

BIOTRANSPLANT INC
 Form 424B5
 June 12, 2002

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

Filed Pursuant to Rule 424(b)(5)
 File No. 333-74850

Prospectus Supplement To Prospectus dated January 22, 2002

4,000,000 Shares

Common Stock

The common stock is listed on the Nasdaq National Market under the symbol "BTRN." The last reported sale price of the common stock on the Nasdaq National Market on June 10, 2002 was \$2.54 per share.

See "Risk Factors" beginning on page S-3 of this prospectus supplement to read about factors you should consider before buying the common stock.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus supplement. Any representation to the contrary is a criminal offense.

	Per Share	Total
Initial price to investors	\$ 2.50	\$ 10,000,000
Placement agent's fee	\$ 0.075	\$ 300,000
Proceeds, before expenses, to BioTransplant	\$ 2.425	\$ 9,700,000

Prospectus Supplement dated June 10, 2002

TABLE OF CONTENTS

Prospectus Supplement

	Page
Prospectus Supplement Summary	S-1
Risk Factors	S-3
Special Note Regarding Forward-Looking Information	S-14
Use of Proceeds	S-15
Plan of Distribution	S-16

	Page
Validity of Common Stock	S-16
Where You Can Find More Information	S-16
Incorporation of Certain Documents by Reference	S-16
Prospectus	
About This Prospectus	1
BioTransplant Incorporated	1
Risk Factors	2
Special Note Regarding Forward Looking Information	2
Use of Proceeds	3
Description of Common Stock	4
Plan of Distribution	6
Validity of Common Stock	7
Experts	7
Where You Can Find More Information	8
Incorporation of Certain Documents By Reference	8

You should carefully read this prospectus supplement along with the accompanying prospectus before you invest. Both documents contain important information you should consider when making your investment decision. This prospectus supplement contains information about the common stock offered hereby and the prospectus contains information about our securities generally. This prospectus supplement may add, update or change information in the prospectus. You should rely on the information provided in this prospectus supplement or the accompanying prospectus or incorporated by reference in the accompanying prospectus. We have not authorized anyone else to provide you with any other information.

PROSPECTUS SUPPLEMENT SUMMARY

This summary contains a general summary of the information contained in this prospectus supplement. Investors should carefully consider the information set forth under "Risk Factors" in this prospectus supplement.

BioTransplant Incorporated

Overview

We discover, develop and commercialize therapeutics, therapeutic devices and therapeutic regimens designed to suppress undesired immune responses and enhance the body's ability to accept donor cells, tissues and organs. We believe that our patented products and product candidates, either alone, in combination or with modified conventional therapies, will address significant unmet medical needs in autoimmune diseases, cancer and transplantation.

Edgar Filing: BIOTRANSPLANT INC - Form 424B5

MEDI-507. We have developed a novel and proprietary humanized monoclonal antibody, MEDI-507, that we believe will be effective in the treatment of a number of T cell-mediated diseases. We have exclusively licensed MEDI-507 for use as a stand-alone agent to MedImmune, Inc., which is developing it under the name Siplizumab. MedImmune has announced completion of enrollment of multiple Phase II clinical trials of Siplizumab for the treatment of moderate to severe psoriasis. We are also independently developing MEDI-507 as a component of transplantation systems.

Eligix HDM Cell Separation Systems. Our Eligix HDM Cell Separation Systems use monoclonal antibodies to remove unwanted cells from bone marrow, peripheral blood stem cell and donor leukocyte grafts used in transplantation procedures. Our BCell Separation System, BCell-SC, and our initial TCell Separation System, CD8-DLI, have received CE Mark approval and are sold in Europe by Gambro BCT, our European sales and distribution partner. We expect to receive CE Mark approval for our CD8-SC Cell Separation System in late 2002.

AlloMune Systems. We are currently developing our AlloMune Systems as multiple-component proprietary therapeutic regimens intended to re-educate a patient's immune system to prevent the rejection of transplanted cells, tissues and organs. MEDI-507 is an important component of our AlloMune Systems, and we are developing the next generation of AlloMune Systems to incorporate our Eligix HDM Cell Separation Systems. We are currently conducting a multi-center Phase I/II clinical trial of our AlloMune System for Cancer for the treatment of refractory lymphoma. A physician-sponsored investigational new drug pilot clinical study of our AlloMune System for Transplantation for human kidney transplantation has also been started.

Xenotransplantation. Our joint venture with Novartis Pharma AG, Immerge BioTherapeutics, is researching the use of MEDI-507 and other proprietary technologies as part of a xenotransplantation system. Xenotransplantation is the transplantation of cells, tissues or organs from one species to another. Immerge BioTherapeutics is currently conducting animal studies to test the use of miniature swine organs in swine-to-primate transplantation.

S-1

We were incorporated in Delaware in 1990. Our principal executive offices are located at Building 75, Third Avenue, Charlestown Navy Yard, Charlestown, Massachusetts 02129, and our telephone number is (617) 241-5200. Our world wide website address is www.biotransplant.com. We are not incorporating by reference the information in our website into this prospectus supplement. We are including our website address in this document as an inactive textual reference only. Unless the context otherwise requires, the terms "BioTransplant," "we," "us" and "our" refer to BioTransplant Incorporated and its subsidiaries.

Eligix , BioTransplant®, AlloMune® and BTI-322® are our trademarks. This prospectus supplement and the documents we incorporate by reference into this prospectus supplement also contain trademarks and trade names of others.

The Offering

Common stock offered	4,000,000 shares
Common stock to be outstanding after the offering	25,334,514 shares
Use of proceeds	For working capital and other general corporate purposes. See "Use of Proceeds."
Nasdaq National Market Symbol	BTRN

The above information regarding shares to be outstanding after this offering excludes, as of June 3, 2002, an aggregate of 2,810,890 shares issuable upon exercise of our outstanding options and warrants and an aggregate of 4,099,798 shares reserved for issuance under our stock options plans.

S-2

RISK FACTORS

Investing in our common stock involves a high degree of risk. Before making an investment decision, you should carefully consider the risks described below with all of the other information included in this prospectus supplement, the accompanying prospectus and the documents we incorporate by reference in the accompanying prospectus. If any of the possible adverse events described below actually occurs, our business, results of operations or financial condition would likely suffer. In such an event, the market price of our common stock could decline and you could lose all or part of your investment.

Risks Related To Our Business, Industry and Strategy

We have a history of operating losses and our future profitability is uncertain.

We were incorporated in 1990 and have experienced significant operating losses in each year since that date. As of March 31, 2002, our accumulated deficit was \$118.1 million. Our net loss for the quarter ended March 31, 2002 and the fiscal years ended December 31, 2001, 2000 and 1999 was \$6.6 million, \$42.6 million, \$11.7 million and \$8.7 million, respectively. We expect to continue to incur significant losses for the foreseeable future. We only began selling our BCell-SC and CD8-DLI Cell Separation Systems in Europe in late 2001. To date, our revenue has been generated principally from license fee and milestone payments from our collaborative partners. We may never achieve significant revenues from product sales, and we may not achieve profitable operations.

We will require substantial additional financing, which may be difficult to obtain and may dilute your ownership interest in us.

