value of any common stock (and cash, if any) received by a holder upon conversion will be treated as a contingent payment.

The comparable yield and the schedule of projected payments are set forth in the indenture. U.S. holders may also obtain the projected payment schedule by submitting a written request for such information to: Edwards Lifesciences Corporation, Treasury Department/Investor Services, MS 27, One Edwards Way, Irvine, CA 92614.

For United States federal income tax purposes, a U.S. holder must use the comparable yield and the schedule of projected payments in determining its interest accruals, and the adjustments thereto described below, in respect of the debentures, unless such U.S. holder timely discloses and justifies the use of other estimates to the IRS. A U.S. holder that determines its own comparable yield or schedule of projected payments must also establish that our comparable yield or schedule of projected payments is unreasonable.

The comparable yield and the schedule of projected payments are not determined for any purpose other than for the determination of a U.S. holder's interest accruals and adjustments thereof in respect of the debentures for United States federal income tax purposes and do not constitute a projection or representation regarding the actual amounts payable on the debentures.

Amounts treated as interest under the CPDI regulations are treated as original issue discount for all purposes of the Code.

Adjustments to interest accruals on the debentures

If, during any taxable year, a U.S. holder receives actual payments with respect to the debentures for that taxable year that in the aggregate exceed the total amount of projected payments for that taxable year, the U.S. holder will incur a "net positive adjustment" under the CPDI regulations equal

54

to the amount of such excess. The U.S. holder will treat a "net positive adjustment" as additional interest income for the taxable year. For this purpose, the payments in a taxable year include the fair market value of property received in that year, including the fair market value of our common stock received upon conversion or purchase by us at your option.

If a U.S. holder receives in a taxable year actual payments with respect to the debentures for that taxable year that in the aggregate are less than the amount of projected payments for that taxable year, the U.S. holder will incur a "net negative adjustment" under the CPDI regulations equal to the amount of such deficit. This adjustment will (a) first reduce the U.S. holder's interest income on the debentures for that taxable year, and (b) to the extent of any excess after the application of (a), give rise to an ordinary loss to the extent of the U.S. holder's interest income on the debentures during prior taxable years, reduced to the extent such interest was offset by prior net negative adjustments. A negative adjustment is not subject to the two percent floor limitation imposed on miscellaneous itemized deductions under section 67 of the Code. Any negative adjustment in excess of the amounts described in (a) or (b) will be carried forward to offset future interest income accruals in respect of the debentures or to reduce the amount realized on the sale, exchange, conversion, purchase by us at the U.S. holder's option or redemption of the debentures.

If a U.S. holder purchases debentures at a discount or premium to the adjusted issue price, the discount will be treated as a positive adjustment and the premium will be treated as a negative adjustment. The U.S. holder must reasonably allocate the adjustment over the remaining term of the debentures by reference to the accruals of original issue discount at the comparable yield or to the projected payments. It may be reasonable to allocate the adjustment over the remaining term of the debentures pro rata with the accruals of original issue discount at the comparable yield. You should consult your tax advisor regarding these allocations.

Sale, exchange, conversion or redemption

Generally, the sale or exchange of a debenture, purchase by us at your option, or the redemption of a debenture for cash, will result in taxable gain or loss to a U.S. holder. As described above, our calculation of the comparable yield and the schedule of projected payments for the debentures includes the receipt of common stock upon conversion or upon a purchase by us at your option as a contingent payment with respect to the debentures. Accordingly, we intend to treat the receipt of our common stock by a U.S. holder upon the conversion of a debenture, or upon the U.S. holder's exercise of a put right where we elect to pay in common stock, as a contingent payment under the CPDI regulations. Under this treatment, conversion or such an exercise of the U.S. holder's put right also would result in taxable gain or loss to the U.S. holder. As described above, holders will generally be bound by our determination of the comparable yield and the schedule of projected payments.

The amount of gain or loss on a taxable sale, exchange, conversion, purchase by us at your option or redemption will be equal to the difference between (a) the amount of cash plus the fair market value of any other property received by the U.S. holder, including the fair market value of any of our common stock received, and (b) the U.S. holder's adjusted tax basis in the debenture. A U.S. holder's adjusted tax basis in a debenture will generally be equal to the U.S. holder's original purchase price for the debenture, increased by any interest income previously accrued by the U.S. holder (determined without regard to any adjustments to interest accruals described above, other than adjustments to reflect a discount or premium to the adjusted issue price, if any), and decreased by the amount of any projected payments, as defined above, previously made on the debentures to the U.S. Holder through such date (without regard to the actual amount paid). Gain recognized upon a sale, exchange, conversion, purchase by us at your option or redemption of a debenture will generally be treated as ordinary interest income; any loss will be ordinary loss to the extent of interest previously included in income, and thereafter, capital loss (which will be long-term if the debenture is held for more than one year). The deductibility of net capital losses by individuals and corporations is subject to limitations.

55

A U.S. holder's tax basis in our common stock received upon a conversion of a debenture or upon a U.S. holder's exercise of a put right that we elect to pay in our common stock will equal the then current fair market value of such common stock. The U.S. holder's holding period for the common stock received will commence on the day immediately following the date of conversion or redemption.

Constructive dividends

If at any time we were to make a distribution of property to our stockholders that would be taxable to the stockholders as a dividend for United States federal income tax purposes and, in accordance with the anti-dilution provisions of the debentures, the conversion price of the debentures were increased, such increase may be deemed to be the payment of a taxable dividend to holders of the debentures.

