TRANSGENOMIC INC
Form 424B3
December 14, 2005
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Registration No. 333-130027

PROSPECTUS

25,015,383 Shares

TRANSGENOMIC, INC.

COMMON STOCK

This Prospectus covers 25,015,383 shares (Shares) of our common stock that the selling stockholders listed under Principal and Selling Stockholders may sell from time to time. These Shares consist of:

- up to 16,975,743 Shares outstanding held by the selling shareholders; and
- up to 8,039,640 Shares that may be issued upon exercise of outstanding warrants.

The selling stockholders may sell the shares at the then prevailing market price for the shares at the time of the sale, or at other prices. The last reported sale price for our common stock on November 29, 2005 was $0.96 per share. The selling stockholders are offering the Shares as described under Plan of Distribution. We will not receive any of the proceeds from the sale of these shares by the selling stockholders, but will be entitled to the proceeds from the exercise of outstanding warrants.

Our common stock is listed on the Nasdaq National Market under the symbol TBIO.

Investing in our common stock involves a high degree of risk. You should carefully consider the information under the heading Risk Factors beginning on page 5 of this Prospectus before buying shares of our common stock.

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

December 12, 2005

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Forward-Looking Statements

This Prospectus contains certain forward-looking statements. Many of these forward-looking statements refer to our plans, objectives, expectations and intentions, as well as our future financial results and are subject to risk and uncertainty. You can identify these forward-looking statements by words such as expects, anticipates, intends, plans, may, believes, seeks, estimates and similar expressions. Because th forward-looking statements involve risks and uncertainties, there are many factors that could cause our actual results to differ materially from those expressed or implied by these forward-looking statements, including those discussed under Risk Factors in this Prospectus or described in reports that we file from time to time with the Securities and Exchange Commission, such as our Forms 10-K and 10-Q, as amended.

You should rely only on the information contained in this Prospectus. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. The information in this Prospectus is current as of its date. Our business, financial condition, results of operations and prospects may have changed since that date.

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PROSPECTUS SUMMARY

The items in the following summary are described in more detail later in this Prospectus. This summary provides an overview of selected information and does not contain all of the information you should consider. Therefore, you should also read the more detailed information set out in this Prospectus, including the consolidated financial statements and related notes appearing elsewhere in this Prospectus, before investing in our common stock. In particular, you should carefully consider the information discussed under Risk Factors. All references to we, us or the Company in this Prospectus mean Transgenomic, Inc.

TRANSGENOMIC, INC.

Our Business

We develop, manufacture and sell innovative products for the analysis, synthesis and purification of nucleic acids through two operating segments, BioSystems and Nucleic Acids.

The BioSystems operating segment develops, assembles, manufactures and markets versatile products and provides analytical services to the medical research, clinical and pharmaceutical markets for use in genetic variation analysis. Products and services are sold through a direct sales force in the United States and throughout much of Western Europe. For the rest of the world, products and services are sold through more than 25 dealers and distributors located in those local markets. Net sales from this operating segment are categorized as bioinstruments, bioconsumables and discovery services.

Bioinstruments. The flagship product of the BioSystems operating segment is the WAVE system which has broad applicability to genetic variation detection in both molecular genetic research and molecular diagnostics. There was a world-wide installed base of 1,269 WAVE systems as of September 30, 2005. Additionally, this operating segment utilizes its sales and distribution network to sell a number of independent, third party equipment platforms. Service contracts to maintain installed systems are sold and supported by technical support personnel.

Bioconsumables. The installed WAVE base generates a demand for consumables that are required for the system s continued operation. These products are developed, manufactured and sold by this operating segment. In addition, the BioSystems operating segment manufactures and sells consumable products that can be used on multiple, independent platforms. These products include SURVEYOR Nuclease and a range of HPLC separation columns.

Discovery Services. The BioSystems operating segment provides various genetic laboratory services through a contract research lab in Gaithersburg, Maryland and a second laboratory in Omaha, Nebraska that operates in a Good Laboratory Practices (GLP) compliant environment and is certified under the Clinical Laboratory Improvement Amendment. The services provided primarily include (1) genomic biomarker analysis services to pharmaceutical and biopharmaceutical companies to support preclinical and clinical development of targeted therapeutics; and (2) molecular-based testing for hematology, oncology and certain inherited diseases for physicians and third-party laboratories.

The Nucleic Acids operating segment develops, manufactures and markets chemical building blocks for nucleic acid synthesis to biotechnology, pharmaceutical, oligonucleotide synthesis companies and research institutions throughout the world. These products are produced primarily in

this operating segment s only facility, in Glasgow, Scotland. Prior to November 11, 2004, this operating segment also manufactured synthesized segments of nucleic acids (known as oligonucleotides) in a facility in Boulder, Colorado. On November 11, 2004, the assets associated with this facility were sold to an unaffiliated

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third party. As a result, the Nucleic Acids operating segment no longer manufactures and sells these specialized oligonucleotides. A substantial portion of this operating segment s revenues during 2005 and 2004 have been derived from one customer.