We anticipate that our existing funds, together with the proceeds of this offering, will be sufficient to fund our operating and capital requirements as currently planned into the third quarter of 2003. We expect to use rather than generate funds from operations for the foreseeable future. The actual amount of funds we will require will be determined by a number of factors, many of which are beyond our control. In particular, we will require substantial funds to conduct research and development, including preclinical testing and clinical trials of our AlloMune Systems and Eligix HDM Cell Separation Systems and to manufacture products that are approved for commercial sale, such as our BCell-SC and CD8-DLI Cell Separation Systems, which we began selling through a distributor in Europe in late 2001. If we cannot raise more funds, we could be required to reduce our capital expenditures, scale back or abandon our research and product development activities, reduce our workforce and license to others products or technologies we would otherwise seek to commercialize ourselves.

We will seek additional funding through collaborative arrangements, by borrowing money or by selling additional equity securities. Any sales of additional equity securities are likely to result in further dilution to our then existing stockholders. Further, if we issue additional equity securities, the new equity securities may have rights, preferences or privileges senior to those of existing holders of our common stock. We may also borrow money from conventional lenders, possibly at high interest rates and on other terms that are unfavorable to us, which will increase the risk of your holdings. Despite our efforts, additional funding may not be available to us at all or only on terms that are unacceptable to us. We also could be required to seek funds through arrangements with collaborative partners or others that may require us to relinquish rights to our

S-3

technologies, product candidates or products which we would otherwise pursue on our own.

We will depend on our BCell-SC and CD8-DLI Cell Separation Systems for substantially all of our near-term product revenue, and if these products do not gain widespread market acceptance, then our near-term product revenue will not grow.

Our future growth depends upon our ability to successfully commercialize and sell our products. We expect to derive most of our near-term product revenues from sales of our BCell-SC and CD8-DLI Cell Separation Systems. We began distributing these products through a distribution agreement with Gambro in late 2001 and, to date, we have sold relatively few devices. Because we currently depend on our BCell-SC and CD8-DLI Cell Separation Systems to generate substantially all of our near-term product revenue, if we fail to achieve widespread market acceptance of these products or if Gambro fails to effectively market these products, we will not be able to grow our near-term product revenue.

If we do not develop and market new products, our ability to achieve profitability will be harmed.

Edgar Filing: BIOTRANSPLANT INC - Form 424B5

Our ability to achieve profitability depends on our ability to develop, obtain regulatory approval for, manufacture, introduce and successfully market new products and product candidates, either directly or with our partners. Our product candidates will require extensive development and testing, as well as regulatory approval, before they can be successfully marketed and sold to the public. The MEDI-507 antibody product under development, the Eligix HDM Cell Separation Systems technology and the prototype AlloMune Systems have been tested in relatively few patients and we may not be able to demonstrate the clinical benefits of these products in a larger patient population. Furthermore, the technology that we have exclusively licensed to our joint venture with Novartis Pharma AG is based upon the transplantation of organs from swine into humans. To our knowledge, transplantation of swine organs has never been tested in humans. As a consequence, we are not sure whether any of our products under development or the products under development by our collaborators will be effective in treating any of the disorders we have targeted. In addition, any products under development may prove to have undesirable or unintended side effects, toxicities or other characteristics that may prevent or limit their commercial use. If our technological approach is not successful or the medical community and/or third-party payors do not accept our products as clinically useful, cost-effective and safe, then neither we nor our collaborators will be able to develop or commercialize these products, which will substantially impair our ability to achieve profitable operations.

If clinical trials of our products under development are not successful or are not completed on a timely basis, we will not be able to develop and commercialize these products and, therefore, we may not achieve profitability.

To obtain regulatory approvals for the commercial sale of our products under development, we and our collaborative partners will need to complete extensive clinical trials in humans to demonstrate the safety and efficacy of these products. We have had limited experience in conducting clinical trials.

Prior to commencing new clinical trials, we must submit investigational new drug and/or investigational device exemption applications to the Food and Drug Administration. Even if we receive authorization from the FDA to commence clinical trials,

S-4

we or our collaborative partners may not be able to successfully complete these trials within an acceptable timeframe, if at all. How quickly we and our collaborative partners complete clinical trials is dependent in part upon the rate of enrollment of patients. Patient enrollment is a function of many factors, including the size of the patient population, the proximity of patients to clinical sites, the eligibility criteria for the study and the existence of competitive clinical trials. In particular, the patient population for a number of our potential products is small. If we experience delays in patient enrollment, we may incur additional costs and delay our research and development programs.

Furthermore, we, our collaborative partners or the FDA may suspend our clinical trials at any time on various grounds, including a finding that the patients in the trials are being exposed to unacceptable health risks. Finally, our clinical trials, if completed, may not show the potential product to be safe or effective, thereby preventing regulatory approval.

We are dependent on our collaborative partners to conduct clinical trials on our MEDI-507 and xenotransplantation products and, therefore, we are not in control of the timing of these clinical trials.

We are dependent upon MedImmune to conduct clinical trials with respect to MEDI-507 and will be dependent upon Novartis to conduct clinical trials for the development of xenotransplantation products, if any, that arise out of our joint venture's research program. We may become dependent upon other third parties to conduct future clinical trials of our AlloMune Systems and Eligix HDM Cell Separation Systems. As a result, we will have less control over these clinical trials than if we were conducting the trials directly. Consequently, these trials may not begin or be completed on a schedule that is acceptable to us, which could lead to delays or uncertainties in the regulatory approval process or in the commercial introduction of these products, either of which could substantially harm our business and ability to achieve profitability.

The approval process is costly and lengthy and we may not obtain and maintain the regulatory approvals required to successfully market and sell our products.

We must obtain regulatory approval for our ongoing research and development activities and before marketing or selling any of our products. For example, although our BCell-SC and CD8-DLI Cell Separation Systems have received CE Mark approval in Europe, we will need to conduct extensive clinical trials and receive FDA approval before we can market these products in the U.S. We may not receive regulatory approvals to conduct clinical trials of our products or to manufacture or market our products. In addition, regulatory agencies may not grant such approvals on a timely basis or may revoke previously granted approvals or impose fines, suspensions, product recalls and other sanctions if we fail to comply with applicable regulatory requirements. If our products do not receive regulatory approvals, or if we do not otherwise comply with government regulations, our business would be harmed.

The process of obtaining FDA and other required regulatory approvals is expensive and typically takes a number of years, depending on the complexity and novelty of the product. Moreover, for our approved products, the marketing, distribution and manufacture of these products remain subject to extensive regulatory requirements. For example, any regulatory approval for a product may limit the indications or markets in which the product can be used or require additional post-approval studies. Any regulatory body can have a product removed from the market if a previously unknown problem with the product is discovered. Any delay in obtaining or failure to obtain or maintain required clearance or approval of a product by the appropriate regulatory authorities, would

S-5

materially adversely affect our ability to generate revenues from the affected product. We have limited experience in filing and prosecuting the applications required to gain and maintain regulatory approval.

There is limited regulatory precedent for the approval of products based upon the technologies that we are employing to develop products. MEDI-507, our AlloMune Systems and our Eligix HDM Cell Separation Systems are based on new technologies and/or new therapeutic approaches that have not been extensively tested in humans. Accordingly, the regulatory requirements governing these products under development may be more rigorous than for conventional products. In addition, the FDA has not yet established final or comprehensive guidelines for xenotransplantation. As a result, we may experience a longer regulatory process in connection with any products that we or our collaborators seek to develop based on these new technologies and/or new therapeutic approaches.