For example, an increase in the conversion price in the event of distributions of our evidences of indebtedness, or our assets, or an increase in the event of an extraordinary cash dividend may result in deemed dividend treatment to holders of the debentures, but generally an increase in the event of nontaxable stock dividends or the distribution of rights to subscribe for common stock would not be so treated.

Liquidated damages

We may be required to make payments of predetermined liquidated damages if we fail to comply with certain obligations under the registration rights agreement entered into in connection with the issuance of the debentures, as described under "Registration rights." We intend to take the position for U.S. federal income tax purposes that any payments of liquidated damages should be taxable to U.S. holders as additional ordinary income when received or accrued, in accordance with the holder's regular method of tax accounting. Our determination is binding on holders of the debentures, unless they explicitly disclose that they are taking a different position to the IRS on their tax returns for the year during which they acquire the debentures. The IRS could take a contrary position from that described above, which could affect the timing and character of U.S. holders' income from the debentures with respect to the payments of liquidated damages.

If we are required to pay liquidated damages for any reason, U.S. holders should consult their tax advisors concerning the appropriate tax treatment of the payment of liquidated damages with respect to the debentures. Investors should also be aware that, as described above under "Registration rights," liquidated damages are payable only in respect of debentures or shares of common stock issued upon conversion of debentures that are registrable securities, as defined above, and, upon a sale or other transfer of any debentures or shares of common stock issued upon conversion of debentures pursuant to the registration statement of which this prospectus is a part, those debentures or shares of common stock, as the case may be, will cease to be registrable securities and our obligation to pay liquidated damages, if any, in respect of those debentures or shares of common stock will terminate.

Treatment of non-U.S. holders

All payments on the debentures made to a non-U.S. holder, including any payment of contingent interest, a payment in our common stock pursuant to a conversion or purchase by us at your option, and any gain realized on a sale, exchange, redemption or conversion of the debentures, will be exempt from United States federal income or withholding tax *provided* that: (i) such non-U.S. holder does not own, actually, indirectly or constructively, 10% or more of the total combined voting power of all classes of our stock entitled to vote, is not a controlled foreign corporation related, directly or indirectly, to us through stock ownership and is not a bank receiving interest described in section 881(c)(3)(A) of the Code, (ii) the statement requirement set forth in section 871(h) or section 881(c) of the Code has been fulfilled with respect to the beneficial owner, as discussed below;

(iii) such payments and gain are not effectively connected with the conduct by such non-U.S. holder of a trade or business in the United States; (iv) our common stock continues to be actively traded within the meaning of section 871(h)(4)(C)(v)(I) of the Code (which, for these purposes and subject to certain exceptions, includes trading on the NYSE); and (v) we are not a "United States real property holding corporation" within the meaning of section 897(c)(2) of the Code. We believe that we are not and do not anticipate becoming a "United States real property holding corporation." However, if a non-U.S. holder were deemed to have received a constructive dividend (see "Constructive dividends" above), the non-U.S. holder will generally be subject to United States federal withholding tax at a 30% rate on the taxable amount of such dividend, subject to reduction by an applicable treaty or upon the receipt of a Form W-8ECI from the non-U.S. holder claiming that the deemed receipt of the constructive dividend is effectively connected with the conduct of a United States trade or business.

The statement requirement referred to in the preceding paragraph will be fulfilled if the beneficial owner of a debenture certifies on IRS Form W-8BEN, under penalties of perjury, that it is not a United States person and provides its name and address or otherwise satisfies applicable documentation requirements. If a non-U.S. holder of the debentures is engaged in a trade or business in the United States, and if interest on the debentures is effectively connected with the conduct of such trade or business, the non-U.S. holder, although exempt from the

Edgar Filing: EDWARDS LIFESCIENCES CORP - Form 424B3

withholding tax discussed in the preceding paragraphs, will generally be subject to regular United States federal income tax on interest and on any gain realized on the sale, exchange, redemption or conversion of the debentures in the same manner as if it were a U.S. holder. In lieu of the certificate described in the preceding paragraph, such a non-U.S. holder will be required to provide to the withholding agent a properly executed IRS Form W-8ECI (or successor form) in order to claim an exemption from withholding tax. In addition, if such a non-U.S. holder is a foreign corporation, such non-U.S. holder may be subject to a branch profits tax equal to 30% (or such lower rate provided by an applicable treaty) of its effectively connected earnings and profits for the taxable year, subject to certain adjustments.

Backup withholding tax and information reporting

Payments of principal, premium, if any, and interest (including tax original issue discount and a payment in common stock pursuant to a conversion or repurchase of the debentures) on, and the proceeds of dispositions of, the debentures may be subject to information reporting and United States federal backup withholding tax if the U.S. holder thereof fails to supply an accurate taxpayer identification number or otherwise fails to comply with applicable United States information reporting or certification requirements. A non-U.S. holder may be subject to United States backup withholding tax on payments on the debentures and the proceeds from a sale or other disposition of the debentures unless the non-U.S. holder complies with certification procedures to establish that it is not a United States person. Any amounts so withheld will be allowed as a credit against a U.S. holder's United States federal income tax liability and may entitle a holder to a refund, provided the required information is timely furnished to the IRS.