We have experienced recurring net losses resulting in an accumulated deficit of $110.88 million at September 30, 2005 and have historically relied upon cash flows from investing and financing activities to offset significant cash outflows from operating activities. We instituted significant changes during the fourth quarter of 2004 designed to, among other things, better align our cost structure with projected revenues, focus on opportunities in our BioSystems operating segment, and minimize the adverse financial effect of our Nucleic Acids operating segment. Specifically, during the fourth quarter of 2004, we sold our manufacturing facility in Boulder, Colorado and implemented a restructuring plan. While the primarily goals of these changes were to provide the foundation for a self-sustaining, growth-oriented company with positive cash flows and earnings, there can be no assurance that we can achieve these goals. Our business strategy going forward is to achieve revenue growth in our BioSystems operating segment and to better align our cost structure with anticipated revenues in both of our operating segments.

Recent Financing Activities

On October 31, 2005, we closed on a private placement of securities to institutional investors (the 2005 Private Placement). The securities issued consisted of: (i) 14,925,743 shares of the Company s common stock, plus (ii) five-year, non-callable warrants to purchase another 5,970,297 shares of common stock with an exercise price of $1.20 per share. The aggregate purchase price for the securities sold was $1.01 per share of common stock initially being sold or $15.08 million. In conjunction with this transaction, we issued a warrant to Oppenheimer & Co., Inc. to purchase 932,859 shares at $1.20 per share as part of their placement fee.

The net proceeds from the 2005 Private Placement were $13.90 million after transaction costs of $1.18 million. These proceeds were partially used to repay all outstanding principal and accrued interest on our convertible line of credit (the Credit Line) and convertible term note (the Term Note) to Laurus Master Fund, Ltd. (Laurus) (collectively, the Laurus Loans) including fees to facilitate the 2005 Private Placement and prepayment penalties to Laurus in the sum of $0.82 million. As a result, our Laurus Loans have been cancelled and are no longer available to us. The remaining proceeds of $5.35 million will be used for future working capital needs.

Shares to be sold by Selling Stockholders

This Prospectus covers 25,015,383 shares of our common stock that the selling stockholders listed under Principal and Selling Stockholders may offer and resell from time to time. These shares consist of (i) 14,925,743 shares issued in conjunction with the 2005 Private Placement; (ii) 6,903,156 shares issuable upon the exercise of warrants that were also issued in conjunction with the 2005 Private Placement; (iii) 2,050,000 shares in conjunction with a private placement that closed in the fourth quarter of 2003; and (iv) 1,136,484 shares issuable upon the exercise of outstanding warrants that were issued primarily in conjunction with our past indebtedness to Laurus. The exercise price of these warrants range from $1.20 to $3.18 per share. The selling stockholders are offering the common stock as described under Plan of Distribution.

At November 29, 2005, we had 49,172,079 shares issued and outstanding. The number of shares outstanding does not include (i) the 8,062,577 shares issuable upon the exercise of outstanding warrants and (ii) up to 6,246,231 shares of our common stock that we could issue under our employee stock option plan of which 5,541,015 options are outstanding.

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Use of Proceeds

This Prospectus relates to shares of our common stock that may be offered and sold from time to time by the selling stockholders. This Prospectus also relates to common stock issuable upon the exercise of warrants held by certain selling stockholders. We will not receive any proceeds from the sale of shares of common stock in this offering. We will, however, receive proceeds from the exercise of the warrants, if exercised. The proceeds from the exercise of warrants, if any, will be used for working capital purposes.

Summary Consolidated Financial Information

The following tables present our summary consolidated historical financial information for the periods indicated. You should read this information together with the consolidated financial statements and related notes and the information under Management s Discussion and Analysis of Financial Condition and Results of Operations included elsewhere in this Prospectus. The summary consolidated balance sheet data at December 31, 2004 and 2003 and the summary consolidated statements of operations data for each year ended December 31, 2004, 2003 and 2002 have been derived from our audited consolidated financial statements that are included elsewhere in this Prospectus. The summary consolidated balance sheet data at September 30, 2005 and the summary consolidated statements of operations data for the nine months ended September 30, 2005 and 2004 are derived from our unaudited condensed consolidated financial statements included elsewhere in this Prospectus. The unaudited condensed consolidated financial statements include, in the opinion of management, all adjustments that management considers necessary for the fair presentation of the financial information set forth in those statements. Historical results are not necessarily indicative of the results to be expected in the future. The as adjusted balance sheet data as of September 30, 2005 and the as adjusted statements of operations data for the nine months ended September 30, 2005 and the year ended December 31, 2004 give effect to the 2005 Private Placement and simultaneous repayment of the Laurus Loans as if is such transactions had occurred as of September 30, 2005 for purposes of the balance sheet data and as of January 1, 2004 for purposes of the statement of operations data. Such amounts have been derived from our as adjusted unaudited condensed consolidated financial statements that are not included in this Prospectus. For a detailed description of the related adjustments refer to Capitalization Table on page 14. Dollar amounts, except per share data, are presented in thousands.