We also are subject to numerous foreign regulatory requirements governing the design and conduct of the clinical trials and the manufacturing and marketing of our future products. The approval procedure varies among countries. The time required to obtain foreign approvals often differs from that required to obtain FDA approvals. Moreover, even if we receive FDA approval, we may not receive necessary approvals by regulatory authorities in other countries.

All of these regulatory risks also are applicable to development, manufacturing and marketing undertaken by our key collaborators and any other future collaborators who may seek to develop, market and sell products based upon our technologies.

We are dependent on collaborative relationships to develop, manufacture and sell some products, and if these parties are not successful, then we will not achieve significant revenues.

We have several strategic relationships for the development, manufacture and distribution of our products and products based upon our technologies. We have a collaborative agreement with MedImmune under which we have provided MedImmune with the exclusive worldwide right to develop and commercialize products derived from the BTI-322 and MEDI-507 antibodies. We have also entered into a multi-year exclusive distribution agreement with Gambro for the distribution of our Eligix HDM Cell Separation Systems, and other cell separation systems we may in the future develop. Gambro has been granted the exclusive right to distribute these products worldwide, with the exception of the United States, Canada and Japan. In addition, our joint venture with Novartis, Immerge BioTherapeutics, has exclusively licensed to Novartis the right to develop and commercialize any products derived from Immerge's research program in xenotransplantation, which refers to the transplantation of cells, tissues and organs from one species to another.

Under each of these collaborative agreements, we have the right to receive royalties or a share of revenue on product sales, if any. Our ability to achieve revenue under these arrangements will be heavily dependent on a number of factors, including the efforts and activities of our collaborative partners. Our arrangements with our collaborative partners allow them significant discretion in determining the efforts and resources that they will apply to the development, commercialization and sale of products based upon our technologies. If any of these collaborative partners do not perform successfully, such failure may delay or prevent regulatory approval, product launch, impair our ability to deliver products on a timely basis, impair our competitive position or otherwise reduce or eliminate any sales revenues that we may receive.

S-6

We have only limited sales and marketing experience and may depend significantly on third parties who may not successfully commercialize our products.

We have only limited sales, marketing and product distribution experience, and our current sales and marketing operations, which we only recently began to develop, is not sufficient to achieve the market presence and sales we need to expand our business. We plan to rely significantly on sales, marketing and distribution arrangements with third parties, including our collaborative partners. For example, we have

granted Gambro exclusive worldwide distribution rights, exclusive of the United States, Canada and Japan, for our Eligix HDM Cell Separation Systems, and other cell separation products which we may in the future develop. Either we or Gambro may terminate the agreement if the other party breaches a material covenant, agreement or obligation under the agreement. If Gambro terminates the distribution agreement, we currently do not have the sales and marketing operations to commence selling these products independently. We have also granted MedImmune exclusive worldwide marketing rights to the MEDI-507 product under development, and our joint venture with Novartis, Immerge BioTherapeutics, has granted to Novartis the exclusive worldwide rights to develop and market products based upon our xenotransplantation technologies. We may have to enter into additional marketing arrangements in the future and we may not be able to enter into these additional arrangements on terms which are favorable to us, if at all. In addition, we may have limited or no control over the sales, marketing and distribution activities of these third parties and sales through these third parties could be less profitable to us than direct sales. These third parties could sell competing products and may devote insufficient sales efforts to our products. Our future revenues will be materially dependent upon the success of the efforts of these third parties.

We may seek to independently market products that are not already subject to marketing agreements with other parties. If we determine to perform sales, marketing and distribution functions ourselves, we could face a number of additional risks, including:

we may not be able to attract and build a significant and skilled marketing staff or sales force;

the cost of establishing a marketing staff or sales force may not be justifiable in light of the revenues generated by any particular product; and

our direct sales and marketing efforts may not be successful.

If we experience delays or interruptions in manufacturing of our Eligix HDM Cell Separation Systems, we may experience customer dissatisfaction and our reputation could suffer.

If we fail to produce enough products at our own manufacturing facility or at a third-party manufacturing facility, we may be unable to deliver products to our customers on a timely basis, which could lead to customer dissatisfaction and could harm our reputation and ability to compete. We currently produce key components of our BCell-SC and CD8-DLI Cell Separation Systems in one manufacturing facility. We would likely experience significant delays or cessation in producing our BCell-SC and CD8-DLI Cell Separation Systems at this facility if a labor strike, natural disaster or other supply disruption were to occur. If we are unable to manufacture our Eligix HDM Cell Separation Systems at our own facility, we may be required to enter into arrangements with one or more contract manufacturing companies. We could encounter delays or difficulties establishing relationships with contract manufacturers or in establishing

S-7

agreements on terms that are favorable to us. In addition, if we are required to depend on third-party manufacturers, our profit margins may be lower, which will make it more difficult for us to achieve profitability.

We will depend on third-party manufacturers to produce some of our products under development, and if these third parties do not successfully manufacture our products our business will be harmed.

We currently rely upon MedImmune to produce material for preclinical and clinical testing of MEDI-507 and expect to continue to do so in the future. In addition, if we receive the necessary regulatory approvals for other products under development, we also expect to rely upon third parties, including our collaborative partners, to produce materials required for commercial production. We may not be able to enter into commercial-scale manufacturing contracts on a timely or commercially reasonable basis, if at all. To the extent that we enter into manufacturing arrangements with third parties, we will be dependent upon these third parties to perform their obligations in a timely and effective manner. If third-party manufacturers with whom we contract fail to perform their obligations, our competitive position and ability to generate revenue may be adversely affected in a number of ways, including:

we may not be able to initiate or continue clinical trials of products that are under development;

we may be delayed in submitting applications for regulatory approvals for our products; and

we may not be able to meet commercial demands for any approved products.

If we or our third-party manufacturers fail to comply with regulatory requirements, we could experience disruptions in the manufacture and sale of our products.

Manufacturers, including us, must adhere to the FDA's current good manufacturing practices regulations, which are enforced by the FDA through its facilities inspection program. We and any of our third-party manufacturers may not be able to comply or maintain compliance with good manufacturing practices regulations. If we or our manufacturers fail to comply with these regulations, our receipt of premarket approval and/or our ability to continue manufacturing our products could be significantly delayed, or we or the third-party manufacturer could be subject to FDA enforcement action. For a premarket approval device, if we change our manufacturing facility or switch to a third-party manufacturer we will be required to submit a premarket approval application supplement before the change is implemented. If we experience any regulatory-related manufacturing delays or difficulties, our ability to deliver products to our distributors or customers would be impaired, which could reduce our revenues and harm our business.

Because we rely on a limited number of suppliers, we may experience difficulty in meeting our customers' demands for our Eligix HDM Cell Separation Systems in a timely manner or within budget.

We currently purchase key components of our Eligix HDM Cell Separation Systems from a variety of outside sources. Some of these components may only be available to us through a few sources. We generally do not have long-term agreements with any of our suppliers.

S-8

Our reliance on our suppliers exposes us to risks, including:

the possibility that one or more of our suppliers could terminate their services at any time without penalty;

the potential inability of our suppliers to obtain required components;

the potential delays and expenses of seeking alternative sources of supply;

reduced control over pricing, quality and timely delivery due to the difficulties in switching to alternative suppliers; and

the possibility that one or more of our suppliers could fail to satisfy any of the FDA's required current good manufacturing practices regulations.