57

Selling securityholders

The debentures offered hereby were originally issued by us in a private offering in May 2003. Pursuant to a purchase agreement that we and the initial purchasers entered into in connection with that offering, the initial purchasers agreed to offer and sell the debentures only to persons they reasonably believed to be "qualified institutional buyers" within the meaning of Rule 144A under the Securities Act. The selling securityholders, which term includes their transferees, pledgees, donees and successors, may from time to time offer and sell pursuant to this prospectus any or all of the debentures and common stock issued upon conversion of the debentures.

The following table sets forth information regarding the respective principal amounts of debentures and numbers of shares of common stock beneficially owned by the selling securityholders prior to this offering and the respective principal amounts and numbers of shares of common stock offered by the selling securityholders pursuant to this prospectus. This information, as well as the information appearing in the footnotes (other than footnotes (1) through (4)) to the following table, has been obtained from the selling securityholders and we have not independently verified this information. The sum of the numbers reflected in this column may differ from the total due to rounding. Except as indicated in the footnotes to the following table, none of the selling securityholders has had any position, office or other material relationship with us or any of our affiliates within the past three years. Because the selling securityholders may offer all or some portion of the debentures or the common stock issuable upon conversion of the debentures pursuant to this prospectus, no estimate can be given as to the amount of the debentures or common stock that will be held by the selling securityholders upon termination of this offering. In addition, the selling securityholders identified below may have sold, transferred or otherwise disposed of all or a portion of their debentures or common stock since the date on which they provided the information to us for inclusion in the following table.

Name of Selling Securityholder(1)	Principal Amount of Debentures Beneficially Owned Prior to this Offering	Principal Amount of Debentures Offered Hereby	Number of Shares of Common Stock Beneficially Owned Prior to this Offering(2)	Number of Shares of Common Stock Offered Hereby(2)
Amaranth L.L.C.(6)(7)	\$ 31,620,000	\$ 31,620,000	578,485	578,485
CIBC World Markets(5)(48)	4,500,000	4,500,000	82,327	82,327
Clinton Multistrategy Master Fund, Ltd.(8)	4,015,000	4,015,000	73,454	73,454
Clinton Riverside Convertible Portfolio Limited(9)	6,985,000	6,985,000	127,789	127,789
CNH CA Master Account, L.P.(10)	1,000,000	1,000,000	18,294	18,294
D.E. Shaw Investment Group, L.P.(6)(11)	1,200,000	1,200,000	21,953	21,953

Edgar Filing: EDWARDS LIFESCIENCES CORP - Form 424B3

Name of Selling Securityholder(1)	Principal Amount of Debentures Beneficially Owned Prior to this Offering	Principal Amount of Debentures Offered Hereby	Number of Shares of Common Stock Beneficially Owned Prior to this Offering(2)	Number of Shares of Common Stock Offered Hereby(2)
D.E. Shaw Valence Portfolios, L.P.(6)(12)	4,800,000	4,800,000	87,815	87,815
Gaia Offshore Master Fund Ltd.(13)	1,800,000	1,800,000	32,930	32,930
Goldman, Sachs & Co.(5)(40)	9,500,000	9,500,000	173,801	173,801
Guggenheim Portfolio Co. XV, LLC(14)	50,000	50,000	914	914
Jersey (IMA) Corp.(6)(41)	800,000	800,000	14,635	14,635
J.P. Morgan Securities Inc.(5)(39)	7,450,000	7,450,000	142,313	136,297
KBC Financial Products USA Inc.(5)(15)	700,000	700,000	12,806	12,806
Laurel Ridge Capital, L.P.(42)	3,000,000	3,000,000	54,884	54,884
LDG Limited(16)	361,000	361,000	6,604	6,604
Libertyview Funds L.P.(6)(43)	3,200,000	3,200,000	58,543	58,543
Lyxor/Gaia II Fund Ltd.(17)	500,000	500,000	9,147	9,147
Man Convertible Bond Master Fund, Ltd.(18)	11,594,000	11,594,000	212,111	212,111
Meadow IAM Limited(19)	565,000	565,000	10,336	10,336
Pacific Life Insurance Company(6)(20)	500,000	500,000	9,147	9,147
Ramius Master Fund, Ltd.(6)(21)	2,000,000	2,000,000	36,589	36,589
RCG Latitude Master Fund, Ltd.(6)(22)	2,250,000	2,250,000	41,163	41,163
RCG Multi Strategy Master Fund Ltd.(6)(23)	1,650,000	1,650,000	30,186	30,186
S.A.C. Capital Associates, LLC(24)	16,000,000	8,000,000	296,084	146,359
SDCERA Convertible Arbitrage(25)	1,300,000	1,300,000	23,783	23,783
SG Cowen Securities Corporation(5)(45)	5,500,000	5,500,000	100,622	100,622
South Dakota Retirement System(46)	3,000,000	3,000,000	54,884	54,884
Sphinx Fund(26)	70,000	70,000	1,280	1,280
St. Thomas Trading, Ltd.(6)(27)	20,206,000	20,206,000	369,667	369,667
Sunrise Partners Limited Partnership(6)(28)	3,880,000	3,880,000	70,984	70,984
Topanga XI(6)(29)	700,000	700,000	12,806	12,806
TQA Master Fund, Ltd.(30)	3,431,000	3,431,000	62,769	62,769