	Nine Months Ended September 30,			Year Ended December 31,			
	2005	2005	2004	2004	2004	2003	2002
		As Adjusted			As Adjusted		
Statement of Operations Data:							
Net sales	$ 23,711	$ 23,711	$ 25,834	$ 33,789	$ 33,789	$ 33,866	$ 37,554
Cost of good sold	13,609	13,609	18,484	24,596	24,596	24,315	19,569
Gross profit	10,102	10,102	7,350	9,193	9,193	9,551	17,985
Selling, general and administrative	10,023	10,023	12,866	17,499	17,499	17,324	24,199
Research and development	1,696	1,696	5,344	6,685	6,685	9,305	12,201
Restructuring charges [1]				3,570	3,570	738	3,282
Impairment charges [2]	247	247	11,964	11,965	11,965	4,772	
Gain on sale of facility [3]				(1,466)	(1,466)		
Gain on sale of product line							
Operating expenses	11,966	11,966	30,174	38,253	38,253	32,139	39,682
Other income (expense) [4]	(1,888)	(611)	(4,704)	(5,406)	(239)	(305)	437
Loss before income taxes	(3,752)	(2,475)	(27,528)	(34,466)	(29,299)	(22,893)	(21,260)

Income tax (benefit) expense	27	27	(94)	(94)	(94)	65	105
Net loss	$ (3,779)	$ (2,502)	$ (27,434)	$ (34,372)	$ (29,205)	$ (22,958)	$ (21,365)
Basic and diluted loss per share	$ (0.12)	$ (0.05)	$ (0.95)	$ (1.19)	$ (0.66)	$ (0.94)	$ (0.91)
Basic and diluted weighted average shares outstanding	32,837	47,763	28,951	29,066	43,992	24,484	23,583

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	As of September 30, 2005		As of December 31,	
	Actual	As Adjusted	2004	2003
Balance Sheet Data:				
Total assets [5]	$ 31,789	$ 37,163	$ 37,458	$ 57,306
Borrowings under credit line	6,935		6,514	2,142
Current portion of long-term debt	675		825	1,693
Long-term debt, less current portion	1,226		2,199	
Total stockholders equity	15,577	29,220	16,535	45,058

(1) Restructuring plans were implemented in 2002 and 2004 to reduce and align our expenses with current business prospects. The plans included employee terminations, office closures, termination of collaborations and write-offs of abandoned intellectual property. As a result, restructuring charges were recorded and are included in operating expenses. See Note N to the accompanying consolidated financial statements.

(2) Impairment charges relate primarily to the impairment of goodwill, and in 2004, also include a charge of $2,100 related to the impairment of property and equipment. See Note C to the accompanying consolidated financial statements.

(3) Gain on sale of facility relates to the sale of our specialty olignucleotide manufacturing facility in Boulder, Colorado during the fourth quarter of 2004. See note M to the accompanying consolidated financial statements.

(4) Other income (expense) for all years presented primarily includes interest expense and in 2004 it includes a loss on debt extinguishment of $2,859 resulting from certain modifications to our Laurus Loans that were treated as extinguishments for financial reporting purposes. See Note E to the accompanying consolidated financial statements.

(5) The reduction in total assets from December 31, 2003 to December 31, 2004 related primarily to impairment charges of $11,965 in our Nucleic Acids operating segment (see Notes C and K to the accompanying consolidated financial statements) and the sale of our specialty oligonucleotide manufacturing facility in Boulder, Colorado (see Note M to the accompanying consolidated financial statements). The reduction in total assets from December 31, 2002 to December 31, 2003 related primarily to operating losses that were funded by reductions in cash and cash equivalents and short term investments.

General Information

We were incorporated in Delaware on March 6, 1997. Our principal office is located at 12325 Emmet Street, Omaha, Nebraska 68164 (telephone: 402-452-5400). We maintain manufacturing facilities in Omaha, Nebraska, San Jose, California, Glasgow, Scotland and Cramlington, England. We maintain research and development offices in Gaithersburg, Maryland and Omaha, Nebraska.

We make reports filed by us with the SEC available free of charge on our website as soon as reasonably practicable after these reports are filed. The address of our website is www.transgenomic.com. Information on our website, including any SEC report, is not part of this Prospectus and you should not rely on it in deciding whether to invest in our common stock.

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RISK FACTORS

An investment in our common stock involves a number of risks. Before making an investment decision, you should carefully consider all of the risks and other information described in this Prospectus. The risks discussed in this Prospectus could materially adversely affect our business, financial condition and results of operations and cause the trading price of our common stock to decline significantly. If this occurs, you may lose all or part of your investment.

Risks Relating to Our Business

We may not have adequate financial resources to execute our business plan.

At October 31, 2005, we had cash and cash equivalents and short-term investment of $6.68 million. While we believe that existing sources of liquidity are sufficient to meet expected cash needs through 2006, we have experienced recurring net losses and have an accumulated deficit totaling $110.88 million at September 30, 2005 and have historically relied upon cash flows from investing and financing activities to offset significant cash outflows from operating activities. To the extent necessary, we believe that we can manage costs and expenses at reduced levels to conserve working capital. The need for any such cost and expense reductions would likely delay implementation of our business plan. Ultimately, we must achieve sufficient revenues in order to generate positive net earnings and cash flows from operations. However, we cannot assure you that we will be able to increase our revenues.

We have a history of operating losses and may incur losses in the future.