Consequently, in the event that our suppliers delay or interrupt the supply of components for any reason, our ability to produce and supply our products to our distributor could be impaired, which could lead to customer dissatisfaction.

If we are not able to obtain patent protection for our discoveries or we infringe patent rights of third parties, then our ability to market our products will be substantially harmed.

Our success depends in significant part on our ability to:

obtain patents;

protect trade secrets;

operate without infringing upon the proprietary rights of others; and

prevent others from infringing on our proprietary rights.

The validity and permissible scope of claims covered in patents relating to our technology involve important unresolved legal principles. Furthermore, there is substantial uncertainty as to whether human clinical data will be required for issuance of patents for human therapeutics. If human clinical data are required, our ability to obtain patent protection could be delayed or otherwise adversely affected.

Patents may not issue from any patent applications that we own or license. If patents do issue, the claims allowed may not be sufficiently broad to protect our technology. In addition, issued patents that we own or license may be challenged, invalidated or circumvented. Our patents also may not afford us protection against competitors with similar technology. Because patent applications in the United States are maintained in secrecy until patents issue, third parties may have filed or maintained patent applications for technology used by us or covered by our pending patent applications without our being aware of these applications.

A patent recently issued to a major pharmaceutical company directed towards recombinant production of monoclonal antibodies. We may require a license under this patent with respect to MEDI-507. There can be no assurance that such a license will be granted to us or that we can obtain a license on terms favorable to us. If a required license is not available, our ability to generate revenue would be adversely affected.

We may not hold proprietary rights to all of the patents related to our proposed products or services. These patents may be owned or controlled by third parties. As a result, we or our collaborative partners may be required to obtain licenses under third-

S-9

party patents to market our proposed products or services. If licenses are not available on acceptable terms, we or our collaborative partners will not be able to market these products or services.

We also rely on trade secrets and proprietary know-how that we seek to protect, in part, by confidentiality agreements with our employees and consultants. We cannot guarantee these agreements will not be breached, that we would have adequate remedies for any such breach or that our trade secrets will not otherwise become known or independently developed by competitors.

If we lose important license rights, we may be unable to successfully develop and commercialize our products and achieve profitability.

We are a party to technology in-licenses with the Catholic University of Louvain, the Alberta Research Council and the Coulter Corporation. We expect to enter into additional licenses in the future. These in-licenses relate to important technologies that may be necessary for the development and commercialization of our products. These licenses impose various commercialization, indemnification, royalty, insurance and other obligations on us. Although we currently meet the requirements imposed by the licenses, if we fail to comply with these requirements in the future, the licensors will have the right to terminate these licenses or make the licenses non-exclusive, which could affect our ability to exploit important technologies that are required for successful development of our products.

We face substantial competition, which could adversely affect our revenues and results of operations.

The products we develop and market compete with existing and new products being created by pharmaceutical, biopharmaceutical, biotechnology and medical device companies and universities. Many of these entities have significantly greater research and development capabilities, as well as substantial marketing, manufacturing, financial and managerial resources and represent significant competition. With respect to our currently marketed BCell-SC and CD8-DLI Cell Separation Systems, we are competing against large companies that have significantly greater financial resources and established marketing and distribution channels for competing products.

The pharmaceutical industry is intensely price competitive and we expect we will face this and other forms of competition. Development by others may render our products or technologies obsolete or noncompetitive, and we may not be able to keep pace with technological developments to maintain a competitive position in the market. Many of our competitors have developed or are in the process of developing technologies that are, or in the future may be, the basis for products that compete with our own. Some of these products may have an entirely different approach or means of accomplishing the desired therapeutic effect than our products and may be more effective and less costly. In

addition, many of these competitors have significantly greater experience than we do in undertaking preclinical testing and human clinical trials and obtaining regulatory approvals of such products. Accordingly, our competitors may succeed in commercializing products more rapidly than we can.

S-10

If we are unable to meet the operational, legal and financial challenges that we will encounter in our international operations, we may not be able to grow our business.

We currently expect to derive substantially all of our near-term product revenue from the sale through a third-party distributor of our BCell-SC and CD8-DLI Cell Separation Systems in the European Union. We are subject to a number of challenges which specifically relate to our international business activities. Our international operations may not be successful if we are unable to meet and overcome these challenges, which would limit the growth of our business. These challenges include:

failure of local laws to provide the same degree of protection against infringement of our intellectual property;

protectionist laws and business practices that favor local competitors, which could slow our growth in international markets; and

potentially longer sales cycles to sell products, which could slow product orders and, accordingly, our revenue growth from international sales.

Our business exposes us to the risk of product liability claims for which we may not be adequately insured.

We face an inherent business risk of exposure to product liability claims in the event that the use of our products results in adverse effects during research, clinical development or commercial use. We cannot guarantee we will avoid significant product liability exposure. Our product liability insurance coverage is currently limited to \$10.0 million, which may not be adequate to cover potential liability exposures. Moreover, adequate insurance coverage may not be available at an acceptable cost, if at all. Any product liability claim would distract management's attention, impair market acceptance of our products and our reputation and harm our ability to achieve revenue from sales of the product.

Our inability to attract or retain key personnel could harm our business.

Our ability to develop our business depends in part upon our attracting and retaining qualified management and scientific personnel. The number of qualified personnel is limited and competition for such personnel is intense. We may not be able to continue to attract or retain qualified people. The loss of our key personnel or the failure to recruit additional key personnel could significantly impede attainment of our objectives and harm our financial condition and results of operations.

The uncertainty of pharmaceutical pricing and reimbursement may negatively impact our results of operations.

Our ability to successfully commercialize our products may depend in part on the extent to which reimbursement for the cost of such products and related treatment will be available from government health administration authorities, private health coverage insurers and other organizations. The pricing, availability of distribution channels and reimbursement status of newly approved healthcare products is highly uncertain and we cannot assure you that adequate third-party coverage will be available for us to maintain price levels sufficient for realization of an appropriate return on our investment in product development. In certain foreign markets, pricing or profitability of healthcare products is subject to government control. In the U.S., there have been, and we expect that there will continue to be, a number of federal and state proposals to implement

S-11

similar governmental control. In addition, an increasing emphasis on managed care in the U.S. has and will continue to increase the pressure on pharmaceutical pricing. While we cannot predict whether any such legislative or regulatory proposals will be adopted or the effect such proposals or managed care efforts may have on our business, the announcement of such proposals or efforts could harm our ability to raise

capital, and the adoption of such proposals or efforts could harm our results of operations. Further, to the extent that such proposals or efforts harm other pharmaceutical companies that are prospective corporate partners, our ability to establish corporate collaborations may be adversely affected. In addition, third-party payors are increasingly challenging the prices charged for medical products and services. We do not know whether our products and product candidates, if approved, will be considered cost effective or that reimbursement to the consumer will be available or will be sufficient to allow us to sell our products on a competitive basis.

Risks Relating To This Offering

Our stock price is highly volatile, and the market price of our common stock after this offering may drop below the price you pay.