58

TQA Master Plus Fund, Ltd.(31)	2,367,000	2,367,000	43,304	43,304
Tewksbury Investment Fund Ltd.(44)	200,000	200,000	3,658	3,658
UBS AG London Branch(6)(32)	11,000,000	11,000,000	201,244	201,244
Xavex Convertible Arbitrage 5 Fund(33)	50,000	50,000	914	914
Xavex Convertible Arbitrage 7 Fund(34)	495,000	495,000	9,055	9,055
Zazove Convertible Arbitrage Fund L.P.(35)	2,400,000	2,400,000	43,907	43,907
Zazove Hedged Convertible Fund L.P.(36)	2,000,000	2,000,000	36,589	36,589
Zazove Income Fund L.P.(37)	1,600,000	1,600,000	29,271	29,271
	2,127,000	2,127,000	38,913	38,913

Edgar Filing: EDWARDS LIFESCIENCES CORP - Form 424B3

Zurich Institutional Benchmarks Master Fund LTD(38)

Any other holders of debentures or shares of common stock issued on conversion of debentures and future transferees, pledgees, donees and successors thereof(3)

	934,000	934,000	17,087(4)	17,087
Total	\$ 177,300,000(47)	\$ 169,300,000(47)	3,253,047(47)	3,097,306(47)

- (1) Information concerning the selling securityholders may change from time to time. Any such changed information will be set forth in amendments or supplements to this prospectus, if and when required.
- (2) Unless otherwise indicated, includes all shares of common stock issuable upon conversion of the debentures and assumes a conversion price of \$54.66 per share and a cash payment in lieu of any fractional share. However, this conversion price will be subject to adjustment as described under "Description of the debentures Conversion rights." As a result, the number of shares of common stock beneficially owned prior to this offering and the number of shares of common stock offered hereby may increase or decrease in the future. Also assumes that the debentures are convertible immediately. As described above under "Description of the debentures Conversion rights," the debentures are convertible only in specified circumstances. The sum of the numbers reflected in this column may differ from the total due to rounding.
- (3) Any of these other holders of debentures or shares of common stock issued on conversion of debentures may be identified at a later date by means of one or more post-effective amendments to the registration statement of which this prospectus is a part.
- (4) Assumes that any of these other holders of debentures or shares of common stock issuable on conversion of debentures and their respective transferees, pledgees, donees and successors do not beneficially own any common stock other than the common stock issued or issuable upon conversion of the debentures.
- (5) This selling securityholder has advised us that it is a broker or dealer. Accordingly, under interpretations by the staff of the SEC, this selling securityholder may be deemed an "underwriter" within the meaning of the Securities Act of 1933.
- (6) This securityholder has advised us that it is an affiliate of a broker-dealer and that it purchased the securities reflected in this table as being owned by it in the ordinary course of business and, at the time of that purchase, it had no agreements or understandings, directly or indirectly, with any person to distribute those securities.
- (7) Amaranth Advisors L.L.C, as the managing member of Amaranth L.L.C., has voting and investment power over the securities listed above as beneficially owned or offered by Amaranth L.L.C. Nicholas M. Maounis is the managing member of Amaranth Advisors L.L.C.
- (8) Mike Vacca as Portfolio Manager for Clinton Group, Inc., which acts as investment manager for and on behalf of Clinton Multistrategy Master Fund, Ltd., has voting and investment power over the securities listed above as beneficially owned or offered by Clinton Multistrategy Master Fund, Ltd.
- (9) Mike Vacca as Portfolio Manager for Clinton Group, Inc., which acts as investment manager for and on behalf of Clinton Riverside Convertible Portfolio Limited, has voting and investment power over the securities listed above as beneficially owned or offered by Clinton Riverside Convertible Portfolio Limited.
- (10) CNH Partners is the investment advisor of CNH CA Master Account, L.P. and has sole voting and dispositive power over the securities listed above as beneficially owned or offered by CNH CA Master Account, L.P. The investment principals for CNH Partners are Robert Krail, Mark Mitchell and Todd Pulvino.
- (11) D.E. Shaw & Co. L.P., as either general partner or investment adviser, has voting and investment control over the debentures and any shares of common stock issuable upon conversion of the debentures owned by D.E. Shaw Investment Group, L.P. Julius Gaudio, Eric Wepsic, and Anne Dinning, or their designees, exercise voting and investment control over the debentures and any shares of common stock issuable upon conversion of the debentures on D.E. Shaw & Co. L.P.'s behalf.