We have experienced losses from operations since inception of our operations. Our loss from operations for the years ended December 31, 2004, 2003 and 2002 were $29.06 million, $22.59 million and $21.70 million, respectively, and for the first nine months of 2005 were $1.86 million. These losses have been due principally to the high levels of research and development expenses and sales and marketing expenses that we have incurred in order to develop and market our products, restructuring charges and impairment charges. In addition, markets for our products have developed more slowly than expected in many cases and may continue to do so. As a result, we may incur operating losses in the future.

Markets for our products and services may develop slowly.

There are many factors that affect the market demand for our products and services that we cannot control. This is especially true in our Nucleic Acids operating segment where the demand for our products depends to a large degree on the success that our customers and potential customers have in developing useful pharmaceutical products based on genetic intervention. A central strategy for our Nucleic Acids operating segment is to sell synthetic nucleic acid products to biopharmaceutical and pharmaceutical companies that are seeking to develop commercially viable genomic-based diagnostic and therapeutic products. We have invested a significant amount of capital into acquiring and developing manufacturing facilities and other assets to allow us to pursue this market. However, this is a new field of commercial development, and many of these biopharmaceutical and pharmaceutical companies are in the early stages of their efforts to develop genomic-based diagnostics and therapeutics and have encountered difficulties in these efforts. As a result, the demand for our synthetic nucleic acid products is difficult to forecast and may develop slowly or sporadically. In addition, we cannot assure you that these companies will not internally develop the chemistries and manufacturing capabilities to produce the products they could buy from us. Demand for our WAVE System is similarly affected by the needs and budgetary resources of research institutions, universities, hospitals and others who use the WAVE System for genetic-variation

research. The WAVE System represents a significant expenditure by these types of

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customers and often requires a long sales cycle. If revenues from the sales of our products and services continue at current levels, we may need to take steps to further reduce operating expenses or raise additional working capital. We cannot assure you that sales will increase or that we will be able to reduce operating expenses or raise additional working capital.

Two customers account for a significant portion of sales in our BioSystems and Nucleic Acids operating segments.

During nine months ended September 30, 2005, sales to Geron Corporation (Geron) totaled $1.73 million and represented 54%, of net sales within our Nucleic Acids operating segment and 7% of our total consolidated net sales. During the year ended December 31, 2004, sales to Geron Corporation totaled $4.15 million and represented 49% of total net sales within our Nucleic Acids operating segment and 12% of total consolidated net sales. Sales to Geron are governed by a supply agreement that does not require Geron to purchase any minimum quantity of our products. Accordingly, the amount of nucleic acid products we sell to Geron is subject to change. Revenues from our Nucleic Acids operating segment business would be substantially reduced if Geron s need for our products declined or if it decided to obtain these products from other suppliers.

During the nine months ended September 30, 2005, sales to a large pharmaceutical company totaled $2.0 million and represented 10% of net sales within our BioSystems operating segment and 9% of our total consolidated net sales. During the year ended December 31, 2004, sales to this customer totaled $1.66 million and represented 7% of total net sales within our BioSystems operating segment and 5% of total consolidated net sales. Sales to this customer are governed by a non-binding master services agreement that does not require the customer to purchase any minimum quantity of our services. Accordingly, the amount of sales to this customer is subject to change.

Customer clinical trials may be delayed or discontinued.

A significant percentage of our Nucleic Acids operating segment and discovery services revenues are generated by sales to customers involved in drug development. Our products and services are generally used by these customers in the manufacture of drug candidates in varying stages of clinical trials. If these clinical trials are delayed or cancelled or are otherwise not successful, this could have a significant impact on revenues we generate from the sales of these products.

The sale of our products and business operations in international markets subjects us to additional risks.

During the last three fiscal years, our international sales have been approximately 55-65% of our net sales. As a result, a major portion of our revenues and expenses are subject to risks associated with international sales and operations. These risks include:

- payment cycles in foreign markets are typically longer than in the U.S., and capital spending budgets for research agencies can vary over time with foreign governments;

- changes in foreign currency exchange rates can make our products more costly and operating expenses higher in local currencies since our foreign sales and operating expenses are typically paid for in U.S. Dollars, British Pounds or the Euro; and

the potential for changes in U.S. and foreign laws or regulations that result in additional import or export restrictions, higher tariffs or other taxes, more burdensome licensing requirements or similar impediments to our ability to sell products and services profitably in these markets.

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Our WAVE System includes hardware components and instrumentation manufactured by a single supplier and if we are no longer able to obtain these components and instrumentation our ability to manufacture our products could be impaired.

We rely on a single supplier, Hitachi High Technologies America, to provide the basic instrument used in our WAVE Systems. While other suppliers of instrumentation and computer hardware are available, we believe that our arrangement with Hitachi offers strategic advantages. Hitachi is replacing its current instrument line with a new instrument line. While we presently plan to convert our technology and applications to this new instrument line, such conversion may not be successful and, therefore, we may incur additional costs for the custom manufacturing of the current instrument line. If we were required to seek alternative sources of supply, it could be time consuming or expensive or require significant and costly modification of our WAVE System. Also, if we were unable to obtain instruments from Hitachi in sufficient quantities or in a timely manner, our ability to manufacture our products could be impaired, which could limit our future revenues.

We may not have adequate personnel to execute our business plan.

In order to reduce our operating costs, we have significantly reduced the number of employees, including reductions in our research and development staff and our sales and marketing personnel. In addition, we may lose other key management, scientific, technical, sales and manufacturing personnel from time to time. It may be very difficult to replace personnel if they are needed in the future, and the loss of key personnel could harm our business and operating results. We cannot assure you that our employee reductions will not impair our ability to continue to develop new products and refine existing products in order to remain competitive. In addition, these reductions could prevent us from successfully marketing our products and developing our customer base.

Our markets are very competitive.

As described above, we compete with many other companies in both our Biosystems and Nucleic Acids operating segments. Many of these competing companies have greater resources than we do or may enjoy other competitive advantages. This may allow them to more effectively market their products to our customers or potential customers, to develop products that make our products obsolete or to produce and sell products less expensively than us. As a result of these competitive factors, demand for and pricing of our products and services could be negatively affected.

Our patents may not protect us from others using our technology that could harm our business and competitive position.

Patent law relating to the scope of claims in the technology fields in which we operate is still evolving. The degree of future protection for our proprietary rights is uncertain. Furthermore, we cannot be certain that others will not independently develop similar or alternative products or technology, duplicate any of our products, or, if patents are issued to us, design around the patented products developed by us. Our patents or licenses could be challenged by litigation and, if the outcome of such litigation were adverse to us, our competitors could be free to use our technology. We may not be able to obtain additional patents for our technology, or if we are able to do so, patents may not provide us with substantial protection or be commercially beneficial. In addition, we could incur substantial costs in litigation if we are required to defend ourselves in patent suits brought by third parties or if we initiate such suits.

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We cannot be certain that other measures taken to protect our intellectual property will be effective.

We rely upon trade secret protection, copyright and trademark laws, non-disclosure agreements and other contractual provisions for some of our confidential and proprietary information that is not subject matter for which patent protection is being sought. Such measures, however, may not provide adequate protection for our trade secrets or other proprietary information. If such measures do not protect our rights, third parties could use our technology and our ability to compete in the market would be reduced.

We are dependent upon our licensed technologies and may need to obtain additional licenses in the future to offer our products and remain competitive.

We have licensed key components of our technologies from third parties. If these agreements were to terminate prematurely due to our breach of the terms of these licenses or we otherwise fail to maintain our rights to such technology, we may lose the right to manufacture or sell a substantial portion of our products. In addition, we may need to obtain licenses to additional technologies in the future in order to keep our products competitive. If we fail to license or otherwise acquire necessary technologies, we may not be able to develop new products that we need to remain competitive.

The patent underlying our nonexclusive license to manufacture standard nucleic acid building blocks expired as of March 15, 2005. The expiration of this patent could result in additional manufacturers entering the market for these products. Some of these manufacturers may have lower cost structures or other competitive advantages which may reduce our market share and/or our operating margins related to these products.

The protection of intellectual property in foreign countries is uncertain.

A significant percentage of our sales are to customers located outside the U.S. The patent and other intellectual property laws of some foreign countries may not protect our intellectual property rights to the same extent as U.S. laws. We may need to bring proceedings to defend our patent rights or to determine the validity of our competitors foreign patents. These proceedings could result in substantial cost and diversion of our efforts. Finally, some of our patent protection in the U.S. is not available to us in foreign countries due to the laws of those countries.

Our products could infringe on the intellectual property rights of others.

There are a significant number of U.S. and foreign patents and patent applications submitted for technologies in, or related to, our area of business. As a result, any application or exploitation of our technology could infringe patents or proprietary rights of others and any licenses that we might need as a result of such infringement might not be available to us on commercially reasonable terms, if at all. This may lead others to assert patent infringement or other intellectual property claims against us.

Our failure to comply with any applicable government regulations or otherwise respond to claims relating to improper handling, storage or disposal of hazardous chemicals that we use may adversely affect our results of operations.

Our research and development and manufacturing activities involve the controlled use of hazardous materials and chemicals. We are subject to federal, state, local and international laws and regulations governing the use, storage, handling and disposal of hazardous materials and waste products. If we fail to comply with applicable laws or regulations, we could be required to pay penalties or be held liable for any damages that result and this liability could exceed our financial resources. We cannot

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assure you that accidental contamination or injury will not occur. Any such accident could damage our research and manufacturing facilities and operations, resulting in delays and increased costs.

Risks Relating To This Offering and Ownership of Our Common Stock

The price for our common stock is volatile and may drop.

The trading price for our common stock has fluctuated significantly over recent years. The volatility in the price of our stock is attributable to a number of factors, not all of which relate to our operating results and financial position. Nevertheless, continued volatility in the market price for our stock should be expected and we cannot assure you that the price of our stock will not decrease in the future. Fluctuations or further declines in the price of our stock may affect our ability to sell shares of our stock and to raise capital through future equity financing.

If we are unable to maintain our Nasdaq listing, your ability to trade shares of our common stock could suffer.

In order for our common stock to remain listed on the Nasdaq National Market (Nasdaq), we must meet the minimum listing requirements for continued listing, including, among other requirements, minimum bid price and market value of public float requirements. If our common stock is delisted from the Nasdaq, transactions in our common stock would likely be conducted only in the over-the counter market, or potentially on regional exchanges, which could negatively impact the trading volume and price of our common stock, and investors may find it more difficult to purchase or dispose of, or to obtain accurate quotations as to the market value of, our common stock. In addition, if our common stock were not listed on the Nasdaq and the trading price of our common stock remains below $5.00 per share, trading in our common stock would also be subject to certain rules that require additional disclosures by broker-dealers in connection with any trades involving a penny stock. In such event, the additional burdens imposed on broker-dealers to effect transactions in our common stock could further limit the market liquidity of our common stock and the ability of investors to trade our common stock.

We may issue a substantial amount of our common stock to holders of options and warrants and this could reduce the market price for our stock.

We also had obligations to issue 13,603,592 shares of common stock under outstanding stock options and warrants. The issuance of these additional shares of common stock may be dilutive to our current shareholders and could negatively impact the market price of our common stock.

Sales of substantial amounts of our common stock in the public market could adversely affect the market price of our common stock.

At November 29, 2005, we have 49,172,079 shares of common stock outstanding. All but 13,972,384 shares held by affiliates of the Company are freely tradable without restriction or further registration under the Securities Act. Shares held by affiliates may also be sold subject only to the requirements of Rule 144 under the Securities Act. The sale of these shares in the public markets has potential to cause significant downward pressure on the price of our common stock. This is particularly the case if the shares being placed into the market exceed the market s ability to

absorb the stock. Such an event could place further downward pressure on the price of our common stock. This presents an opportunity for short sellers to contribute to the further decline of our stock price. If there are significant short sales of our stock, the price decline that would result from this activity will cause the share price to decline more so, which, in turn, may cause long holders of the stock to sell their shares thereby contributing to sales of stock in the market.

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The price you pay for shares offered by the selling stockholders may be higher than the prices paid by other people acquiring such shares.

Selling stockholders may sell shares under this Prospectus from time to time either at prices then prevailing in the market or at other prices they negotiate with buyers. Accordingly, the price you pay for shares of our common stock you purchase from a selling stockholder may be higher than the prices paid by other people acquiring such shares.

USE OF PROCEEDS

We will not receive additional proceeds from the sale of the Shares offered by this Prospectus. However, we have already received net proceeds (after transaction costs of $1.18 million) of $13.90 million in conjunction with the 2005 Private Placement. These proceeds were partially used to repay all outstanding principal and accrued interest on our Laurus Loans including fees to facilitate the private placement and prepayment penalties to Laurus in the sum of $0.82 million. The remaining proceeds of $5.35 million will be used for future working capital needs. We also received proceeds of $2.05 million in conjunction with the private placement that we closed in the fourth quarter of 2003. Additionally, we may receive approximately $10.49 million upon the exercise of warrants for the remaining 8,062,577 Shares that may be offered hereby. The net proceeds we receive from any exercise of these warrants, if any, will be used by us primarily for working capital purposes.

PRICE RANGE OF COMMON STOCK AND DIVIDEND POLICY

Our common stock is listed for trading on the Nasdaq under the symbol TBIO. The following table sets forth the high and low closing prices for our common stock during each of the quarters of 2003 and 2004 and through November 29, 2005

	High	Low
Year Ended December 31, 2003		
First Quarter	$ 4.22	$ 1.40
Second Quarter	$ 2.43	$ 0.93
Third Quarter	$ 2.14	$ 1.03
Fourth Quarter	$ 2.98	$ 1.45
Year Ended December 31, 2004		
First Quarter	$ 3.23	$ 1.96
Second Quarter	$ 1.87	$ 1.24
Third Quarter	$ 1.58	$ 1.07
Fourth Quarter	$ 1.52	$ 1.06
Year Ending December 31, 2005		
First Quarter	$ 1.11	$ 0.53
Second Quarter	$ 0.90	$ 0.45
Third Quarter	$ 1.24	$ 0.70
Fourth Quarter (through November 29, 2005)	$ 1.02	$ 0.80

At November 29, 2005, there are 49,172,079 shares of our common stock outstanding and approximately 3,475 holders of record.

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We have never declared or paid any cash dividends on our common stock and we do not anticipate paying any cash dividends on our common stock in the foreseeable future. We expect to retain all earnings, if any, for investment in our business. Dividends on our common stock will be paid only if and when declared by our Board of Directors. The Board s ability to declare a dividend is subject to limits imposed by Delaware corporate law. In determining whether to declare dividends, the Board may consider our financial condition, results of operations, working capital requirements, future prospects and other relevant factors.

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SELECTED CONSOLIDATED FINANCIAL DATA

The following selected consolidated financial data should be read together with Management s Discussion and Analysis of Financial Condition and Results of Operations and our consolidated financial statements and related notes included elsewhere in this Prospectus. The selected consolidated balance sheet data at December 31, 2004 and 2003 and the selected consolidated statements of operations data for each year ended December 31, 2004, 2003 and 2002 have been derived from our audited consolidated financial statements that are included elsewhere in this Prospectus. The selected consolidated balance sheet data at December 31, 2002, 2001 and 2000 and the selected consolidated statements of operations data for each year ended December 31, 2001 and 2000 have been derived from our audited consolidated financial statements that are not included in this Prospectus. The selected consolidated balance sheet data at September 30, 2005 and the selected consolidated statements of operations data for the nine months ended September 30, 2005 and 2004 are derived from our unaudited condensed consolidated financial statements included in this Prospectus. The unaudited condensed consolidated financial statements include, in the opinion of management, all adjustments that management considers necessary for the fair presentation of the financial information set forth in those statements. Historical results are not necessarily indicative of the results to be expected in the future. Dollar amounts, except per share data, are presented in thousands.

	Nine Months Ended September 30,		Year Ended December 31,				
	2005	2004	2004	2003	2002	2001[1]	2000[1]
Statement of Operations Data:							
Net sales	$ 23,711	$ 25,834	$ 33,789	$ 33,866	$ 37,554	$ 38,467	$ 25,883
Cost of good sold	13,609	18,484	24,596	24,315	19,569	17,198	12,800
Gross profit	10,102	7,350	9,193	9,551	17,985	21,269	13,083
Selling, general and administrative	10,023	12,866	17,499	17,324	24,199	21,636	14,908
Research and development	1,696	5,344	6,685	9,305	12,201	9,372	7,652
Restructuring charges [2]			3,570	738	3,282		
Impairment charges [3]	247	11,964	11,965	4,772			
Gain on sale of facility [4]			(1,466)				
Gain on sale of product line							(784)
Operating expenses	11,966	30,174	38,253	32,139	39,682	31,008	21,776
Other income (expense) [5]	(1,888)	(4,704)	(5,406)	(305)	437	2,362	212
Loss before income taxes	(3,752)	(27,528)	(34,466)	(22,893)	(21,260)	(7,377)	(8,481)
Income tax (benefit) expense	27	(94)	(94)	65	105	24	180
Net loss	$ (3,779)	$ (27,434)	$ (34,372)	$ (22,958)	$ (21,365)	$ (7,401)	$ (8,661)
Basic and diluted loss per share	$ (0.12)	$ (0.95)	$ (1.19)	$ (0.94)	$ (0.91)	$ (0.33)	$ (0.52)
Basic and diluted weighted average shares outstanding	32,837	28,951	29,066	24,484	23,583	22,560	16,630

	As of September 30,	As of December 31,				
	2005	2004	2003	2002	2001	2000
Balance Sheet Data:						

Total assets [6]	$ 31,789	$ 37,458	$ 57,306	$ 74,035	$ 89,286	$ 77,863
Borrowings under credit line	6,935	6,514	2,142			
Current portion of long-term debt	675	825	1,693	63		
Long-term debt, less current portion	1,226	2,199		1,499		
Total stockholders equity	15,577	16,535	45,058	61,515	82,104	73,966

(1) In May 2001, we acquired Annovis, Inc., a specialty chemicals company that develops, manufactures and markets a wide variety of nucleic acid-based products and services for the life science industry, for a total purchase price of approximately $16,910. Annovis results of operations have been included in the accompanying financial statements beginning on May 1, 2001. Additionally, our consolidated financial statements include the results from our non-life sciences product line which was sold effective April 1, 2000.

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(2) Restructuring plans were implemented in 2002 and 2004 to reduce and align our expenses with current business prospects. The plans included employee terminations, office closures, termination of collaborations and write-offs of abandoned intellectual property. As a result, restructuring charges were recorded and are included in operating expenses. See Note N to the accompanying consolidated financial statements.

(3) Impairment charges relate primarily to the impairment of goodwill, and in 2004, also include a charge of $2,100 related to the impairment of property and equipment. See Note C to the accompanying consolidated financial statements.

(4) Gain on sale of facility relates to the sale of our specialty olignucleotide manufacturing facility in Boulder, Colorado during the fourth quarter of 2004. See note M to the accompanying consolidated financial statements.

(5) Other income (expense) for all years presented primarily includes interest expense and in 2004 it includes a loss on debt extinguishment of $2,859 resulting from certain modifications to our Laurus Loans that were treated as extinguishments for financial reporting purposes. See Note E to the accompanying consolidated financial statements.

(6) The reduction in total assets from December 31, 2003 to December 31, 2004 related primarily to impairment charges of $11,965 in our Nucleic Acids operating segment (see Notes C and K to the accompanying consolidated financial statements) and the sale of our specialty oligonucleotide manufacturing facility in Boulder, Colorado (see Note M to the accompanying consolidated financial statements). The reduction in total assets from December 31, 2002 to December 31, 2003 related primarily to operating losses that were funded by reductions in cash and cash equivalents and short term investments.

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CAPITALIZATION

The following table reflects our capitalization as of September 30, 2005 on an actual and as adjusted basis as if the 2005 Private Placement and simultaneous repayment of the Laurus Loans had occurred on September 30, 2005.

	As of September 30,	
	Actual	As Adjusted
Credit Line [1]	$ 6,935	$
Current portion of Term Note [1]	675	
Term Note, less current portion [1]	1,226	
Stockholders equity:		
Preferred stock, $0.01 par value, 15,000,000 shares authorized, none outstanding		
Common stock, $0.01 par value, 60,000,000 shares authorized, 34,246,336 and 49,172,079 shares outstanding, respectively [2]	348	497
Additional paid-in capital [1] [2]	125,058	138,803
Accumulated other comprehensive income	1,051	1,051
Accumulated deficit [3]	(110,880)	(111,131)
Total stockholders equity	15,577	29,220
Total capitalization	$ 24,413	$ 29,220

(1) Net proceeds from the 2005 Private Placement (after transaction costs of $1,180) totaled $13,895 and were used in part to prepay all indebtedness and prepayment fees to Laurus. The remaining proceeds will be used for the future working capital needs of the Company. Transaction costs included fees to Oppenheimer of $1,055 and other transaction specific costs of approximately $125.

(2) Subsequent to September 30, 2005, we issued 14,925,743 shares in conjunction with the 2005 Private Placement. At November 29, 2005, we have 13,603,592 potentially dilutive securities consisting of 5,541,015 options issued under our stock option plan and warrants representing 8,062,577 shares.

(3) The as-adjusted presentation assumes that net premiums related to the Laurus Loans totaling $573 at September 30, 2005 will result in a gain upon prepayment of these loans. This gain will be offset by fees to Laurus of $500 to facilitate the private placement and prepayment penalties of $324.

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MANAGEMENT S DISCUSSION AND ANALYSIS OF

FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion of our financial condition and results of operations should be read together with our consolidated financial statements, unaudited condensed consolidated financial statements and related notes included elsewhere in this Prospectus. This discussion contains forward-looking statements based upon current expectations that involve risks, uncertainties and assumptions. Our actual results may differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth under Risk Factors, Information Regarding Forward-Looking Statements and elsewhere in this Prospectus.

The following discussion also gives effect to the restatement of our statements of cash flows for the years ended December 31, 2004 and 2003, as discussed in Note P to the consolidated financial statements for the years ended December 31, 2004, 2003 and 2002.

Overview

The Company develops, manufactures and sells innovative products for the analysis, synthesis and purification of nucleic acids through two operating segments, BioSystems and Nucleic Acids.

The BioSystems operating segment develops, assembles, manufactures and markets versatile products and provides analytical services to the medical research, clinical and pharmaceutical markets for use in genetic variation analysis. Net sales from this operating segment are categorized as bioinstruments, bioconsumables and discovery services.

Bioinstruments. The flagship product of the BioSystems operating segment is the WAVE system which has broad applicability to genetic variation detection in both molecular genetic research and molecular diagnostics. There was a world-wide installed base of 1,269 WAVE systems as of September 30, 2005. Additionally, this operating segment utilizes its sales and distribution network to sell a number of independent, third party equipment platforms. Service contracts to maintain installed systems are sold and supported by technical support personnel.

Bioconsumables. The installed WAVE base generates a demand for consumables that are required for the system s continued operation. These products are developed, manufactured and sold by this operating segment. In addition, the BioSystems operating segment manufactures and sells consumable products that can be used on multiple, independent platforms. These products include SURVEYOR Nuclease and a range of HPLC separation columns.

Discovery Services. The BioSystems operating segment provides various genetic laboratory services through a contract research lab in Gaithersburg, Maryland and a second laboratory in Omaha, Nebraska that operates in a Good Laboratory Practices (GLP) compliant environment and is certified under the Clinical Laboratory Improvement Amendment. The services provided primarily include (1) genomic biomarker analysis services to pharmaceutical and biopharmaceutical companies to support preclinical and clinical development of targeted therapeutics; and (2) molecular-based testing for hematology, oncology and certain inherited diseases for physicians and third-party laboratories.

The Nucleic Acids operating segment develops, manufactures and markets chemical building blocks for nucleic acid synthesis to biotechnology, pharmaceutical and oligonucleotide synthesis companies and research institutions throughout the world. These products are produced primarily in this operating segment s only facility, in Glasgow, Scotland. Prior to November 11, 2004, this operating

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segment also manufactured synthesized segments of nucleic acids (known as oligonucleotides) in a facility in Boulder, Colorado. On November 11, 2004, the assets associated with this facility were sold to an unaffiliated third party. As a result, the Nucleic Acids operating segment no longer manufactures and sells these specialized oligonucleotides.

Results of Operations

Nine Months Ended September 30, 2005 and 2004

Dollars in thousands	2005	2004	Change	% Change
Net Sales				
Bioinstruments	$ 11,343	$ 10,766	$ 577	5%
Bioconsumables	6,977	6,286	691	11%
Discovery Services	2,159	1,398	761	54%
Total BioSystems Business Unit	20,479	18,450	2,029	11%
Chemical Building Blocks	3,232	5,588	(2,356)	(42)%
Specialty Oligonucleotides and Services		1,796	(1,796)	(100)%
Total Synthetic Nucleic Acids Business Unit	3,232	7,384	(4,152)	(56)%
Total Net Sales	23,711	25,834		