The market price of our common stock is highly volatile. For example, since 2000 our stock price fluctuated from a high sale price of \$23.00 in the quarter ended March 31, 2000 to a low sale price of \$1.86 during the quarter ending June 30, 2002. Prices for our common stock will be determined in the market place and may be influenced by many factors, including fluctuations in our financial results and investors' perceptions of us, as well as their perceptions of general economic, industry and market conditions, and the daily trading volumes of our common stock. Market fluctuations may adversely affect the market price of our common stock and may cause a rapid and substantial decline in the value of your investment in our common stock. In particular, factors that may cause such volatility include our ability to complete clinical trials of our product candidates, the results of such trials, our ability to expand sales of our products and our ability to meet the expectations of investors and securities analysts.

In the past, companies that have experienced volatility in the market price of their stock have been subject to class action litigation. If we were to become involved in this type of litigation, even if it was found that the claim had no merit, we could incur substantial costs and diversion of management's attention, which could harm our business, financial condition and operating results.

The general business climate is uncertain and we do not know how this will impact our business or our stock price.

Over the past 18 months, there have been dramatic changes in economic conditions and the general business climate has been negatively impacted. Indices of the U.S. stock markets have fallen significantly and consumer confidence has waned. Accordingly, it is generally accepted that the United States is in a recession. Compounding the general unease about the current business climate are the still unknown economic and political impacts of the September 11, 2001 terrorist attacks and hostilities in Afghanistan and elsewhere. We are unable to predict how any of these factors may affect our business or stock price.

Future sales of our common stock could adversely affect our stock price.

Sales of substantial amounts of our common stock in the public market following this offering, or the perception that a large number of shares are available for sale, could

S-12

cause the market price of our common stock to decline. These sales or the potential for these sales could make it more difficult for us to raise capital by offering equity securities. After this offering, we will have approximately 25,334,514 shares of common stock outstanding. All of the shares in this offering will be freely tradable unless purchased by our "affiliates" as that term is defined in Rule 144 under the Securities Act of 1933. As of June 3, 2002, options to purchase 2,577,879 shares of our common stock were outstanding and options to purchase 1,546,444 shares of our common stock were available for future grant under our stock option plans. In addition, as of June 3, 2002, warrants to purchase 233,011 shares of our common stock were outstanding. Holders of 43,750 shares of our common stock and warrants to purchase 233,011 shares of our common stock have the right to have their shares registered in the future for sale in the public market.

We will have broad discretion as to the use of the proceeds from this offering.

Our board of directors and our management will have broad discretion over the use of the net proceeds of this offering. Investors will be relying on the judgment of our board of directors and our management regarding the application of the proceeds from this offering.

Provisions of Delaware law and our charter and by-laws may make a takeover more difficult.

Provisions in our certificate of incorporation and by-laws and in the Delaware corporate law may make it difficult and expensive for a third party to pursue a tender offer, change in control or takeover attempt which is opposed by our management and board of directors. Public

stockholders who might desire to participate in such a transaction may not have an opportunity to do so. These anti-takeover provisions could substantially impede the ability of public stockholders to change our management and board of directors, which may reduce the market price of our common stock.

S-13

SPECIAL NOTE REGARDING FORWARD-LOOKING INFORMATION

This prospectus supplement, the accompanying prospectus and the documents incorporated by reference in the accompanying prospectus contain "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 that involve risks and uncertainties, such as statements concerning:

our growth and future operating results;

our ability to discover, develop and commercialize products;

developments in our markets and strategic focus;

potential acquisitions and our integration of acquired businesses, products and technologies;

our ability to obtain regulatory approvals;

our collaborative arrangements;

our intellectual property;

our manufacturing, marketing, sales and distribution capabilities; and

future economic, business and regulatory conditions.

We may, in some cases, use words such as "project," "believe," "anticipate," "plan," "expect," "estimate," "intend," "should," "would," "could," "will" or "may," or other words that convey uncertainty of future events or outcomes to identify these forward-looking statements. There are a number of important factors that could cause actual results to differ materially from the results anticipated by these forward-looking statements. These important factors include those that we discuss in this prospectus supplement under the caption "Risk Factors" and in the documents that we incorporate by reference in the accompanying prospectus. You should read these factors and the other cautionary statements made in this prospectus supplement, the accompanying prospectus and in the documents we incorporate by reference in the accompanying prospectus as being applicable to all related forward-looking statements wherever they appear in this prospectus supplement, the accompanying prospectus and in the documents incorporated by reference in the accompanying prospectus. You should not place undue reliance on our forward-looking statements. We do not intend and disclaim any obligation to update any forward-looking statement to reflect future events, except as may be expressly required by law.

S-14

USE OF PROCEEDS

Edgar Filing: BIOTRANSPLANT INC - Form 424B5

We estimate that the net proceeds we will receive from this common stock offering will be approximately \$9,440,000 after deducting the placement agent's fee and estimated offering expenses. We intend to use the net proceeds from this common stock offering for working capital and other general corporate purposes, including:

development and commercialization of existing and proposed products;

conduct of clinical trials; and

enhancement of sales, marketing and manufacturing capabilities.

Pending use of the net proceeds, we intend to invest these net proceeds in short-term, interest-bearing, investment-grade securities.

S-15

PLAN OF DISTRIBUTION

The shares of common stock being offered hereby are being offered for sale directly by us to individual and institutional investors. The price of the shares of common stock offered hereby was determined through negotiations between us and the purchasers.

The (Wilson) Williams Financial Group, Inc. has been retained by us to act, on a best efforts basis, as our placement agent in arranging sales of the shares to be sold in this offering. The placement agent is not obligated to purchase any of the shares offered hereby. We have agreed to pay the placement agent a fee in the amount of \$300,000 with respect to the sale of the shares offered hereby.

We expect to incur expenses in connection with this offering of approximately \$260,000.

VALIDITY OF COMMON STOCK

The validity of the shares of common stock we are offering will be passed upon for us by Hale and Dorr LLP, Boston, Massachusetts.

WHERE YOU CAN FIND MORE INFORMATION

We file reports, proxy statements and other documents with the Securities and Exchange Commission. You may read and copy any documents we file with the SEC at the public reference facility the SEC maintains at:

Room 1024, Judiciary Plaza
450 Fifth Street, N.W.
Washington, D.C. 20549

and you may also obtain copies of these materials by mail from the Public Reference Section of the SEC at:

450 Fifth Street
Washington, D.C. 20549

at prescribed rates. Please call the SEC at 1-800-SEC-0330 for further information on the public reference rooms.

The SEC also maintains a Web site, the address of which is <http://www.sec.gov>. That site also contains our annual, quarterly and special reports, proxy statements, information statements and other information.

Edgar Filing: BIOTRANSPLANT INC - Form 424B5

This prospectus supplement and the accompanying prospectus are part of a registration statement that we filed with the SEC. The registration statement contains more information than this prospectus supplement and the accompanying prospectus regarding us and the common stock being offered by us, including exhibits and schedules. You can obtain a copy of the registration statement from the SEC at any address listed above or from the SEC's Web site.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to "incorporate" into this prospectus supplement and the accompanying prospectus information that we file with the SEC in other documents. This means that we can disclose important information to you by referring to other documents that contain that information. Any information that we incorporate by reference is considered part of this prospectus supplement and the accompanying prospectus. The documents and reports that we list below are incorporated by reference into this

S-16

prospectus supplement and the accompanying prospectus. In addition, all documents and reports that we file pursuant to Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act after the date of this prospectus supplement are incorporated by reference in this prospectus and the accompanying prospectus as of the respective filing dates of these documents and reports. Statements contained in documents that we file with the SEC and that are incorporated by reference in this prospectus supplement will automatically update and supersede information contained in this prospectus supplement and the accompanying prospectus, including information in previously filed documents or reports that have been incorporated by reference in this prospectus supplement, or the accompanying prospectus, to the extent the new information differs from or is inconsistent with the old information.