Edgar Filing: EDWARDS LIFESCIENCES CORP - Form 424B3

- (12) D.E. Shaw & Co. L.P., as either general partner or investment adviser, has voting and investment control over the debentures and any shares of common stock issuable upon conversion of the debentures owned by D.E. Shaw Valence Portfolios, L.P. Julius Gaudio, Eric Wepsic, and Anne Dinning, or their designees, exercise voting and investment control over these securities on D.E. Shaw & Co. L.P.'s behalf.
- (13) Promethean Asset Management, LLC, as investment manager, has voting and investment power over the securities listed above as beneficially owned or offered by Gaia Offshore Master Fund Ltd. ("Gaia"). Promethean Asset Management, LLC disclaims beneficial ownership of the debentures and shares of common stock issuable upon conversion of the debentures beneficially owned by Gaia. James F. O'Brien, Jr. indirectly controls Promethean Asset Management, LLC. Mr. O'Brien disclaims beneficial ownership
-
- 59
-
- of the debentures and shares of common stock issuable upon conversion of the debentures beneficially owned by Promethean Asset Management, LLC and Gaia.
- (14) Alex Adair has sole voting and investment power over the securities listed above as beneficially owned or offered by Guggenheim Portfolio Co. XV, LLC.
- (15) KBC Financial Products USA Inc. exercises voting and investment control over the securities listed above as beneficially owned or offered by KBC Financial Products USA Inc. Luke Edwards, Managing Director, exercises voting and investment control on behalf of KBC Financial Products USA Inc.
- (16) TQA Investors, L.L.C. has full dispositive power and shared voting power over the securities listed above as beneficially owned or offered by LDG Limited. The following individuals have voting and investment power on behalf of TQA Investors, L.L.C. with respect to these securities: Robert Butman, John Idone, Paul Bucci, George Esser and Bart Tesoriero.
- (17) Promethean Asset Management, LLC, as trading advisor, has voting and investment power over the securities listed above as beneficially owned or offered by Lyxor/Gaia II Fund Ltd. ("Lyxor/Gaia"). Promethean Asset Management, LLC disclaims beneficial ownership of the debentures and shares of common stock issuable upon conversion of the debentures beneficially owned by Lyxor/Gaia. James F. O'Brien, Jr. indirectly controls Promethean Asset Management, LLC. Mr. O'Brien disclaims beneficial ownership of the debentures and shares of common stock issuable upon conversion of the debentures beneficially owned by Promethean Asset Management, LLC and Lyxor/Gaia.
- (18) John Null and J.T. Hansen have voting power and investment power over the securities listed above as beneficially owned or offered by Man Convertible Bond Master Fund, Ltd. Both John Null and J.T. Hansen are the principals of Marin Capital Partners, LP, the investment adviser to Man Convertible Bond Master Fund, Ltd.
- (19) Mike Vacca as Portfolio Manager for Clinton Group, Inc., which acts as investment manager for and on behalf of Meadow IAM Limited, has voting and investment power over the securities listed above as beneficially owned or offered by Meadow IAM Limited.
- (20) The Pacific Life Management Investment Committee comprised of the following officers: Larry J. Card, Mark W. Holmlund, James T. Morris, Michael S. Robb, Gerald W. Robinson, Glenn S. Schafer, Thomas C. Sutton and Khahn T. Tran, has voting and investment power over the securities listed above as beneficially owned or offered by Pacific Life Insurance Company.
- (21) Alex Adair has sole voting and investment power over the securities listed above as beneficially owned or offered by Ramius Master Fund, Ltd.
- (22) Alex Adair has sole voting and investment power over the securities listed above as beneficially owned or offered by RCG Latitude Master Fund, Ltd.
- (23) Alex Adair has sole voting and investment power over the securities listed above as beneficially owned or offered by RCG Multi Strategy Master Fund, Ltd.
- (24)

Edgar Filing: EDWARDS LIFESCIENCES CORP - Form 424B3

Pursuant to investment agreements, each of S.A.C. Capital Advisors, LLC, a Delaware limited liability company ("SAC Capital Advisors"), and S.A.C. Capital Management, LLC, a Delaware limited liability company ("SAC Capital Management") share all investment and voting power with respect to the securities held by SAC Capital Associates, LLC. Mr. Steven A. Cohen controls both SAC Capital Advisors and SAC Capital Management. Each of SAC Capital Advisors, SAC Capital Management and Mr. Cohen disclaim beneficial ownership of any of the securities listed above as beneficially owned or offered by S.A.C. Capital Associates, LLC.

- (25) Gene T. Pretti has voting and investment power over the securities listed above as beneficially owned or offered by SDCERA Convertible Arbitrage.
- (26) TQA Investors, L.L.C. has voting and investment power over the securities listed above as beneficially owned or offered by Sphinx Fund. The following individuals have voting and investment power on behalf of TQA Investors, L.L.C. with respect to these securities: Robert Butman, John Idone, Paul Bucci, George Esser and Bart Tesoriero.
- (27) John Null and J.T. Hansen have voting power and investment power over the securities listed above as beneficially owned or offered by St. Thomas Trading, Ltd.. Both John Null and J.T. Hansen are the principals of Marin Capital Partners, LP, the investment adviser to St. Thomas Trading, Ltd.
- (28) S. Donald Sussman, the controlling person of Dawn General Partner Corp., as the General Partner of Sunrise Partners Limited Partnership, has voting and investment power over the securities listed above as beneficially owned or offered by Sunrise Partners Limited Partnership.
- (29) Promethean Asset Management, LLC, as investment manager to Topanga XI, has voting and investment power over the securities listed above as beneficially owned or offered by Topanga XI ("Topanga XI"). Promethean Asset Management, LLC disclaims beneficial ownership of the debentures and common stock issuable upon conversion of the debentures beneficially owned by Topanga XI. James F. O'Brien, Jr. indirectly controls Promethean Asset Management, LLC. Mr. O'Brien disclaims beneficial ownership of the shares beneficially owned by Promethean Asset Management, LLC and Topanga XI.
- (30) TQA Investors, L.L.C. has voting and investment power over the securities listed above as beneficially owned or offered by TQA Master Fund, Ltd. The following individuals have voting and investment power on behalf of TQA Investors, L.L.C. with respect to these securities: Robert Butman, John Idone, Paul Bucci, George Esser and Bart Tesoriero.
- (31) TQA Investors, L.L.C. has voting and investment power over the securities listed above as beneficially owned or offered by TQA Master Plus Fund, Ltd. The following individuals have voting and investment power on behalf of TQA Investors, L.L.C. with respect to these securities: Robert Butman, John Idone, Paul Bucci, George Esser and Bart Tesoriero.
- (32) The following individuals have voting power and investment power on behalf of UBS AG London Branch, UBS AG London Branch: Charles Dietz, Veronica Wilthew, Pat Costigan and Tom Klein. During the past three years, UBS AG and/or its affiliates have provided investment banking and commercial banking services to us, including as a lender under our credit facilities.

- (33) Alex Adair has sole voting and investment power over the securities listed above as beneficially owned or offered by Xavex Convertible Arbitrage 5 Fund, Ltd.
- (34) TQA Investors, L.L.C. has voting and investment power over the securities listed above as beneficially owned or offered by Xavex Convertible Arbitrage 7 Fund. The following individuals have voting and investment power on behalf of TQA Investors, L.L.C. with respect to these securities: Robert Butman, John Idone, Paul Bucci, George Esser and Bart Tesoriero.
- (35) Gene T. Pretti has voting and investment power over the securities listed above as beneficially owned or offered by Zazove Convertible Arbitrage Fund L.P.

Edgar Filing: EDWARDS LIFESCIENCES CORP - Form 424B3

- (36) Gene T. Pretti has voting and investment power over the securities listed above as beneficially owned or offered by Zazove Hedged Convertible Fund L.P.
- (37) Gene T. Pretti has voting and investment power over the securities listed above as beneficially owned or offered by Zazove Income Fund L.P.
- (38) TQA Investors, L.L.C. has voting and investment power over \$427,000 principal amount of the debentures and 7,812 shares of the common stock listed above as beneficially owned or offered by Zurich Institutional Benchmarks Master Fund, Ltd. The following individuals have voting and investment power on behalf of TQA Investors, L.L.C. with respect to these securities: Robert Butman, John Idone, Paul Bucci, George Esser and Bart Tesoriero.
- Gene T. Pretti has voting and investment power over \$1,700,000 principal amount of the debentures and 31,101 shares of the common stock listed above as beneficially owned or offered by Zurich Institutional Benchmarks Master Fund, Ltd.
- (39) J.P. Morgan Chase & Co., a public company, controls J.P. Morgan Securities Inc. During the past three years, J.P.Morgan Securities Inc. and/or its affiliates have provided investment banking, commercial banking and financial advisory services to us, including as a lender and an agent under certain of our credit facilities and as the trustee under the indenture relating to the debentures.
- (40) Goldman, Sachs & Co. is a wholly owned subsidiary of The Goldman Sachs Group, Inc., a publicly traded company. During the past three years, Goldman, Sachs & Co. and/or its affiliates acted as a lender under certain of our credit facilities and provided investment banking services to us.
- (41) Libertyview Capital Management, a division of Neuberger Berman LLC, as investment adviser, has voting and investment power over the securities listed above as beneficially owned or offered by Jersey (IMA) Corp. The following individuals exercise investment power over such securities on behalf of Libertyview Capital Management: Michael Assante, Cort Gwon, Randall Hutton, K.C. Klegar, Spencer Kornreich, Roy Kwok, Aaron Meyer, Charles LaCarriere, Alan Mark, Richard Meckler, Kevin O'Neill, Ryan Hay and Ann Tucker.
- (42) The following individuals have voting and investment power with respect to these securities on behalf of Laurel Ridge Capital, L.P.: Van Nguyen, John Icluzzi, Andrew Mitchell, Nathaniel Newlin, Timothy Walton, Venkatesh Reddy.
- (43) Libertyview Capital Management, a division of Neuberger Berman LLC, as investment adviser, has voting and investment power over the securities listed above as beneficially owned or offered by Libertview Funds L.P. The following individuals exercise investment power over such securities on behalf of Libertyview Capital Management: Michael Assante, Cort Gwon, Randall Hutton, K.C. Klegar, Spencer Kornreich, Roy Kwok, Aaron Meyer, Charles LaCarriere, Alan Mark, Richard Meckler, Kevin O'Neill, Ryan Hay and Ann Tucker.
- (44) Employees of Tewksbury Capital Management Ltd. appointed as authorized signatories and authorized traders have voting and investment power with respect to these securities. Authorized signatories with voting power are any two of: Matthew S. Tewksbury, Andrew M. Kain or Ian Dickson. Authorized traders with investment power are any one of Christopher Mueller, John Leone, Lawrence Gal, William Lemke or Mathew O'Reilly.
- (45) SG Cowen Securities corporation is a wholly owned subsidiary of Société Générale, which is a publicly traded company.
- (46) Chris Huisken is the Convertible Portfolio Manager of South Dakota Retirement System and has voting and investment power over the securities listed above as beneficially owned or offered by South Dakota Retirement System.
- (47) Amounts indicated may be in excess of the total amount registered due to sales or transfers exempt from the registration requirements of the Securities Act since the date upon which the selling securityholders provided to us the information regarding their debentures and common stock.
- (48) CIBC World Markets is a wholly owned subsidiary of Canadian Imperial Bank of Commerce, which is a publicly traded company.

Plan of distribution

The selling securityholders (including their transferees, pledgees, donees and successors) may sell the debentures and the common stock issuable upon conversion of the debentures from time to time directly to purchasers or through broker-dealers or agents who may receive compensation in the form of discounts, concessions or commissions from the selling securityholders or the purchasers. If the debentures or the shares of common stock issuable upon conversion of debentures are sold through broker-dealers or agents, the selling securityholders will be responsible for any discounts, concessions or commissions payable to those broker-dealers or agents.

The debentures and the common stock issuable upon conversion of the debentures may be sold in one or more transactions at:

fixed prices,

prevailing market prices at the time of sale,

varying prices determined at the time of sale, or

negotiated prices.

These sales may be effected in transactions, which may involve crosses or block transactions:

on any national securities exchange or quotation service on which the debentures or the common stock may be listed or quoted at the time of sale;

in the over-the-counter market;

otherwise than on such exchanges or services or in the over-the-counter market; or

through the writing of options.

Crosses are transactions in which the same broker acts as an agent on both sides of the trade.

In connection with the sale of the debentures and the common stock issuable upon conversion of the debentures or otherwise, the selling securityholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the debentures or common stock in the course of hedging their positions. The selling securityholders also may deliver the debentures and shares of common stock issuable upon conversion of debentures to close out short positions, or loan or pledge the debentures or the common stock issuable upon conversion of such debentures to broker-dealers or other financial institutions that in turn may sell those securities. The selling securityholders also may transfer, donate and pledge debentures and shares of common stock issuable upon conversion of debentures, in which case the transferees, donees, pledgees or other successors in interest will be deemed selling securityholders for purposes of this prospectus.

The aggregate proceeds to the selling securityholders from the sale of the debentures or the common stock issuable upon the conversion of the debentures offered by them will be the purchase price of such debentures or common stock less discounts and commissions, if any, payable by them. Each of the selling securityholders reserves the right to accept and, together with their broker-dealers or agents from time to time, to reject, in whole or in part, any proposed purchase of the debentures or the common stock issuable upon conversion of the debentures to be made directly or through broker-dealers or agents. We will not receive any of the proceeds from the offering of the debentures and the common stock issuable upon conversion of the debentures.

There is no public market for the debentures and we do not intend to apply for listing of the debentures on any securities exchange or for quotation of the debentures through any automated quotation system. The debentures are currently designated for trading on the PORTAL Market. However, once debentures are sold by means of this prospectus, those debentures will no longer trade

on the PORTAL Market. Our common stock is listed on the New York Stock Exchange under the symbol "EW".

In order to comply with the securities laws of some states, if applicable, the debentures and the common stock issuable upon conversion of the debentures may be sold in those jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the debentures and the common stock issuable upon conversion of the debentures may not be sold unless they have been registered or qualified for sale or an exemption from registration or qualification requirements is available and is complied with.

The selling securityholders may not sell any, or may sell less than all, of the debentures and shares of common stock issuable upon conversion of the debentures offered by them pursuant to this prospectus. In addition, any selling securityholder may, to the extent permitted by applicable law, sell, transfer, devise or gift the debentures or shares of common stock issuable upon conversion of debentures by means not described in this prospectus. In that regard, any debentures or shares of common stock issuable upon conversion of debentures that qualify for sale pursuant to Rule 144A or Rule 144 under the Securities Act may be sold under that rule, if applicable, rather than pursuant to this prospectus.

The selling securityholders and any broker-dealers or agents that participate in the distribution of the debentures and the common stock issuable upon conversion of the debenture may be "underwriters" within the meaning of Section 2(11) of the Securities Act. As a result, any profits on the sale of the debentures or the shares of common stock issued on conversion of debentures received by selling securityholders and any discounts, commissions or concessions received by any such broker-dealers or agents might be deemed to be underwriting discounts and commissions under the Securities Act. If the selling securityholders were deemed to be underwriters, the selling securityholders could be subject to certain statutory liabilities under the federal securities laws, including under Sections 11, 12 and 17 of the Securities Act and Rule 10b-5 under the Securities Exchange Act of 1934.

The selling securityholders and any other persons participating in the distribution of the debentures and the shares of common stock issuable upon conversion of the debentures will be subject to the Securities Exchange Act. The Securities Exchange Act rules include, without limitation, Regulation M, which may limit the timing of or prohibit the purchase and sale of debentures and shares of common stock by the selling securityholders and any such other person. In addition, under Regulation M, any selling securityholder or other person engaged in the "distribution", within the meaning of Regulation M, of the debentures or the shares of common stock issuable upon conversion of the debentures may not engage in market-making activities with respect to the debentures or the common stock for certain periods prior to the commencement of that distribution, unless, in the case of persons other than selling securityholders, an applicable exemption is available under Regulation M. The foregoing may affect the marketability of the debentures and the common stock issuable upon conversion of the debentures and the ability of any person or entity to engage in market-making activities with respect to those securities.

In that regard, the selling securityholders are required to acknowledge that they understand their obligations to comply with the provisions of the Securities Exchange Act and the rules thereunder relating to stock manipulation, particularly Regulation M thereunder (or any successor rules or regulations), in connection with the offering made by this prospectus. Each selling securityholder is required to agree that neither it nor any person acting on its behalf will engage in any transaction in violation of such provisions.

To the extent required, the specific debentures or common stock to be sold, the names of the selling securityholders, the respective purchase prices and public offering prices, the names of any agent or broker-dealer, and any applicable commissions or discounts with respect to a particular sale or other disposition of debentures or shares of common stock issued on conversion of debentures pursuant to

this prospectus will be set forth in a supplement to this prospectus or, if appropriate, a post-effective amendment to the shelf registration statement of which this prospectus is a part.

Pursuant to the registration rights agreement described above under "Registration rights," we and the selling securityholders have agreed, subject to exceptions, to indemnify each other against specified liabilities, including liabilities under the Securities Act, and may be entitled to contribution from each other in respect of those liabilities.

We will pay substantially all of the expenses incident to the offering and sale of the debentures and the common stock issuable upon conversion of the debentures pursuant to this prospectus, other than commissions, fees and discounts payable to brokers-dealers or agents, fees and disbursements of any counsel or other advisors or experts retained by the selling securityholders and any documentary, stamp or similar

issue or transfer tax.

Under the registration rights agreement, we may be required from time to time to require holders of debentures and shares of common stock issued on conversion of debentures to discontinue the sale or other disposition of those debentures and shares of common stock under specified circumstances. See "Registration rights" above.

Available information

We are subject to the information reporting requirements of the Securities Exchange Act of 1934 and, in accordance therewith, file reports, proxy statements and other information with the SEC. Reports, proxy statements and other information filed by us with the SEC pursuant to the requirements of the Exchange Act may be read and copied at the public reference facilities maintained by the SEC at Judiciary Plaza, 450 Fifth Street, N.W., Washington, D.C. 20549 and at its regional office located at 5670 Wilshire Blvd., Los Angeles, California 90036. Copies of such material also may be obtained from the Public Reference Section of the SEC located at 450 Fifth Street, N.W., Washington, D.C. 20549, at prescribed rates. You may obtain information on the operation of the SEC's public reference facilities by calling the SEC at 1-800-SEC-0330. The SEC maintains a web site that contains reports, proxy statements and other information that we file with the SEC. The SEC's web site address is <http://www.sec.gov>. We are a publicly held corporation and our common stock is traded on the New York Stock Exchange under the symbol "EW." Reports, proxy statements, and other information that we file with the SEC can also be inspected at the offices of the New York Stock Exchange, 20 Broad Street, New York, New York 10005.

Statements contained or incorporated by reference in this prospectus as to the contents of any contract or other document are not necessarily complete, and in each instance we refer you to the copy of the contract or document filed as an exhibit to the registration statement of which this prospectus is a part or as an exhibit to a document incorporated or deemed to be incorporated by reference in this prospectus, each such statement being qualified in all respects by such reference.

64

Incorporation of documents by reference

We have elected to "incorporate by reference" certain information in this prospectus. By incorporating by reference, we can disclose important information to you by referring you to another document we have filed with the SEC. Our Annual Report on Form 10-K for the fiscal year ended December 31, 2002, as amended by our Annual Report on Form 10-K/A for the fiscal year ended December 31, 2002, our Quarterly Report on Form 10-Q for the quarter ended March 31, 2003, as amended by our Quarterly Report on Form 10-Q/A for the quarter ended March 31, 2003, our Form 10-Q for the quarter ended June 30, 2003, as amended by our Quarterly Report on Form 10-Q/A for the quarter ended June 30, 2003, our Quarterly Report on Form 10-Q for the quarter ended September 30, 2003, our two Current Reports on Form 8-K filed with the SEC on May 6, 2003, our Current Report on Form 8-K filed with the SEC on May 13, 2003, and our Current Report on Form 8-K filed with the SEC on May 20, 2003 and our Current Report on Form 8-K filed with the SEC on October 30, 2003 are hereby incorporated by reference into this prospectus. In addition, all documents filed with the SEC by us pursuant to Sections 13(a), 13(c), 14, or 15(d) of the Exchange Act subsequent to the date of this prospectus and prior to the termination of the offering of the debentures and the shares of common stock issuable upon conversion of the debentures made hereby will be deemed to be incorporated by reference into this prospectus. However, any documents or portions thereof or any exhibits thereto that we furnish to, but do not file with, the SEC shall not be incorporated or deemed to be incorporated by reference into this prospectus. Any statement contained in this prospectus or in a document that is incorporated or deemed to be incorporated by reference herein will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained herein or in a supplement hereto or in any other subsequently filed document that also is, or is deemed to be, incorporated by reference herein modifies or supersedes such statement. The modifying or superseding statement need not state that it has modified or superseded a prior statement or include any other information set forth in the document that it modifies or supersedes. The making of a modifying or superseding statement will not be deemed an admission for any purposes that the modified or superseded statement, when made, constituted a misrepresentation, an untrue statement of a material fact or an omission to state a material fact that is required to be stated or that is necessary to make a statement not misleading in light of the circumstances in which it was made. Any such statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

We will provide without charge to each person to whom a copy of this prospectus is delivered upon the written or oral request of such person, a copy of any or all of the documents incorporated by reference or deemed to be incorporated by reference herein (other than exhibits to such documents, unless such exhibits are specifically incorporated by reference into the information that this prospectus incorporates). Requests should be directed to:

Edwards Lifesciences Corporation
One Edwards Way
Irvine, California 92614
Telephone: (949) 250-2500
Attention: Investor Relations

Legal matters

The validity of the debentures and the common stock issuable upon conversion of the debentures offered hereby will be passed upon for us by Sidley Austin Brown & Wood LLP, San Francisco, California.

Experts

The financial statements of Edwards Lifesciences Corporation incorporated in this prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2002 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, independent accountants, given on the authority of said firm as experts in auditing and accounting.

65

\$150,000,000

Edwards Lifesciences Corporation
3.875% Convertible Senior Debentures due 2033
and the Common Stock Issuable Upon
Conversion of the Debentures

PROSPECTUS
December 5, 2003

Table of contents

Summary

The offering

Risk factors

Cautionary note regarding forward-looking statements and market data

Use of proceeds

Dividend policy

Ratio of earnings to fixed charges

Description of the debentures

Registration rights

Description of capital stock

Certain United States federal income tax considerations

Selling securityholders

Plan of distribution

Available information

Incorporation of documents by reference

Legal matters

Experts