We have filed the following documents with the SEC. These documents are incorporated herein by reference as of their respective dates of filing:

- (1) Our Annual Report on Form 10-K for the year ended December 31, 2001;
- (2) Our Quarterly Report on Form 10-Q for the quarter ended March 31, 2002;
- (3) Our Current Reports on Form 8-K filed on December 10, 2001, April 18, 2002 and May 9, 2002;
- (4) The description of our common stock contained in our Registration Statement on Form 8-A, as amended by a Current Report on Form 8-K filed on August 9, 2000 and including any other amendments or reports filed for the purpose of updating that description.

You may request, orally or in writing, a copy of these documents, which will be provided to you at no cost, by contacting:

BioTransplant Incorporated
Building 75, Third Avenue
Charlestown Navy Yard
Charlestown, MA 02129
Attention: Richard V. Capasso
Telephone: (617) 241-5200

S-17

BIOTRANSPLANT INCORPORATED

5,000,000 Shares of Common Stock

We may from time to time issue up to 5,000,000 shares of our common stock. We will specify in the accompanying prospectus supplement the terms of the common stock to be offered and sold. We may sell shares of our common stock to or through underwriters and also to other purchasers or through agents. We will set forth the names of any underwriters or agents in the accompanying prospectus supplement.

Investing in our common stock involves risks. See "Risk Factors" on page 2.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

This prospectus may not be used to consummate sales of securities unless it is accompanied by a prospectus supplement.

Prospectus dated January 22, 2002.

TABLE OF CONTENTS

	<u>Page</u>
ABOUT THIS PROSPECTUS	1
BIOTRANSPLANT INCORPORATED	1
RISK FACTORS	2
SPECIAL NOTE REGARDING FORWARD LOOKING INFORMATION	2
USE OF PROCEEDS	3
DESCRIPTION OF COMMON STOCK	4
PLAN OF DISTRIBUTION	6
VALIDITY OF COMMON STOCK	7
EXPERTS	7
WHERE YOU CAN FIND MORE INFORMATION	8
INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE	8

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, utilizing a "shelf" registration process. Under this shelf process, we may sell the common stock described in this prospectus in one or more offerings up to a total of 5,000,000 shares of common stock. We have provided to you in this prospectus a general description of the common stock we may offer. Each time we sell common stock, we will provide a prospectus supplement that will contain specific information about the terms of that offering. We may also add, update or change in the prospectus supplement any of the information contained in this prospectus. This prospectus, together with applicable prospectus supplements, includes all material information relating to this offering.

BIOTRANSPLANT INCORPORATED

Edgar Filing: BIOTRANSPLANT INC - Form 424B5

We are developing pharmaceutical products and systems to enable the body's immune system to better tolerate the transplantation of foreign cells, tissues and organs. Our Eligix BCell-HDM Cell Separation System and Eligix TCell-HDM Cell Separation System have received CE mark approval. CE mark approval indicates compliance with European standards for safety and allows certified products to be marketed and sold in Europe. The BCell-HDM and TCell-HDM Cell Separation System products, which will target bone marrow and stem cell transplant procedures, are being commercialized and sold pursuant to an exclusive distribution agreement with Gambro BCT.

In addition, we are developing MEDI-507, an antibody product, in collaboration with MedImmune, Inc. We have exclusively licensed MEDI-507 to MedImmune as a stand-alone agent, and we are entitled to royalties on product sales, if any, as well as milestone payments if specific product related milestones are achieved. MEDI-507 is currently in multiple Phase II clinical trials for the treatment of psoriasis.

We are also developing products to improve therapies associated with organ and bone marrow transplantation as well as the treatment of cancer, autoimmune diseases and blood disorders. These products under development are based upon our ImmunoCognance technology, which mixes elements of a donor's immune system with that of a patient in a manner that enables the patient to recognize the donor's tissue as self. Our AlloMune System for Cancer is currently in a multi-center Phase I/II clinical trial for therapy-resistant lymphoma. We expect that a Phase I clinical study of our AlloMune System for Transplantation for human kidney transplantation will begin in 2002.

We are party to a joint venture with Novartis Pharma AG. The joint venture company, Immerge BioTherapeutics AG, is conducting further research in the area of xenotransplantation, which is the transplantation of cells, tissues and organs from one species to another. Novartis has committed \$30 million in research funding to Immerge over three years, and has exclusively licensed xenotransplantation technology to Immerge in return for a 67% ownership interest and exclusive development and marketing rights. BioTransplant has exclusively licensed xenotransplantation technology to Immerge in exchange for a 33% ownership interest and future royalties from the sale of any xenotransplantation products by Novartis.

We were incorporated in Delaware in 1990. Our executive offices are located at Building 75, Third Avenue, Charlestown Navy Yard, Charlestown, Massachusetts 02129, and our telephone number is 617-241-5200. Unless the context otherwise requires, references in this prospectus to "BioTransplant," "we," "us," and "our" refer to BioTransplant Incorporated and its subsidiaries.

BioTransplant, ImmunoCognance, AlloMune, BTI-322 and Eligix are our trademarks. This prospectus and the Documents we incorporate by reference into this prospectus also contain trademarks and trade names of others.

1

RISK FACTORS

Investing in our common stock involves risk. Please see the risk factors described in our Annual Report on Form 10-K for the fiscal year ended December 31, 2000, which is incorporated by reference in this prospectus. Before making an investment decision, you should carefully consider these risks as well as other information we include or incorporate by reference in this prospectus or in any prospectus supplement. The risks and uncertainties we have described are not the only ones facing our company. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our business operations.

SPECIAL NOTE REGARDING FORWARD-LOOKING INFORMATION

We include in this prospectus, any prospectus supplement, and in the documents we incorporate by reference in this prospectus and any prospectus supplement, forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. All statements, other than statements of historical facts, that we include in this prospectus, any prospectus supplement, and in the documents we incorporate by reference in this prospectus, may be deemed forward-looking statements for purposes of these Acts. We use the words "anticipate," "believe," "estimate," "expect," "intend," "may," "plan," "project," "will," "would" and similar expressions to identify forward-looking statements, although not all forward-looking statements contain these identifying words. We cannot guarantee that we actually will achieve the plans, intentions or expectations disclosed in our forward-looking statements and, accordingly, you should not place undue reliance on our forward-looking statements. There are a number of important factors that could cause actual results or events to differ materially from the forward-looking statements that we make, including without limitation, the factors referred to above under the caption "Risk Factors." These important factors include the factors that we identify in the documents we incorporate by reference in this prospectus. You should read these factors and the other cautionary statements made in this prospectus, any prospectus supplement, and in the documents we incorporate by reference as being applicable to all related forward-looking statements wherever they appear in this prospectus, any prospectus supplement, and in the documents incorporated by reference. We caution you that we may not update any or all of the forward-looking statements we make in this prospectus and incorporate in this prospectus by reference to other documents.

USE OF PROCEEDS

Unless we otherwise indicate in the applicable prospectus supplement, we currently intend to use the net proceeds from the sale of our common stock for working capital and other general corporate purposes, including:

development and commercialization of existing and proposed products;

expenses relating to the conduct of clinical trials; and

enhancing sales, marketing, and manufacturing capabilities.

We intend to use the remainder of the net proceeds for working capital and general corporate purposes, including to acquire or invest in complementary businesses or products or to obtain the right to use complementary technologies. We have no specific understandings, commitments or agreements with respect to any such acquisition or investment. Pending the uses described above, we plan to invest the net proceeds of this offering in short-term, interest-bearing, investment-grade securities.

We may set forth additional information on the use of net proceeds from the sale of the common stock we offer under this prospectus in a prospectus supplement relating to the specific offering.

DESCRIPTION OF COMMON STOCK

The following description of our common stock, together with the additional information we include in any applicable prospectus supplements, summarizes the material terms and provisions of the common stock that we may offer under this prospectus. For the complete terms of our common stock, please refer to our charter and by-laws, which are incorporated by reference into the registration statement which includes this prospectus. The General Corporation Law of Delaware may also affect the terms of our common stock.

Our authorized capital stock consists of 50,000,000 shares of common stock, \$0.01 par value per share, and 2,000,000 shares of preferred stock, \$0.01 par value per share. As of December 1, 2001, we had 21,095,217 shares of common stock outstanding held by 268 stockholders of record. As of December 1, 2001, no shares of preferred stock were outstanding.

Common Stock

Voting. For all matters submitted to a vote of stockholders, each holder of common stock is entitled to one vote for each share registered in his or her name on our books. Our common stock does not have cumulative voting rights. As a result, subject to the voting rights of any outstanding preferred stock, of which there currently is none, persons who hold more than 50% of the outstanding common stock entitled to elect members of our board of directors can elect all of the directors who are up for election in a particular year.

Dividends. If our board of directors declares a dividend, holders of common stock will receive payments from our funds that are legally available to pay dividends. However, this dividend right is subject to any preferential dividend rights we may grant to the persons who hold preferred stock, if any is outstanding.

Liquidation and Dissolution. If we are liquidated or dissolve, the holders of our common stock will be entitled to share ratably in all the assets that remain after we pay our liabilities and any amounts we may owe to the persons who hold preferred stock, if any is outstanding.

Other Rights and Restrictions. Holders of our common stock do not have preemptive rights, and they have no right to convert their common stock into any other securities. Our common stock is not subject to redemption by us. The rights, preferences and privileges of common stockholders are subject to the rights of the stockholders of any series of preferred stock which we may designate in the future. Our charter and

by-laws do not restrict the ability of a holder of common stock to transfer his or her shares of common stock.

Listing. Our common stock is listed on the Nasdaq National Market under the symbol "BTRN."

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

Certain Effects of Authorized But Unissued Stock

We have shares of common stock and preferred stock available for future issuance without stockholder approval. We may utilize these additional shares for a variety of corporate purposes, including future public offerings to raise additional capital, to facilitate corporate acquisitions or payment as a dividend on the capital stock.

The existence of authorized but unissued and unreserved common stock and preferred stock may enable our board of directors to issue shares to persons friendly to current management or to issue preferred stock with terms that could render more difficult or discourage a third party attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise, thereby protecting the continuity of our management. In addition, if we issue preferred stock, the issuance

4

could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon liquidation.

Delaware Law and Charter and By-Law Provisions

Business Combinations. We are subject to the provisions of Section 203 of the General Corporation Law of Delaware. Section 203 prohibits a publicly-held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. A "business combination" includes mergers, assets sales and other transactions resulting in a financial benefit to the interested stockholder. Subject to specified exceptions, an "interested stockholder" is a person who, together with affiliates and associates, owns, or within three years did own, 15% or more of the corporation's voting stock.

Limitation of Liability; Indemnification. Our charter contains provisions permitted under the General Corporation Law of Delaware relating to the liability of directors. The provisions eliminate a director's liability for monetary damages for a breach of fiduciary duty, except in circumstances involving wrongful acts, such as the breach of a director's duty of loyalty or acts or omissions which involve intentional misconduct or a knowing violation of law. The limitation of liability described above does not alter the liability of our directors and officers under federal securities laws. Furthermore, our charter contains provisions to indemnify our directors and officers to the fullest extent permitted by the General Corporation Law of Delaware. These provisions do not limit or eliminate our right or the right of any shareholder of ours to seek non-monetary relief, such as an injunction or rescission in the event of a breach by a director or an officer of his duty of care to us.

Stockholder Action; Special Meeting of Stockholders. Our by-laws provide that action required or permitted to be taken by our stockholders at an annual meeting or special meeting of stockholders may only be taken if it is properly brought before the meeting and may not be taken by written consent in lieu of a meeting. In order for a matter to be properly brought before a meeting, stockholders must comply with specified advance notice requirements. Our by-laws also provide that special meetings of stockholders may only be called by the chairman of our board of directors, the chief executive officer, our president, or by our board of directors or holders of at least 20% of the then outstanding shares of our capital stock. These provisions may discourage another person or entity from making a tender offer of our common stock, because such person or entity, even if it acquired a majority of our outstanding voting securities, would be able to take action as a stockholder only at a duly called stockholders meeting, and not by written consent.

Advance Notice Requirements for Stockholder Proposals and Director Nominations. Our by-laws provide that stockholders seeking to bring business before an annual meeting of stockholders, or to nominate candidates for election as directors at an annual or special meeting of stockholders, must meet specified procedural requirements. These provisions may preclude stockholders from bringing matters before an annual meeting of stockholders or from making nominations for directors at an annual or special meeting of stockholders.

5

PLAN OF DISTRIBUTION

We may sell the shares of common stock being offered hereby in one or more of the following ways from time to time:

through agents to the public or to investors;

to underwriters for resale to the public or to investors; or

directly to investors.

We will set forth in a prospectus supplement the terms of the offering of our common stock, including:

the name or names of any agents or underwriters;

the purchase price of our common stock being offered and the proceeds we will receive from the sale;

any over-allotment options under which underwriters may purchase additional shares of common stock from us;

any agency fees or underwriting discounts and other items constituting agents' or underwriters' compensation;

any initial public offering price;

any discounts or concessions allowed or reallocated or paid to dealers; and

any securities exchanges on which such common stock may be listed.

Agents

We may designate agents who agree to use their reasonable efforts to solicit purchases for the period of their appointment or to sell our common stock on a continuing basis.

Underwriters

If we use underwriters for a sale of our common stock, the underwriters will acquire our common stock for their own account. The underwriters may resell our common stock in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. The obligations of the underwriters to purchase our common stock will be subject to the conditions set forth in the applicable underwriting agreement. We may change from time to time any initial public offering price and any discounts or concessions the underwriters allow or reallocate or pay to dealers. We may use underwriters with whom we have a material relationship. We will describe in the prospectus supplement naming the underwriter the nature of any such relationship.

Direct Sales

We may also sell our common stock directly to one or more purchasers without using underwriters or agents.

Underwriters, dealers and agents that participate in the distribution of our common stock may be underwriters as defined in the Securities Act and any discounts or commissions they receive from us and any profit on their resale of common stock may be treated as underwriting discounts and commissions under the Securities Act. We will identify in the applicable prospectus supplement any

underwriters, dealers or agents and will describe their compensation. We may have agreements with the underwriters, dealers and agents to indemnify them against specified civil liabilities, including liabilities under the Securities Act. Underwriters, dealers and agents may engage in transactions with or perform services for us or our subsidiaries in the ordinary course of their businesses.

Trading Markets and Listing of Securities

Our common stock is listed on the Nasdaq National Market. It is possible that one or more underwriters may make a market in our common stock, but the underwriters will not be obligated to do so and may discontinue any market making at any time without notice. We cannot give any assurance as to the liquidity of the trading market for any of our common stock.

Stabilization Activities

Any underwriter may engage in over-allotment, stabilizing transactions, short covering transactions and penalty bids in accordance with Regulation M under the Securities Exchange Act of 1934. Over-allotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum. Short covering transactions involve purchases of the common stock in the open market after the distribution is completed to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the common stock originally sold by the dealer is purchased in a covering transaction to cover short positions. Those activities may cause the price of our common stock to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of the activities at any time.

Passive Market Making

Any underwriters who are qualified market makers on the Nasdaq National Market may engage in passive market making transactions in our common stock on the Nasdaq National Market in accordance with Rule 103 of Regulation M, during the business day prior to the pricing of the offering, before the commencement of offers or sales of our common stock. Passive market makers must comply with applicable volume and price limitations and must be identified as passive market makers. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for the security; if all independent bids are lowered below the passive market maker's bid, however, the passive market maker's bid then must be lowered when certain purchase limits are exceeded.

VALIDITY OF COMMON STOCK

The validity of the common stock offered hereby will be passed upon for us by Hale and Dorr LLP, Boston, Massachusetts.

EXPERTS

Our audited financial statements as of December 31, 1999 and 2000 and for the years ended December 31, 1999 and December 31, 2000 incorporated by reference in this prospectus to our Annual Report on Form 10-K for the year ended December 31, 2000, as amended, filed with the Securities and Exchange Commission, have been audited by Arthur Andersen LLP, independent public accountants, as indicated in their reports with respect thereto, and are included herein in reliance upon Arthur Andersen LLP as experts on auditing and accounting in giving such reports.

WHERE YOU CAN FIND MORE INFORMATION

We file reports, proxy statements and other documents with the Securities and Exchange Commission. You may read and copy any document we file with the SEC at the public reference facility the SEC maintains at:

Edgar Filing: BIOTRANSPLANT INC - Form 424B5

Room 1024, Judiciary Plaza
450 Fifth Street, N.W.
Washington, D.C. 20549

and you may also obtain copies of these materials by mail from the Public Reference Section of the SEC at:

450 Fifth Street, N.W.
Washington, D.C. 20549

at prescribed rates. Please call the SEC at 1-800-SEC-0330 for further information on the public reference rooms.

The SEC also maintains a Web site, the address of which is <http://www.sec.gov>. That site also contains our annual, quarterly and special reports, proxy statements, information statements and other information.

This prospectus is part of a registration statement that we filed with the SEC. The registration statement contains more information than this prospectus regarding us and the common stock being offered by us, including exhibits and schedules. You can obtain a copy of the registration statement from the SEC at any address listed above or from the SEC's Web site.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to "incorporate" into this prospectus information that we file with the SEC in other documents. This means that we can disclose important information to you by referring to other documents that contain that information. Any information that we incorporate by reference is considered part of this prospectus. The documents and reports that we list below are incorporated by reference into this prospectus. In addition, all documents and reports that we file pursuant to Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act after the date of this prospectus are incorporated by reference in this prospectus as of the respective filing dates of these documents and reports. Statements contained in documents that we file with the SEC and that are incorporated by reference in this prospectus will automatically update and supersede information contained in this prospectus, including information in previously filed documents or reports that have been incorporated by reference in this prospectus, to the extent the new information differs from or is inconsistent with the old information.

We have filed the following documents with the SEC. These documents are incorporated herein by reference as of their respective dates of filing:

- (1) Our Annual Report on Form 10-K for the year ended December 31, 2000, as amended by Amendment No. 1 to Form 10-K/A and Amendment No. 2 to Form 10-K/A;
- (2) Our Quarterly Report on Form 10-Q for the quarter ended March 31, 2001, as amended by Amendment No. 1 to Form 10-Q/A;
- (3) Our Quarterly Report on Form 10-Q for the quarter ended June 30, 2001;
- (4) Our Quarterly Report on Form 10-Q for the quarter ended September 30, 2001;
- (5) Our Current Reports on Form 8-K filed February 21, 2001, February 23, 2001, March 9, 2001, March 12, 2001, May 25, 2001, and June 14, 2001;

- (6) Our Current Report on Form 8-K/A filed June 26, 2001;
- (7)

Edgar Filing: BIOTRANSPLANT INC - Form 424B5

All our filings pursuant to the Exchange Act after the date of filing of the initial registration statement and prior to effectiveness of the registration statement; and

(8)

The description of our common stock contained in our Registration Statement on Form 8-A, as amended by a Current Report on Form 8-K filed on August 9, 2000 and including any other amendments or reports filed for the purpose of updating that description.

You may request, orally or in writing, a copy of these documents, which will be provided to you at no cost, by contacting:

BioTransplant Incorporated
Building 75, Third Avenue
Charlestown Navy Yard
Charlestown, MA 02129
Attention: Richard V. Capasso
Telephone: (617) 241-5200

You should rely only on the information contained in this prospectus, including information incorporated by reference as described above, or any prospectus supplement that we have specifically referred you to. We have not authorized anyone else to provide you with different information. You should not assume that the information in this prospectus or any prospectus supplement is accurate as of any date other than the date on the front of those documents or that any document incorporated by reference is accurate as of any date other than its filing date. You should not consider this prospectus to be an offer or solicitation relating to the securities in any jurisdiction in which such an offer or solicitation relating to the securities is not authorized. Furthermore, you should not consider this prospectus to be an offer or solicitation relating to the securities if the person making the offer or solicitation is not qualified to do so, or if it is unlawful for you to receive such an offer or solicitation.

9

4,000,000 Shares

Common Stock

PROSPECTUS

June 10, 2002

QuickLinks

[TABLE OF CONTENTS Prospectus Supplement](#)

[PROSPECTUS SUPPLEMENT SUMMARY](#)

[BioTransplant Incorporated](#)

[The Offering](#)

[RISK FACTORS](#)

[Risks Related To Our Business, Industry and Strategy](#)

[Risks Relating To This Offering](#)

SPECIAL NOTE REGARDING FORWARD-LOOKING INFORMATION

USE OF PROCEEDS

PLAN OF DISTRIBUTION

VALIDITY OF COMMON STOCK

WHERE YOU CAN FIND MORE INFORMATION

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

TABLE OF CONTENTS

ABOUT THIS PROSPECTUS

BIOTRANSPLANT INCORPORATED

RISK FACTORS

SPECIAL NOTE REGARDING FORWARD-LOOKING INFORMATION

USE OF PROCEEDS

DESCRIPTION OF COMMON STOCK

PLAN OF DISTRIBUTION

VALIDITY OF COMMON STOCK

EXPERTS

WHERE YOU CAN FIND MORE INFORMATION

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE