## **INSMED INC**

## FORM 10-K (Annual Report)

## Filed 3/16/2005 For Period Ending 12/31/2004

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Industry Biotechnology & Drugs

Sector Healthcare

Fiscal Year 12/31



(Mark One)

## SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

## **FORM 10-K**

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	ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF T	THE SECURITIES EXCHANGE ACT OF 1934					
For th	ne fiscal year ended <u>December 31, 2004</u>						
	OR						
	TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934						
For th	ne transition period fromto						
	Commission File Num	ber 0-30739					
INSMED INCORPORATED (Exact name of registrant as specified in its charter)							
	Virginia	54-1972729					
	(State or other Jurisdiction of incorporation or organization)	(I.R.S. employer identification no.)					
	4851 Lake Brook Drive						
	Glen Allen, Virginia 23060	(804) 565-3000					
	(Address of principal executive offices)	(Registrant's telephone number					
	(zip code)	including area code)					
	Securities registered pursuant to S	Section 12(b) of the Act:					
		Name of each exchange on					
	Title of each class	which registered					
	None	None					
	Securities registered nursuant to	Section 12(g) of the Act					

Securities registered pursuant to Section 12(g) of the Act:

Common Stock **Preferred Stock Purchase Rights** 

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities

Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), are has been subject to such filing requirements for the past 90 days.  Yes [ ✓ ] No [ ]	ıd (2)
Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will n contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this 10-K or any amendment to this Form 10-K. [ ✓ ]	

Indicate by check mark whether the registrant is an accelerated filer (as defined in Exchange Act Rule 12b-2). Yes ] No [ ]

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant on June 30, 2004 was \$86,024,160 (based on the closing price for shares of the registrant's Common Stock as reported on the Nasdaq National Market on that date). In determining this figure, the registrant has assumed that all of its directors, officers and persons owning 10% or more of the outstanding Common Stock are affiliates. This assumption shall not be deemed conclusive for any other purpose.

As of February 29, 2005, there were 44,986,996 shares of the registrant's common stock, \$.01 par value, outstanding.

Portions of the registrant's definitive Proxy Statement to be filed with the Securities and Exchange Commission no later than 120 days after the registrant's fiscal year ended December 31, 2004, and to be delivered to shareholders in connection with the 2005 Annual Meeting of Shareholders, are incorporated in Part III by reference.

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In this Form 10-K, the "Company," "Insmed," "Insmed Incorporated," "we," "us" and "our" refer to Insmed Incorporated, a Virginia corporation. This Form 10-K also contains trademarks of third parties. Each trademark of another company appearing in this Form 10-K is the property of its owner.

### **PART I**

Insmed may from time to time make written or oral "forward-looking statements", including statements contained in our filings with the Securities and Exchange Commission (including this Annual Report on Form 10-K and the Exhibits hereto and thereto), in our reports to stockholders and in other communications. Such statements give our current expectations or forecasts of future events; they do not relate strictly to historical or current facts. One can identify these forward-looking statements by their use of words such as "may," "could," "should," "would," "believe," "anticipate," "estimate," "expect," "intend," "plan," "projects," "outlook" or similar expressions. In particular, these include statements relating to our beliefs, plans, objectives, goals, future actions, prospective products or product approvals, future performance or results of current and anticipated products, the outcome of contingencies, such as legal proceedings, and financial results. These statements are based upon the current beliefs and expectations of management and are subject to significant risks and uncertainties. Our actual results may differ materially from those set forth in the forward-looking statements. Forward-looking statements involve certain risks and uncertainties that are subject to change based on various factors (many of which are beyond our control). Factors that could cause or contribute to differences in our actual results include those discussed in Item 1 under the section entitled "Risk Factors Related to Our Business," as well as those discussed in Item 7 under the section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and elsewhere throughout this Annual Report on Form 10-K and in any other documents incorporated by reference. We undertake no obligation to publicly update forward-looking statements, whether as a result of new information, future events or otherwise. You are advised, however, to consult any further disclosures we make on related subjects in our 10-O and 8-K reports to the Securities and Exchange Commission.

### ITEM 1. BUSINESS

#### Overview

Insmed Incorporated is a biopharmaceutical company focused on the development and commercialization of drug products for the treatment of metabolic diseases and endocrine disorders. Currently, our development activities focus on drugs that modulate IGF-I activity in the human body. We currently have 3 lead drug candidates, recombinant human insulin-like growth factor-I bound to recombinant human insulin-like growth factor binding protein-3 (rhIGF-I/rhIGFBP-3; also known as SomatoKine ®) rhIGFBP-3 and INSM-18. We are actively developing these drugs to treat indications in the metabolic and oncology fields.

The endocrine system regulates metabolism through the use of hormones. IGF-I is a naturally occurring hormone necessary for normal growth and metabolism. Growth hormone (GH) regulates the cellular production of IGF-I, which mediates the majority of its growth-promoting effects. In the human body, IGF-I circulates in the bloodstream bound to a second protein called IGFBP-3, which serves to regulate the tissue distribution of IGF-I, therefore playing a major role in controlling its actions. GH deficiency (GHD) results in inadequate IGF-I production, which can result in growth disturbance in children. GH replacement therapy causes an increase in IGF-I levels and is used to successfully treat this condition. However, we believe many individuals have normal GH secretion, but because their cells are insensitive to this hormone they become IGF-I deficient and suffer from growth disturbance. Individuals with this condition are candidates for IGF-I replacement therapy. We believe that to ensure that IGF-I replacement is carried out in a physiologically relevant way, it is desirable to administer it bound to IGFBP-3, therefore maintaining the normal equilibrium of these important proteins in the bloodstream. rhIGF-I/rhIGFBP-3 is a recombinant protein complex that mimics the effects of IGF-I/IGFBP-3 in the bloodstream.

rhIGF-I/rhIGFBP-3 is currently in development for a number of metabolic and endocrine indications. The most advanced indication in development is the treatment of severe growth disturbance due to growth hormone insensitivity syndrome (GHIS) (i.e., Laron's Syndrome). In children, this condition is characterized by a height

standard deviation score three standard deviations below normal and an IGF-I standard deviation score three standard deviations below normal. GHIS can lead to a range of other metabolic disorders, including lipid abnormalities, decreased bone density, obesity and insulin resistance.

We have been granted Orphan Drug Designation by the United States Food and Drug Administration (FDA) and European Agency for the Evaluation of Medicinal Products (EMEA) for rhIGF-I/rhIGFBP-3 in the treatment of GHIS. A worldwide Phase III clinical trial for this indication is in progress.

We have been granted an exclusive license from Pharmacia (now Pfizer) to a large data base of historical treatment information and regulatory submissions associated with rhIGF-I. Pharmacia received approval of rhIGF-I for the treatment of GHIS in the majority of countries now in the European Union. We believe this exclusive license to Pharmacia's regulatory dossiers and other information will be of value to us during our product registration process for rhIGF-I/rhIGFBP-3. The data received through this license include results from over 100 patients with GHIS who were treated intermittently for up to 14 years with rhIGF-I.

We believe the commercial opportunities for rhIGFI/rhIGFBP-3 reach beyond the indication of GHIS and that initial approval of our rhIGF-I/rhIGFBP-3 may offer us an opportunity to enter other potentially very large markets. These markets include other growth disturbances related to IGF-I deficiency, severe insulin resistance, diabetes, myotonic dystrophy, HIV associated adipose redistribution syndrome, severe burns and hip fracture. It is our intention to initiate clinical studies in a variety of these indications with rhIGF-I/rhIGFBP-3. Based on the results from these studies we will select the next indication to pursue for marketing authorization.

Our oncology program focuses on IGFBP-3 as a naturally occurring anti-tumor agent. This protein is normally found in the human bloodstream and several epidemiological studies have demonstrated that cancer risk increases with decreasing blood levels of IGFBP-3. rhIGFBP-3 is a recombinant protein that mimics the effects of IGFBP-3 in the bloodstream. This product is currently in pre-clinical development for a variety of cancers including those of the breast, lung, colon and prostate. A phase I clinical study to study safety and tolerance in human volunteers is in progress.

Insmed is also initiating clinical studies of a compound known as INSM-18, which has novel effects on the activity of the IGF-I and other receptors that can lead to the inhibition of growth of various tumors. Insmed is currently planning the clinical development of this compound in collaboration with the University of California, San Francisco School of Medicine and is preparing to initiate an exploratory clinical study in patients with relapsed prostate cancer.

### **Corporate History**

In November 1999, Insmed Pharmaceuticals, Inc., our successor entity, entered into an agreement to acquire Celtrix Pharmaceuticals Inc. (Celtrix). Celtrix was a biopharmaceutical company focused on developing novel therapeutics for the treatment of seriously debilitating, degenerative conditions primarily associated with severe trauma, chronic diseases or aging. The transaction closed on May 31, 2000, at which time Celtrix and Insmed Pharmaceuticals, Inc. became wholly-owned subsidiaries of the newly formed entity, Insmed Incorporated, which was incorporated in the Commonwealth of Virgina on November 29, 1999.

On June 1, 2000, we began trading on The Nasdaq SmallCap Market on June 1, 2000 under the ticker symbol "INSM." We moved from The Nasdaq SmallCap Market to the Nasdaq National Market on August 8, 2000.

### **Scientific Background**

### Role of IGF-I and IGFBP-3 in Growth

Insulin-like growth factor-I (IGF-I) is required for normal growth, development and metabolism. It is produced locally in tissues throughout the body, and also circulates in the blood to be delivered to target tissues. The majority of circulating IGF-I, which is largely produced by the liver, is bound to IGF binding proteins (IGFBPs), principally IGFBP-3. The major role of IGFBP-3 is to regulate the tissue distribution and activity of IGF-I.

IGF-I binds to IGFBP-3 with high affinity to form a binary complex, which in turns binds to an acid-labile subunit (ALS) to form a ternary complex. All three components of the ternary complex are growth hormone (GH)-dependent. IGF-I is the principal mediator of the growth-promoting properties of GH. GH-induced IGF-I, that is either produced locally or delivered via the circulation, stimulates cartilage and bone and the growth plates of long bones and is necessary for normal accrual of peak bone mass.

Insufficient blood levels of IGF-I (IGF-I deficiency) during childhood and adolescence result in growth failure and short stature. In some cases, this is the result of inadequate GH quantity or bioactivity. Children with low levels of GH (GH deficiency) can generally be treated with recombinant human GH (rhGH) replacement therapy, resulting in normalization of IGF-I production and catch-up growth in most patients. However, there are a number of conditions in which IGF-I deficiency can occur despite normal or even elevated levels of GH. These abnormalities are known collectively as GH insensitivity syndrome (GHIS), and can result from either hereditary or acquired conditions. These forms of IGF-I deficiency are unresponsive to rhGH treatment.

IGF-I deficiency due to GHIS can be the result of genetic abnormalities involving the GH receptor or other genes in the GH signal transduction pathway or be the result of mutations in the IGF-I gene itself. Acquired conditions include the development of neutralizing antibodies to GH in response to rhGH treatment in children with deletions of the GH gene (GH deficiency type IA). Regardless of the cause of IGF-I deficiency, replacement therapy with rhIGF-I can correct the abnormality. Co-administration of rhIGF-I with rhIGFBP-3 can accomplish this in a more physiologic manner by delivering the IGF-I to tissues bound to its natural regulatory protein.

### Role of IGF-I and IGFBP-3 in Glucose Metabolism

Insulin is the primary hormone responsible for controlling glucose metabolism. Although less potent than insulin, IGF-I is capable of stimulating hepatic and muscle glucose uptake. IGF-I can affect the set point for insulin action and, like insulin, block protein and lipid breakdown. IGF-I causes a decrease in circulating GH levels via negative feedback, which further affects glucose metabolism. Thus, the proper balance of insulin, GH and IGF-I is extremely important for normal glucose metabolism.

Short-term clinical studies with rhIGF-I/rhIGFBP-3 and longer-term studies with rhIGF-I reported in scientific literature demonstrate that IGF-I therapy can reduce insulin requirements, improve glycemic control, and increase insulin sensitivity in both type 1 and type 2 diabetes. Fujisawa Pharmaceutical Co., Ltd., with whom Insmed has entered into a license agreement (see Strategic Relationships), has received approval of rhIGF-I in Japan for the treatment of the most severe forms of diabetes, referred to as extreme insulin resistance. Extreme insulin resistance includes a number of chronic diseases distinguished by severe insensitivity to insulin due to inherited or acquired causes. Treatment with rhIGF-I/rhIGFBP-3 is intended to improved glycemic control and reduce insulin dose requirements in this patient population.

## Role of IGF-I and IGFBP-3 in Cancer

IGF-I plays an essential role in normal growth throughout fetal and childhood development. In adult life, IGF-I continues to function by regulating cellular metabolism, inducing cell division and protecting against cell death. IGFBP-3 is the most abundant naturally-occurring IGF-I binding protein in the circulation and controls the actions of IGF-I by regulating its tissue distribution. When bound to IGFBP-3, IGF-I is incapable of binding to the IGF-I receptor. IGFBP-3 also has independent actions of its own that can inhibit cell proliferation and stimulate cell death.

A number of epidemiological studies suggest that increased circulating levels of IGFBP-3 are associated with a decreased risk for the development of several common cancers, including those of the prostate, lung, rectum and bladder. Therefore, administration of rhIGFBP-3 may represent a novel therapeutic approach to a variety of human cancers. Insmed has initiated a clinical program with prominent oncologists to develop rhIGFBP-3 as a therapeutic agent. To date, we have evaluated the efficacy of rhIGFBP-3 alone and in combination with standard chemotherapeutic agents in pre-clinical models of breast, lung, prostate and colon cancers.

Insmed is also initiating clinical studies of a compound known as INSM-18, which has novel effects on the activity of the IGF-I and other receptors that can lead to the inhibition of growth of various tumors. Insmed is currently planning the clinical development of this compound in collaboration with the University of California, San Francisco School of Medicine and is preparing to initiate an exploratory clinical study in patients with relapsed prostate cancer.

### **Primary Therapeutic Indications**

### Growth Failure Due to GHIS Resulting in IGF-I Deficiency

GHIS is a condition affecting a specific subset of patients suffering from growth failure because of a deficiency in IGF-I. This deficiency can be due to hereditary or acquired defects in the GH receptor or GH signal transduction. Characteristics of this condition include:

- · normal or elevated serum GH levels
- inability to generate normal IGF-I levels after GH provocation
- reduced serum IGF-I and IGFBP-3 levels
- severe postnatal growth failure and markedly reduced adult height (120-140 cm)
- · truncal adiposity
- · delayed skeletal maturation
- · abnormal craniofacial development

Physicians use height standard deviation score, or height SDS, to indicate how many standard deviations a person's height is from the average of the normal population of the same age and sex. The American Academy of Pediatrics and the American Academy of Clinical Endocrinology define short stature as a height that is more than two standard deviations below the average. Children with severe GHIS typically have height SDS < -3. Similarly, in evaluating IGF-I deficiency, physicians can use an IGF-I SDS < -2 to define abnormally low serum IGF-I levels.

### Extreme Insulin Resistance

Insulin resistance describes an abnormality whereby the body is incapable of responding appropriately to circulating insulin. This abnormality can occur in many forms and results in varying degrees of disease severity. Extreme insulin resistance can result from defects in the insulin receptor gene or other genes involved in insulin signal transduction. These conditions include:

- Type A and Type B syndrome
- · Rabson-Mendenhall syndrome
- Leprechaunism

Type A syndrome patients have high circulating concentrations of insulin with impaired glucose tolerance or diabetes. They also have hyperandrogenism, resulting in hirsutism, acne, abnormal menstruation, and infertility. High doses of insulin fail to provide adequate glycemic control in these patients and there is no satisfactory treatment currently available.

Type B syndrome is characterized by the presence of autoantibodies to the insulin receptor that interfere with proper receptor functioning. These patients have hyperinsulinism, erratic glycemic control, hyperandrogenism, and other autoimmune disorders. High doses of insulin fail to provide adequate glycemic control in these patients and there is no satisfactory treatment currently available.

Rabson-Mendenhall syndrome and Leprechaunism are also characterized by high circulating concentrations of insulin with alternating episodes of hyperglycemia and hypoglycemia. They also have hyperandrogenism and growth failure. High doses of insulin fail to provide adequate glycemic control in these patients and there is no satisfactory treatment currently available.

### **Diabetes**

Patients with type 1 diabetes are characterized by their inability to produce insulin. In these patients, insulin deficiency leads to glucose intolerance in childhood. In type 1 diabetes, down-regulation of GH receptors in the liver results in reduced circulating IGF-I levels, which can lead to GH hypersecretion. This in turn causes decreased insulin sensitivity and worsening of metabolic control. Treatment of type 1 diabetes with rhIGF-I/rhIGFBP-3 can reduce GH levels and improve insulin sensitivity and glycemic control, while decreasing insulin dose requirements.

Type 2 diabetes is characterized by insulin resistance. In addition to low circulating levels of IGF-I, these patients have an increased number of insulin/IGF-I hybrid receptors. Increased expression of these hybrid receptors positively correlates with a decrease in both insulin binding affinity and insulin sensitivity. Treatment of type 2 diabetics requiring insulin therapy with rhIGF-I/rhIGFBP-3 also leads to improved glycemic control while decreasing insulin dose requirement.

### Cancer

The World Health Organization estimates that by 2020, the number of annual worldwide cancer related deaths is expected to reach 10 million. To date, the FDA has approved over 110 oncology drugs for more than 25 indications. Up to two-thirds of these drugs are cytotoxic agents, many of which exhibit significant systemic toxicity and decrease the quality of life of the patient.

Identification of the signaling pathways that regulate tumor growth has led to novel strategies for the treatment of cancer. As a result, new agents that target growth factors and their receptors are emerging as promising new treatments. To this end, both IGFBP-3 and INSM-18 have emerged as promising novel treatments for a variety of cancer types. Both treatments interact with the IGF system to reduce tumor growth.

### **Business Strategy**

Our focus is on the development and commercialization of products for the treatment of metabolic and endocrine diseases with unmet medical needs. Our initial goal is to obtain the approval of rhIGF-I/rhIGFBP-3 for the treatment of GHIS and establish proof-of-concept clinical data with rhIGFBP-3 in the treatment of breast or other cancers. Our long-term strategy is to capitalize on many other potential endocrine and metabolic indications with rhIGF-I/rhIGFBP-3 and additional cancer indications with rhIGFBP-3. Key elements of our strategy for achieving these goals include:

Seek FDA and EMEA approval of rhIGF-I/rhIGFBP-3 replacement treatment for GHIS. We submitted a New Drug Application (NDA) on January 3, 2005 for the use of rhIGF-I/rhIGFBP-3 in the treatment of GHIS, which was accepted for review by the FDA on March 4, 2005. We are continuing our Phase III clinical trial in patients with GHIS in order to obtain long term data and plan to submit a Marketing Authorization Application (MAA) to the EMEA for this indication. Children with this disorder have a significant unmet medical need because no effective treatment is currently available on the market. The proprietary information we have licensed from Pharmacia demonstrates that replacement therapy with rhIGF-I given twice daily will significantly improve height velocity in these severely growth disturbed patients. Data from our clinical studies demonstrates that we can achieve similar circulating concentrations of IGF-I and efficacy results following administration of rhIGF-I/rhIGFBP-3 as was achieved in the Pharmacia studies following administration of rhIGF-I. Furthermore, these blood levels and efficacy were achieved with one injection of rhIGF-I/rhIGFBP-3 per day as opposed to the two injections needed with rhIGF-I alone. In addition to having the advantage of once-a-day dosing, our animal and clinical data suggest less severe side effects with rhIGF-I/rhIGFBP-3 when compared with rhIGF-I.

Our strategy is to maintain a dual manufacturing source for our products. We currently manufacture rhIGF-I/rhIGFBP-3 at our manufacturing facility, Insmed Therapeutic Proteins (ITP), in Boulder, Colorado and plan to continue our manufacturing program with Avecia Limited, a third party contract manufacturer in the United Kingdom. Based on discussions with the FDA, we are conducting several studies, including analytical, pre-clinical and clinical to compare the drug substance previously manufactured at Avecia to the new drug substance produced at ITP. The results of this comparison will become part of our submissions to the regulatory authorities.

Expand the GHIS indication to other growth disorders related to IGF-I deficiency. A number of growth disorders related to IGF-I deficiency other than GHIS represent conditions with significant unmet medical needs. While seeking approval in GHIS, we plan to investigate these other indications and further develop those that will provide the best market opportunity for label expansion. We will then seek this label expansion through supplemental regulatory submissions. It is likely that we will conduct one or more clinical studies to support label expansion.

**Develop rhIGF-I/rhIGFBP-3 in additional indications.** We intend to initiate clinical studies of rhIGF-I/rhIGFBP-3 in additional indications. Based on the data from these studies, we will select the most promising indications for further development and commercialization. The indications we are considering are extreme insulin resistance, diabetes, myotonic dystrophy, HIV associated adipose redistribution syndrome, recovery from severe burn injury, recovery from osteoporotic hip fracture and retinopathy of prematurity.

Establish a sales and marketing organization for the United States. We intend to develop a sales and marketing force to target the approximately 400 active U.S.-based pediatric endocrinology centers where children with growth disorders are evaluated and treated. These physicians are primarily hospital-based and concentrated in major metropolitan areas and we believe that they will be best served by a focused marketing organization and specialized sales force. In addition, we intend to conduct continuing medical education programs, medical symposia, and regional speaker programs aimed at establishing awareness of rhIGF-I/rhIGFBP-3 in the medical community. We also intend to conduct post-marketing studies and establish a patient registry to provide further data on the safety and efficacy of rhIGF-I/rhIGFBP-3.

Establish a sales and marketing organization or obtain a Marketing Partner for Europe. We are exploring several opportunities in Europe to partner with an established sales and marketing organization. We expect to conduct continuing medical education programs, medical symposia, and regional speaker programs aimed at establishing awareness of rhIGF-I/rhIGFBP-3 in the European physician community. We also intend to conduct post-marketing studies and establish a patient registry to provide further data on the safety and efficacy of rhIGF-I/rhIGFBP-3.

*Initiate clinical studies with rhIGFBP-3* We are currently conducting a Phase I clinical study to establish the pharmacokinetic profile of rhIGFBP-3 and plan to proceed to Phase II clinical studies in one or more of the following cancer types: breast, colorectal, lung and/or prostate.

**Broaden endocrinology and oncology portfolio based on our expertise.** Our longer-term strategy for growth is to pursue the development and commercialization of additional products for the treatment of significant unmet medical needs that complement our activities within the fields of metabolic and endocrine diseases and oncology.

**Retain commercial rights to market products in selected markets.** Our goal is to retain relevant marketing rights to our products and commercialize them in selected niche markets.

*Establish corporate partnerships in certain markets.* We plan to establish corporate partnerships to develop, market and commercialize our products in markets outside of our core focus.

### Research and Development

We have devoted substantially all of our resources since we began our operations to the research and development of pharmaceutical product candidates for metabolic and endocrine diseases. Our focus is principally in developing and commercializing late-stage products. We conduct very little of our own preclinical laboratory research. However, we actively maintain ongoing discussions with academic research institutions and other companies regarding rhIGF-I/rhIGFBP-3, rhIGFBP-3 and other projects in endocrinology and oncology. We are currently conducting a Phase III clinical study with our lead product, rhIGF-I/rhIGFBP-3, and plan to investigate other potential indications with this product. We are also conducting pre-clinical studies with our other lead compound, rhIGFBP-3 and plan on conducting clinical studies with this product in the future. Our research and development expenses were approximately \$23.3 million in 2004, \$7.1 million in 2003, and \$18.1 million in 2002.

### **Strategic Relationships**

### Fujisawa Pharmaceutical Co., Ltd.

In January 2004, Insmed was granted a non-exclusive license to patent rights pertaining to the use of IGF-I therapy for the treatment of extreme or severe insulin resistant diabetes from Fujisawa Pharmaceutical Co., Ltd. Under the terms of the agreement, Insmed obtained worldwide rights in territories (excluding Japan) where a valid patent claim exists, including the United States and Europe. We have made a commitment to use reasonable commercial efforts to make rhIGF-I/rhIGFBP-3 available on a named patient basis to patients with extreme insulin resistance.

### Tzamal Pharmaceutical

In October 2004, we entered into a letter of intent promotion agreement with Tzamal Pharma, a subsidiary of Fox Pharma headquartered in Jerusalem Israel. The agreement calls for Tzamal to be our exclusive distributor in Israel and Palestinian autonomous territories, West Bank and Gaza. The agreement has a term of one year and on the anniversary of the agreement it may be renewed via a joint agreement between Insmed and Tzamal for another twelve months.

#### Pharmacia Inc.

Pharmacia, Inc. was granted marketing approval in several European and Scandinavian countries for rhIGF-I in the treatment of GHIS. In August 2002, we entered into an agreement with Pharmacia that grants us an exclusive worldwide license to Pharmacia's portfolio of regulatory filings and proprietary information pertaining to rhIGF-I for the treatment of GHIS. We have made a commitment to make rhIGF-I/rhIGFBP-3 available on a named patient basis to GHIS subjects that were previously being treated with rhIGF-I supplied by Pharmacia.

### Avecia Limited

In July 2002, we entered into an agreement with Avecia Limited, Europe's largest privately held specialty chemical company, for the process development and manufacture of rhIGF-I/rhIGFBP-3. In consideration for the work performed under this agreement, we have paid process development and manufacturing costs associated with the production of rhIGF-I/rhIGFBP-3.

### **Patents and Proprietary Rights**

### Insmed Patent Portfolio

Proprietary protection is important to our business, and our policy is to protect our technology by filing patent applications for technology that we consider important. We intend to file additional patent applications, when appropriate, relating to improvements in our technology and other specific products that we develop. As with any pending patent application, there can be no assurance that any of these applications will issue in the United States or a foreign country. There also can be no assurance that a subsequent U.S. or foreign patent will later be held valid and enforceable.

We hold 28 United States patents relating to the composition, production, antibodies and methods of use for rhIGF-I/rhIGFBP-3 and rhIGFBP-3, including:

Two issued patents for rhIGFBP-3 composition-of-matter;

15 therapeutic use patents for rhIGF-I/rhIGFBP-3, IGF-I, rhIGFBP-3 or rhIGFBP-3 fragments for the treatment of various disease conditions; and

11 patents regarding novel expression, production or analysis methods, some of which may be used for the manufacture of rhIGF-I/rhIGFBP-3 and pharmaceutical compositions of rhIGF-I/rhIGFBP-3.

As part of the ongoing development of rhIGF-I/rhIGFBP-3 and rhIGFBP-3, we have filed or intend to file patent applications related to new production methods, improved formulations, new medical uses and new dosing regimens in the United States and in many of the major international pharmaceutical markets. The various issued patents related to rhIGF-I/rhIGFBP-3 and rhIGFBP-3 compositions, methods of production and methods of treatment expire at various times during the years 2010 through 2019.

In addition, foreign counterparts to the above-referenced U.S. patents have issued or are pending issue in the major pharmaceutical markets, such as Europe, Canada and Japan.

With respect to Europe, Insmed recently decided to withdraw one of its patents, EP 451,194 ("the 194 patent"), which is directed to compositions and methods of using IGFBP-3. This patent expires in 2009. We do not believe that a competitor is developing IGFBP-3 or will engage in activities encompassed by this patent prior to 2009. As such, the costs of maintaining this patent outweigh its estimated value. Therefore, Insmed has withdrawn its approval of the text of the '194 patent. As a result of this action, we expect the European Patent Office will soon revoke the '194 patent.

As part of our development and manufacturing agreement with Avecia Limited, we are currently negotiating to obtain certain non-exclusive rights to Avecia's proprietary manufacturing technology. In January 2004, Insmed was granted a non-exclusive license to patent rights pertaining to the use of IGF-I therapy for the treatment of extreme or severe insulin resistant diabetes from Fujisawa Pharmaceutical Co., Ltd.

Reflecting our commitment to safeguarding proprietary information, we require our employees and consultants to sign confidentiality agreements. These agreements prohibit unauthorized disclosure of Insmed's proprietary information. Despite our efforts to protect our proprietary information, unauthorized parties may attempt to obtain and use our proprietary information. Policing unauthorized use of our proprietary information is difficult, and the steps we have taken might not prevent misappropriation, particularly in foreign countries where the laws may not protect our proprietary rights as fully as do the laws of the United States.

We note that there has been increasing litigation in the biopharmaceutical industry with respect to the manufacture and sale of new therapeutic products. The validity and breadth of claims in biotechnology patents may involve complex factual and legal issues, for which no consistent policy exists. In particular, the patent protection available for protein-based products, such as rhIGF-I/rhIGFBP-3 and rhIGFBP-3, is highly uncertain and involves issues relating to the scope of protection of claims to gene sequences and the production of their corresponding proteins.

In some cases, litigation or other proceedings may be necessary to enforce our patents or protect our know-how or other intellectual property rights. Any potential litigation could result in a substantial cost to us and a diversion of our resources. We cannot be sure that any of our patents will ultimately be held valid. An adverse outcome in any litigation or proceeding could subject us to significant liability.

### Third-Party Patents

Third parties, including Genentech Inc. and Chiron Corporation hold United States and/or foreign patents possibly directed to the composition, production and/or use of rhIGF-I, rhIGFBP-3, rhIGF-I/rhIGFBP-3 and/or recombinant proteins in general. After examining these patents, we do not believe they present an obstacle to our plans to commercialize rhIGF-I/rhIGFBP-3 and rhIGFBP-3.

We can provide no assurance, however, that one of these third parties will not assert a contrary position in the future, for instance in the context of an infringement action. Likewise, we cannot predict with certainty the outcome of such a proceeding. We note, however, that an adverse ruling could impact our ability to make, use or sell our products. In any event, in some cases, litigation or other proceedings may be necessary to defend Insmed against claims of patent infringement.

In this regard, we note that on December 20, 2004, Tercica, Inc. and Genentech Inc. filed a complaint against Avecia Limited and Insmed, Inc. in the United Kingdom at the High Court of Justice, Chancery Division, Patents Court alleging infringement of EP patent No. 571,417 ("the 417 patent"). The '417 patent has claims directed to particular uses of a combination of IGFBP-3 and IGF-I. In the complaint, Tercica, Inc. asked the court for an injunction to restrain allegedly infringing activity, for a declaration that the '417 patent is valid and infringed, for an order requiring the delivery or destruction of allegedly infringing articles and materials and for an inquiry into possible economic damages.

On February 11, 2005, Avecia and Insmed filed a Defense and Counterclaim to Tercica Inc.'s suit. In its Defense, Avecia and Insmed asserted, among other things, that the '417 patent is invalid and that the Claimant failed to properly register its license. In its Counterclaim, Avecia and Insmed also asked the court to revoke the '417 patent.

Insmed cannot predict with certainty the outcome of this proceeding. We note, however, that an adverse ruling could impact our ability to make, use or sell our products and would have a material adverse effect on our business, financial condition and results of operations.

In addition, Tercica, Inc. filed, on December 23, 2004, a complaint against Insmed in the United States District Court for the Northern District of California alleging infringement of U.S. patent Nos. 5,187,151 and 6,331,414. These patents are directed to certain methods of using IGF-I/IGFBP-3 and methods of producing human IGF-I, respectively. On February 16, 2005, Tercica, Inc. and Genentech, Inc. filed an Amended Complaint, adding allegations of infringement of U.S. patent No. 5,258,287 ("the '287 patent"). The claims of the '287 patent are directed to DNA encoding BP53 (i.e. IGFBP-3) and recombinant constructs, transformed host cells and methods for using same.

On February 18, 2005, Insmed filed a motion to dismiss the Amended Complaint. In the motion, Insmed asserted that all alleged activities fall within the statutory safe-harbor provided by 35 U.S.C. § 271(e)(1), commonly called the clinical trial exemption. This exemption prevents patent infringement actions from being filed against activities reasonably related to obtaining FDA approval of a product, such as when the product is still being tested in clinical trials. Insmed further asserted, among other things, that Plaintiffs have failed to state a claim for the requested relief, have not sued the proper party, have failed to name all the proper plaintiffs and have failed to establish the existence of a sufficiently real and substantial controversy between the parties. Insmed requested immediate dismissal or Summary Judgment against the plaintiff's allegation on these grounds.

Insmed cannot predict with certainty the outcome of this proceeding. We note, however, that an adverse ruling could impact our ability to make, use or sell our products and would have a material adverse effect on our business, financial condition and results of operations.

In addition, Novartis AG and Chiron Corporation have rights to United States and foreign patents relating to the use of IGF-1 for the treatment of type 1 diabetes, and Novartis owns United States and foreign patents relating to the treatment of osteoporosis with IGF-1. Genentech, Inc. owns U.S. and foreign patents directed to using IGF-1 to increase the growth rate of certain patients with non-GH-deficient short stature and patients having partial growth hormone insensitivity syndrome. We do not expect that we will infringe these patents. We can give no assurances, however, that such patents can be avoided, invalidated or licensed. Thus, the patents could potentially have an adverse effect on our ability to make, use or sell rhIGF-I/rhIGFBP-3 for certain indications.

### Manufacturing

We currently rely on our wholly owned subsidiary, Insmed Therapeutic Proteins, as well as contract manufacturers to produce rhIGF-I/rhIGFBP-3 and rhIGFBP-3. If we are unable to establish our own capacity and

maintain relationships with third parties for manufacturing sufficient quantities of our product candidates and their components which meet our planned time and cost parameters, the development and timing of our clinical trials and/or product commercialization may be adversely affected.

Our product candidates must be manufactured in a facility by processes that comply with current good manufacturing practices (cGMP) and other similar regulations. Prior to receiving marketing approval from the FDA, it is likely that the FDA will inspect our manufacturing facilities to ensure that our contract manufacturers and/or Insmed Therapeutic Proteins are in compliance with cGMP. If we are not in compliance with cGMP, the FDA may make us halt manufacturing until we can bring the facilities into compliance. This could take a substantial period of time and could adversely affect the development and timing of our clinical trials and/or product commercialization.

rhIGF-I/rhIGFBP-3 is a complex of two proteins, rhIGF-I and its binding protein rhIGFBP-3, and is manufactured using recombinant DNA technology. The manufacturing process is complicated and involves expression of the two proteins by bacterial fermentation followed by purification and combination of the two proteins. During the manufacturing process, rhIGF-I and rhIGFBP-3 are produced separately and then combined to make rhIGF-I/rhIGFBP-3. The rhIGFBP-3 can either be utilized to make rhIGF-I/rhIGFBP-3 or kept separate as its own distinct product.

To date, we have supplied all of our pre-clinical and clinical study requirements with rhIGF-I/rhIGFBP-3 previously produced by our subsidiary, Celtrix Pharmaceuticals Inc. or Avecia Limited, a contract manufacturer in Billingham, England.

In July 2002, we entered into an agreement with Avecia Limited, Europe's largest privately held specialty chemical company, for the process development and manufacture of rhIGF-I/rhIGFBP-3. In consideration for the work performed under this agreement, we have paid process development and manufacturing costs associated with the production of rhIGF-I/rhIGFBP-3.

We are currently manufacturing rhIGF-I/rhIGFBP-3 at Insmed Therapeutic Proteins in Boulder, Colorado. Celtrix Pharmaceuticals Inc. no longer produces rhIGF-I/rhIGFBP-3. We cannot guarantee that Insmed Therapeutic Proteins and Avecia will be able to produce the rhIGF-I/rhIGFBP-3 or rhIGFBP-3 necessary for future pre-clinical and clinical trials or commercialization.

### **Marketing and Sales**

We currently have no sales, marketing or distribution capability. However, we intend to develop a sales and marketing force to target the approximately 400 active U.S.-based pediatric endocrinologists who treat children with growth disturbance. Because these pediatric endocrinologists are primarily hospital-based and concentrated in major metropolitan areas, we believe that a focused marketing organization and specialized sales force can effectively serve them. In addition, we intend to conduct continuing medical education programs, medical symposia, and regional speaker programs aimed at establishing awareness of rhIGF-I/rhIGFBP-3 in the physician community. We also intend to conduct post-marketing studies and establish a patient registry to provide further data on the safety and efficacy of rhIGF-I/rhIGFBP-3.

We are exploring several opportunities for sales and marketing in Europe including the establishment of our own sales and marketing organization, acquisition of an existing sales and marketing organization and partnering with an established sales and marketing organization.

Our goal is to retain marketing, sales and distribution rights to our product candidates for certain niche markets and find commercial partners to develop and market our products in markets outside of our core focus.

### Competition

We are engaged in an industry that is intensely competitive and characterized by rapid technological progress. In each of our potential product areas, we face significant competition from large pharmaceutical, biotechnology and other companies, as well as universities and research institutions. Most of these companies

and institutions have substantially greater capital resources, research and development staffs, facilities and experience in conducting clinical trials and obtaining regulatory approvals. In addition, many of these companies have greater experience and expertise in manufacturing and marketing pharmaceutical products.

Since all of our products are under development, we cannot predict the relative competitive position of our products if they are approved for use. However, we expect that the following factors will determine our ability to compete effectively:

- · safety and efficacy;
- · product price;
- · ease of administration; and
- marketing and sales capability.

Currently, no drug in the United States and Europe is approved and marketed as replacement therapy for the treatment of GHIS. We are aware of only one other company, Tercica, Inc., that is pursuing development of a product for this indication. On February 28, 2005 Tercica announced that it had submitted a new drug application (NDA) for the use of rhIGF-I in the long term treatment of growth failure in children with a severe form of primary IGF deficiency. We believe this indication would include patients with GHIS. We believe Tercica may also be planning to develop rhIGF-I for some of the same indications that we plan to pursue with rhIGF-I/rhIGFBP-3.

GH may also be a competitive product for the treatment of some patients with growth disorders associated with IGF-I deficiency. The major suppliers of commercially available GH are Genentech, Eli Lilly, Novo Nordisk, Pfizer and Serono.

In addition, we believe that Genentech, Merck, Novo Nordisk and Pfizer have previously conducted research and development of orally available small molecules that cause the release of GH, known as GH secretagogues. We are not aware of any continued clinical development of these molecules by these companies. We believe that Rejuvenon Corporation may have licensed certain rights to Novo Nordisk's GH secretagogues, which are in pre-clinical development. We are also aware that Theratechnologies is developing various peptides that stimulate the release of hormones that could be used in the treatment of some of the indications we plan to pursue with rhIGF-I/rhIGFBP-3.

Many companies are seeking to develop products and therapies for the treatment of diabetes. Our competitors include multinational pharmaceutical companies, specialized biotechnology firms, and universities and other research institutions. Our largest competitors include Bristol-Myers Squibb Company, Eli Lilly, GlaxoSmithKline, Merck, Novartis, Novo Nordisk, Takeda Chemical Industries and Amylin Pharmaceuticals. Various products are currently available to treat type 2 diabetes, such as insulin and oral hypoglycemic drugs.

In addition, several companies are developing various new approaches to improve the treatments of type 1 and type 2 diabetes. Amylin Pharmaceuticals has conducted and is continuing to conduct clinical trials for two products, Symlin and Exenatide, for the treatment of type 2 diabetes. Tercica has indicated that it plans to pursue the development of rhIGF-I in the treatment of severe forms of diabetes.

Many companies are pursuing the development of products for the treatment of cancer. Our competitors include multinational pharmaceutical companies, specialized biotechnology firms, and universities and other research institutions. Although we are unaware of any companies developing rhIGFBP-3 for cancer, we are aware of companies who are developing products that are intended to target the same pathway that we are targeting with rhIGFBP-3.

It is possible that there are other companies with products currently in development or that exist on the market that may compete directly with rhIGF-I/rhIGFBP-3 or rhIGFBP-3.

### **Government Regulation**

Government authorities in the United States and other countries extensively regulate the research, development, testing, manufacture, promotion, marketing and distribution of drug products. Drugs are subject to rigorous regulation by the FDA and similar regulatory bodies in other countries. The steps ordinarily required before a new drug may be marketed in the United States are similar to steps required in most other countries and include:

- Pre-clinical laboratory tests, pre-clinical studies in animals and formulation studies and the submission of an Investigational New Drug Application (IND);
- Adequate and well-controlled clinical trials to establish the safety and efficacy of the drug for each indication;
- The submission of a NDA; and
- Regulatory review and approval of the NDA before any commercial sale or shipment of the drug.

Pre-clinical tests include laboratory evaluation of product chemistry and stability, as well as animal studies to evaluate toxicity. The results of pre-clinical testing are submitted to the FDA as part of an IND. The FDA requires a 30-day waiting period after the filing of each IND before beginning clinical tests in humans. At any time during this 30-day period or at any time thereafter, the FDA may halt proposed or ongoing clinical trials until the FDA authorizes trials under specified terms. The IND process may become extremely costly and substantially delay development of our products. Moreover, positive results of pre-clinical tests will not necessarily indicate positive results in clinical trials.

Clinical trials to support NDAs are typically conducted in three sequential phases, but the phases may overlap. During Phase I, the initial introduction of the drug into healthy human subjects or patients, the drug is tested to assess pharmacokinetics and safety.

Phase II usually involves studies in a limited patient population to:

- assess the efficacy of the drug in specific targeted indications;
- · assess dosage tolerance and optimal dosage; and
- identify possible adverse effects and safety risks.

If a compound is found to be potentially effective and to have an acceptable safety profile in Phase II evaluations, Phase III trials, also called pivotal studies, are undertaken to further demonstrate clinical efficacy and to further test for safety within an expanded patient population at geographically dispersed clinical study sites.

After completion of the required clinical testing, a NDA is submitted. The FDA may request additional information before accepting a NDA for filing, in which case the application must be resubmitted with the additional information. The performance goals and procedures of the FDA Center for Drug Evaluation and Research (CDER) and the Center for Biologics Evaluation and Research (CBER), as agreed to under the reauthorization of the prescription drug user fee program in the "Food and Drug Administration Modernization Act of 1997," indicate the FDA is striving to review and act on 90% of standard NDA submissions filed during years 2003 through 2007 within 10 months of receipt and priority NDA submissions within 6 months of submission. The review process is often significantly extended by FDA requests for additional information or clarification. The FDA may refer the NDA to an appropriate advisory committee for review, evaluation and recommendation as to whether the application should be approved, but the FDA is not bound by the recommendation of an advisory committee.

If FDA evaluations of the NDA and related manufacturing facilities are favorable, the FDA may issue either an approval letter or an approvable letter. An approvable letter will usually contain a number of conditions that must be met in order to secure final approval of the NDA and authorization of commercial marketing of the drug. The FDA may refuse to approve the NDA or issue a not approvable letter, outlining the deficiencies in the submission or the manufacturing site(s) and often requiring additional testing or information.

The manufacturers of approved products and their manufacturing facilities will be subject to continual review and periodic inspections. Because we intend to contract with third parties for manufacturing of these products, our control of compliance with FDA requirements may be incomplete. In addition, identification of certain side effects or the occurrence of manufacturing problems after any of our drugs are on the market could cause subsequent withdrawal of approval, reformulation of the drug, additional pre-clinical testing or clinical trials and changes in labeling of the product.

The FDA's policies may change and additional government regulations may be enacted which could prevent or delay regulatory approval of our products. We cannot predict the likelihood, nature or extent of adverse governmental regulation which might arise from future legislative or administrative action, either in the United States or abroad.

Under the Orphan Drug Act, the FDA may grant orphan drug designation to drugs intended to treat a rare disease or condition, which is generally a disease or condition that affects fewer than 200,000 individuals in the United States Orphan drug designation must be requested before submitting a NDA. After the FDA grants orphan drug designation, the identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. Orphan drug designation does not convey any advantage in or shorten the duration of the regulatory review and approval process. If a product that has orphan drug designation subsequently receives the first FDA approval for the disease for which it has such designation, the product is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications to market the same drug for the same disease, except in very limited circumstances, for seven years. This exclusivity, however, also could block the approval of our products for seven years if a competitor is granted orphan designation and receives NDA approval of the same drug for the same indication or disease before we do. We have received orphan designation for the treatment of severe burn injury, growth disturbances due to GHIS, and extreme insulin resistance. We also intend to file for orphan drug designation for other indications which meet the criteria for orphan exclusivity. Obtaining FDA approval to market a product with orphan drug exclusivity may not provide us with a material commercial advantage.

The FDA Modernization Act of 1997 included a pediatric exclusivity provision that was extended by the Best Pharmaceuticals for Children Act of 2003. Pediatric exclusivity is designed to provide an incentive to manufacturers for conducting research about the safety of their products in children. Pediatric exclusivity, if granted, provides an additional six months of market exclusivity in the United States for new or currently marketed drugs, if certain pediatric studies requested by FDA are completed by the applicant. We believe our current plans to study rhIGF-I/rhIGFBP-3 in children may qualify rhIGF-I/rhIGFBP-3 for the additional six months of pediatric exclusivity, although there can be no assurances that FDA will grant such additional exclusivity. The current pediatric exclusivity provision is scheduled to end on October 1, 2007 and there can be no assurances that it will be reauthorized.

Outside the United States, our ability to market our products will also depend on receiving marketing authorizations from the appropriate regulatory authorities. The requirements governing the conduct of clinical trials and marketing authorization vary widely from country to country. The foreign regulatory approval process includes risks similar to those associated with FDA approval as described above.

## **Employees**

As of December 31, 2004, we had 55 full-time employees. Of these employees, 14 were engaged in research and development, 29 were engaged in manufacturing and 12 were engaged in general management, finance and administration. None of our employees are covered by any collective bargaining agreement. We consider relations with our employees to be good.

### Risk Factors Related to Our Business

You should consider carefully the following risk factors, together with all of the other information included in this Annual Report on Form 10–K. Each of these risk factors could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our common stock.

Since we have a limited operating history, a history of operating losses and an expectation that we will generate operating losses for the foreseeable future, we may not achieve profitability for some time, if at all.

We are focused on product development and currently have no commercial sales. We have incurred losses each year of operation and we expect to continue incurring operating losses for the foreseeable future. The process of developing our products requires significant pre-clinical testing and clinical trials as well as regulatory approvals for commercialization and marketing before we can begin to generate any revenue from product sales. In addition, commercialization of our drug candidates will require us to establish a sales and marketing organization and contractual relationships to enable product manufacturing and other related activities. We expect that these activities, together with our general and administrative expenses, will result in substantial operating losses for the foreseeable future. As of December 31, 2004, our accumulated deficit was \$213.7 million. For the year ended December 31, 2004, our consolidated net loss was \$27.2 million.

We currently have two lead product candidates, rhIGF-I/rhIGFBP-3 (also known as SomatoKine ®) and rhIGFBP-3. rhIGF-I/rhIGFBP-3 is currently in development for a number of metabolic and endocrine indications. The most advanced indication in development is the treatment of severe growth disturbance due to growth hormone insensitivity syndrome (GHIS). Our second compound, rhIGFBP-3, is currently in preclinical development for a variety of cancers including breast, lung, colon and prostate.

# All of our products are currently in the research and development stage and if we are unable to commercialize them it will materially adversely affect our business, financial condition and results of operations.

All of our potential products are in the research and development stage. Our long-term viability and growth depend on the successful commercialization of products which lead to revenue and profits. In order to commercialize any of our products they must first be successfully developed. Pharmaceutical product development is an expensive, high risk, lengthy, complicated, resource intensive process. In order to succeed, among other things, we must be able to:

- · identify potential drug product candidates;
- design and conduct appropriate laboratory, pre-clinical and other research;
- submit for and receive regulatory approval to perform clinical studies;
- · design and conduct appropriate clinical studies;
- select and recruit clinical investigators;
- · select and recruit subjects for our studies;
- collect, analyze and correctly interpret the data from our studies;
- submit for and receive regulatory approvals for marketing; and
- manufacture the drug product candidates according to current good manufacturing practices (cGMP).

The development program with respect to any given product will take many years and thus delay our ability to generate profit. In addition, potential products that appear promising at early stages of development may fail for a number of reasons, including the possibility that the products may require significant additional testing or turn out to be:

- unsafe;
- · not effective;

- too difficult or expensive to manufacture;
- · too difficult to administer; or
- · unstable.

In order to conduct the development programs for our potential products we must, among other things, be able to successfully:

- raise sufficient money to pay for the development;
- attract and retain appropriate personnel; and
- develop relationships with other companies to perform various development activities that we are unable to perform.

Even if we are successful in developing our products, there are numerous developments that could prevent the successful commercialization of the products such as:

- the regulatory approval of our products are delayed or we are required to conduct further research and development with our products prior to receiving regulatory approval;
- we are unable to build a sales and marketing group to successfully launch and sell our products;
- we are unable to raise the additional funds needed to successfully develop and commercialize our products or acquire additional products for growth;
- an event such as a law suit or other litigation drains our cash;
- we are unable to manufacture the quantity of product needed in accordance with current good manufacturing practices to meet market demand or at all;
- our product is determined to be ineffective or unsafe following approval and is removed from the market or we are required to perform additional research and development to further prove the safety and effectiveness of the product before re-entry into the market;
- competition from other products or technologies prevents or reduces market acceptance of our products;
- we do not have and cannot obtain the intellectual property rights needed to manufacture or market our products without infringing on another company's patents; or
- we are unable to obtain reimbursement for our products or such reimbursement may be less than is necessary to produce a reasonable profit.

Our growth strategy includes the commercialization of more than one product. We may not be able to identify and acquire complementary products, businesses or technologies and if acquired or licensed, they might not improve our business, financial condition or results of operations.

The failure to successfully acquire, develop and commercialize products will adversely affect our business, financial condition and results of operations.

# If our products fail in pre-clinical or clinical trials or if we cannot enroll enough patients to complete our clinical trials, such failure may adversely affect our business, financial condition and results of operations.

In order to sell our products, we must receive regulatory approval. Before obtaining regulatory approvals for the commercial sale of any of our products under development, we must demonstrate through pre-clinical studies and clinical trials that the product is safe and effective for use in each target indication. In addition, the results from pre-clinical testing and early clinical trials may not be predictive of results obtained in later clinical trials. There can be no assurance that our clinical trials will demonstrate sufficient safety and effectiveness to obtain regulatory approvals. A number of companies in the biotechnology and pharmaceutical industries have suffered

significant setbacks in late stage clinical trials even after promising results in early stage development. If our products fail in pre-clinical or clinical trials, it will have an adverse effect on our business, financial condition and results of operations.

We are currently conducting a Phase III clinical trial of rhIGF-I/rhIGFBP-3 in patients with GHIS and have included some data from this trial as pivotal information in a NDA submission to the FDA which was filed on January 3, 2005. We also plan to include the data from the trial in a MAA to the EMEA. We must receive approval of these applications before we can market rhIGF-I/rhIGFBP-3 in the respective territories. We are also planning clinical trials with rhIGFBP-3.

The completion rate of these and other clinical trials is dependent on, among other factors, the patient enrollment rate. Patient enrollment is a function of many factors, including:

- Investigator identification and recruitment;
- · regulatory approvals to initiate study sites;
- patient population size;
- the nature of the protocol to be used in the trial;
- patient proximity to clinical sites;
- · eligibility criteria for the study; and
- competition from other companies' clinical trials for the same patient population.

We believe our planned procedures for enrolling patients are appropriate; however, delays in patient enrollment would increase costs and delay ultimate commercialization and sales, if any, of our products. Such delays could materially adversely affect our business, financial condition and results of operations.

We may be required to conduct broad, long-term clinical trials to address concerns that the long-term use of rhIGF-I/rhIGFBP-3 in broader chronic indications might increase the risk of diabetic retinopathy. This may materially adversely affect our business, financial condition and results of operations.

In previously published clinical trials of rhIGF-I, concerns were raised that long-term use of rhIGF-I might lead to an increased incidence and/or severity of retinopathy, a disease of new blood vessel growth in the eye which results in loss of vision. Because our product contains rhIGF-I, the FDA may require us to conduct broad, long-term clinical trials to address these concerns prior to receiving FDA approval for broad chronic indications such as diabetes. These clinical trials would be expensive and could delay our commercialization of rhIGF-I/rhIGFBP-3 for these broader chronic indications. Adverse results in these trials could prevent our commercialization of rhIGF-I/rhIGFBP-3 for broad chronic indications or could jeopardize existing development and approvals in other indications.

We cannot be certain that we will obtain any regulatory approvals in the United States and Europe. The failure to obtain such approvals may materially adversely affect our business, financial condition and results of operations.

We are required to obtain various regulatory approvals prior to studying our drug products in humans and then again before we market and distribute our products. The regulatory review and approval process required to perform a clinical study in both the United States and Europe includes evaluation of pre-clinical studies and clinical trials, as well as the evaluation of our manufacturing process and is complex, lengthy, expensive, resource intensive and uncertain. Securing regulatory approval to market our products also requires the submission of extensive pre-clinical and clinical data, manufacturing information regarding the process and facility, scientific data characterizing our product and other supporting data to the regulatory authorities in order to establish its safety and effectiveness. This process is also complex, lengthy, expensive, resource intensive and uncertain. We have limited experience in filing and pursuing applications necessary to gain these regulatory approvals.

Data submitted to the regulators is subject to varying interpretations that could delay, limit or prevent regulatory agency approval. We may also encounter delays or rejections based on changes in regulatory agency policies during the period in which we develop a drug and/or the period required for review of any application for regulatory agency approval of a particular product. Delays in obtaining regulatory agency approvals could adversely affect the marketing of any drugs that our collaborative partners or we develop. Such delays could impose costly procedures on our collaborative partners' or our activities, diminish any competitive advantages that our collaborative partners or we may attain and adversely affect our ability to receive royalties, any of which could materially adversely affect our business, financial condition and results of operations.

We are currently conducting a Phase III clinical trial of rhIGF-I/rhIGFBP-3 in patients with GHIS and have included data from this trial as a pivotal piece of information in a January 3, 2005 NDA submission to the FDA. We also plan to include the data in a MAA submission to the EMEA. We must receive approval of these applications before we can market rhIGF-I/rhIGFBP-3.

As part of our normal development we continue to increase our scale of production and refine our manufacturing process. Because of these changes we are required to perform various comparability analyses to demonstrate that the drug product used in our previous development studies is essentially the same as the new drug product produced. We have had several discussions with the FDA and other foreign regulatory agencies regarding our Phase III clinical study and this comparability analysis and believe we understand what is required to satisfy the FDA and EMEA. We plan to submit this data to the appropriate regulatory authorities as part of the regulatory process. If we are unable to produce comparable drug product or meet the regulatory requirements of comparability it will materially adversely affect our business, financial condition and results of operations.

The regulatory authorities have substantial discretion in the approval process and may either refuse to accept our applications, or may decide after review of our applications that our data is insufficient to allow approval of rhIGF-I/rhIGFBP-3. If the FDA or EMEA do not accept or approve our application, it may require that we conduct additional clinical, pre-clinical or manufacturing studies and submit that data before it will reconsider our application. This could materially adversely affect our business, financial condition and results of operations.

Even if the FDA or EMEA grants approval for a drug, such approval may limit the indicated uses for which we may market the drug, and this could limit the potential market for such drug. Furthermore, if we obtain approval for any of our products, the marketing and manufacture of such products remain subject to extensive regulatory requirements. Even if the FDA or EMEA grants approval, such approval would be subject to continual review, and later discovery of unknown problems could restrict the products future use or cause their withdrawal from the market. Failure to comply with regulatory requirements could, among other things, result in fines, suspension of regulatory approvals, operating restrictions and criminal prosecution. In addition, many countries require regulatory agency approval of pricing and may also require approval for the marketing in such countries of any drug that our collaborative partners or we develop.

If our Phase III clinical trial is unsuccessful or if we cannot produce comparable drug product, have not correctly understood the regulatory requirements associated with comparability of drug products or for various other reasons cannot satisfy ongoing regulatory requirements, we may not receive NDA and/or MAA approvals or such approvals may be substantially delayed or withdrawn. Any of these events could materially adversely affect our business, financial condition and results of operations.

We cannot be certain that we will obtain any regulatory approvals in foreign countries. The failure to obtain such approvals may materially adversely affect our business, financial condition and results of operations.

In order to market our products outside of the United States and European Union territories, our corporate partners and we must comply with numerous and varying regulatory requirements of other countries. The approval procedures vary among countries and can involve additional product testing and administrative review periods. The time required to obtain approval in these other territories might differ from that required to obtain

FDA or EMEA approval. The regulatory approval process in these other territories includes at least all of the risks associated with obtaining FDA and EMEA approval detailed above. Approval by the FDA or EMEA does not ensure approval by the regulatory authorities of other countries.

We are currently conducting or planning to conduct several clinical studies in the United States, and countries in the European Union and other territories with our products. If we are unable to receive regulatory approval to conduct such studies, it may prevent or substantially delay our development programs which could materially adversely affect our business, financial condition and results of operations.

If another party obtains orphan drug or pediatric exclusivity for a product that is essentially the same as rhIGF-I/rhIGFBP-3 for the treatment of growth disturbance due to GHIS, we may be precluded or delayed from commercializing rhIGF-I/rhIGFBP-3 in that indication. This will materially adversely affect our business, financial condition and results of operations.

Under the Orphan Drug Act, the FDA may grant orphan drug designation to drugs intended to treat a rare disease or condition, which is generally a disease or condition that affects fewer than 200,000 individuals in the United States The company that obtains the first marketing approval from the FDA for a designated orphan drug for a rare disease receives marketing exclusivity for use of that drug for the designated condition for a period of seven years. Similar laws exist in Europe. Pediatric exclusivity can provide an additional six months of market exclusivity in the United States If a competitor obtains approval of the same drug for the same indication or disease before us, we would be blocked from obtaining approval for our product for seven or more years, unless our product can be shown to be clinically superior. In addition, more than one product may be approved by the FDA for the same orphan indication or disease as long as the products are different drugs. As a result, if our product is approved and receives orphan drug status, the FDA can still approve other drugs for use in treating the same indication or disease covered by our product, which could create a more competitive market for us.

We are aware of a drug being developed by Tercica, Inc., which we believe is a product containing essentially only rhIGF-I, that is in development for treatment of severe primary IGF-I Deficiency. We believe this population includes patients with GHIS. We believe this company has or will file for orphan designation of their product and pursue pediatric exclusivity. The regulatory agencies could determine that this other product is the same drug as our product and is used for the same indication. If the regulatory agencies make this determination and the other product is approved first, the approval of our rhIGF-I/rhIGFBP-3 for GHIS could be blocked for up to seven or more years, which could force us to curtail or cease our operations. We may not be able to benefit from the orphan drug marketing exclusivity because products that are clinically superior may be approved for marketing regardless of whether we receive orphan drug designation and the first marketing approval.

The failure to successfully obtain orphan drug market exclusivity or pediatric drug market exclusivity will adversely affect our business, financial condition and results of operations.

Manufacturing capacity necessary to supply rhIGF-I/rhIGFBP-3 and rhIGFBP-3 may not be available, which may adversely affect our business, financial condition and results of operations. If we are unable to find sufficient manufacturing capacity, it could materially adversely affect our business, financial condition and results of operations.

Failure to successfully manufacture our products could materially adversely affect our business, financial condition and results of operations. We intend to manufacture products at out ITP facility in Boulder, Colorado and enter into strategic alliances with other parties that have established commercial scale manufacturing capabilities. There can be no assurance that our ITP facility will have the capacity to produce the required products nor that we will enter into such strategic alliances on terms favorable to us or at all. If we are unable to increase production capacity at our ITP facility or establish and maintain relationships with third parties for manufacturing sufficient quantities of our product candidates and their components that meet our planned time and cost parameters, the development and timing of our pre-clinical and clinical trials may be adversely affected.

In addition, there can be no assurance that an adverse regulatory inspection at our ITP facility or at our contract manufacturers' facilities would not impede our commercial supply capability. If we choose to commercialize such products solely on our own, it would be time consuming, resource intensive and capital intensive. If our contract manufacturers' facilities or our facilities can not produce our products according to current good manufacturing practices (cGMP) and pass a cGMP inspection or if our contract manufacturers' or our facilities become unavailable, we may be unable to develop and commercialize our products. This will materially adversely affect our business, financial condition and results of operations.

The available capacity for the manufacture of recombinant proteins that comprise rhIGF-I/rhIGFBP-3 is limited. A shutdown or disruption at our ITP facility or in any of these third party facilities due to technical, regulatory or other problems, resulting in an interruption in supply of these materials, could delay our development activities and adversely impact our business, financial condition and results of operations.

We have manufactured rhIGF-I/rhIGFBP-3 at our ITP facility and at Avecia's site at Billingham, England. At present, rhIGF-I/rhIGFBP-3 has never been manufactured by ITP or Avecia in quantities necessary for commercialization; we cannot guarantee that they will be able to produce the quantities of rhIGF-I/rhIGFBP-3 necessary for commercialization or that there will not be delays in such production. If we are unable to manufacture rhIGF-I/rhIGFBP-3 or such manufacture is delayed it could materially adversely affect our business, financial condition and results of operations.

Our ITP facility and the facilities used by our contract manufacturers, including Avecia Limited, to manufacture rhIGF-I/rhIGFBP-3 may undergo an inspection by the FDA and/or EMEA for compliance with cGMP regulations, before rhIGF-I/rhIGFBP-3 can be approved. In the event these facilities do not receive a satisfactory cGMP inspection for the manufacture of our product, we may need to fund additional modifications to our manufacturing process, conduct additional validation studies, or find alternative manufacturing facilities, any of which would result in significant cost to us as well as a significant delay of up to several years in obtaining approval for rhIGF-I/rhIGFBP-3. In addition, our contract manufacturers, and any alternative contract manufacturer we may utilize, will be subject to ongoing periodic inspection by the FDA and EMEA and other foreign agencies for compliance with cGMP regulations and similar foreign standards. We do not have control over our contract manufacturers' compliance with these regulations and standards.

Product for our clinical trials is currently made at either our ITP facility or Avecia's manufacturing facility and then sent to an additional third party contract manufacture for sterile filtration and filling into vials. Should our ITP facility, Avecia's facility or our contract sterile filtration and filling manufacturer become unavailable to us for any reason, including damage from any event, including fire, flood, earthquake or terrorism, we may be unable to complete manufacture of rhIGF-I/rhIGFBP-3 or validation of the manufacturing process for rhIGF-I/rhIGFBP-3. This could delay our clinical trials and the approval of our NDA or MAA, which would delay or otherwise adversely affect revenues. If the damage to any of these facilities is extensive, or if they are unwilling or unable to operate in compliance with cGMP or perform under our agreements, we will need to find alternative facilities. The number of contract manufacturers with the expertise and facilities to manufacture rhIGF-I/rhIGFBP-3 bulk drug substance on a commercial scale in accordance with cGMP regulations is extremely limited, and it would take a significant amount of time and resources to arrange for alternative manufacturers. If we need to change to other commercial manufacturers, we would need to transfer and validate the processes and analytical methods necessary for the production and testing of rhIGF-I/rhIGFBP-3 to these new manufacturers. Any of these factors could lead to the delay or suspension of our clinical trials, regulatory submissions, regulatory approvals or commercialization of rhIGF-I/rhIGFBP-3, or higher costs of production and result in our failure to effectively commercialize rhIGF-I/rhIGFBP-3.

Furthermore, if our ITP facility or our contract manufacturers fail to deliver sufficient quantities of bulk drug substance or finished product on a timely basis and at commercially reasonable prices, and we are unable to promptly find one or more replacement manufacturers capable of production at a substantially equivalent cost, in substantially equivalent volume and on a timely basis, we will likely be unable to meet demand for rhIGF-I/rhIGFBP-3 and we would lose potential revenues.

We currently have limited sales, marketing and distribution capabilities, which may make commercializing our products difficult. If we are unable to build sales, marketing and distribution capabilities, it will materially adversely affect our business, financial condition and results of operations.

If the FDA or any other regulatory agency permits us to commence commercial sales of products, we will face competition with respect to commercial sales, marketing and distribution. These are areas in which we have no experience. To market any of our products directly, we must develop a marketing and sales force with technical expertise and with supporting distribution capability. Alternatively, we may engage a pharmaceutical company with a large distribution system and a large direct sales force to assist us. There can be no assurance that we will successfully establish sales and distribution capabilities or gain market acceptance for our proprietary products. To the extent we enter copromotion or other licensing arrangements, any revenues we receive will depend on the efforts of third parties and there can be no assurance that our efforts will succeed. Failure to successfully sell, market or distribute our products once approved will materially adversely affect our business, financial condition and results of operations

# If our products fail to achieve market acceptance for any reason, such failure may materially adversely affect our business, financial condition and results of operations.

There can be no assurance that any of our product candidates, if approved for marketing, will achieve market acceptance. If our products do not receive market acceptance for any reason, it will adversely affect our business, financial condition and results of operations. The degree of market acceptance of any products we develop will depend on a number of factors, including:

- the establishment and demonstration in the medical community of the clinical efficacy and safety of our products;
- their potential advantage over existing and future treatment methods;
- their price; and
- reimbursement policies of government and third-party payers, including hospitals and insurance companies.

For example, even if we obtain regulatory approval to sell our products, physicians and healthcare payers could conclude that our products are not safe and effective and physicians could choose not to use them to treat patients. Our competitors may also develop new technologies or products which are more effective or less costly, or that seem more cost-effective than our products.

Our commercial success will depend in part on third-party payers agreeing to reimburse patients for the costs of products. Government health administration authorities, private health insurers and other organizations generally provide reimbursement. Third-party payers frequently challenge the pricing of new drugs. Significant uncertainty exists as to the reimbursement status of newly approved healthcare products. Therefore, third-party payers may not approve our products for reimbursement. If third-party payers do not approve our products for reimbursement, sales will suffer, as some patients will opt for a competing product that is approved for reimbursement. Even if third-party payers make reimbursement available, these payers' reimbursement policies may adversely affect our corporate partners and our ability to sell such products on a profitable basis. Moreover, the trend toward managed healthcare in the United States, the growth of organizations such as health maintenance organizations and legislative proposals to reform healthcare and government insurance programs could significantly influence the purchase of healthcare services and products, resulting in lower prices and reducing demand for our products which could adversely affect our business, financial condition and results of operations.

In addition, legislation and regulations affecting the pricing of pharmaceuticals may change in ways adverse to us before or after the FDA or other regulatory agencies approve any of our proposed products for marketing. While we cannot predict the likelihood of any such legislative or regulatory proposals, if the government or an agency adopts such proposals, they could materially adversely affect our business, financial condition and results of operations.

If physicians, patients, third-party payers or the medical community in general do not accept and use the products we develop and commercialize, it will materially adversely affect our business, financial condition and results of operations.

We will need additional funds in the future to continue our operations, but we face uncertainties with respect to our access to capital that could materially adversely impact our business, financial condition and results of operations.

We will require substantial future capital in order to execute our business plan. Our future capital requirements will depend on many factors, including factors associated with:

- · manufacturing;
- · process development;
- research and development including among other items, pre-clinical testing and clinical trials;
- · obtaining regulatory approvals;
- obtaining marketing sales and distribution capabilities;
- launching products;
- retaining employees and consultants;
- filing and prosecuting patent applications and enforcing patent claims;
- · establishing strategic alliances; and
- other activities required for product commercialization.

We may also need to spend more money than currently expected because we may change our product development plans, acquire additional products or product candidates or we may misjudge our costs. We have no committed sources of capital and do not know whether additional financing will be available when needed, or, if available, that the terms will be favorable. There can be no assurance that our cash reserves together with any subsequent funding will satisfy our capital requirements. The failure to satisfy our capital requirements will adversely affect our business, financial condition and results of operations. We believe that existing cash reserves including the March 15, 2005 financing, will sufficiently fund our activities through the next twelve months.

We may seek additional funding through strategic alliances, private or public sales of our securities or licensing all or a portion of our technology. Such funding may significantly dilute existing shareholders or may limit our rights to our currently developing technology. There can be no assurance, however, that we can obtain additional funding on reasonable terms, or at all. If we cannot obtain adequate funds, we may need to significantly curtail our product development programs and/or relinquish rights to our technologies or product candidates. This may adversely affect our business, financial condition and results of operations.

# We are dependent upon retaining and attracting key personnel and others, the loss of which could materially adversely affect our business, financial condition and results of operations.

We depend highly on the principal members of our scientific and management staff, the loss of whose services might significantly delay or prevent the achievement of research, development or business objectives and would materially adversely affect our business, financial condition and results of operations. Our success depends, in large part, on our ability to attract and retain qualified management, scientific and medical personnel, and on our ability to develop and maintain important relationships with commercial partners, leading research institutions and key distributors. We face intense competition for such personnel and relationships. We cannot assure that we will attract and retain such persons or maintain such relationships.

We expect that our potential expansion into areas and activities requiring additional expertise, such as further clinical trials, governmental approvals, manufacturing, sales, marketing and distribution will place

additional requirements on our management, operational and financial resources. We expect these demands will require an increase in management and scientific personnel and the development of additional expertise by existing management personnel. The failure to attract and retain such personnel or to develop such expertise could materially adversely affect our business, financial condition and results of operations.

# We need collaborative relationships to be successful. If we are unable to form these relationships it could materially adversely impact our business, financial condition and results of operations.

We currently rely and may in the future rely on a number of significant collaborative relationships for intellectual property rights, research funding, manufacturing, analytical services, pre-clinical development, clinical development and/or sales and marketing. Reliance on collaborative relationships poses a number of risks, including the following:

- we cannot effectively control whether our corporate partners will devote sufficient resources to our programs or products;
- disputes may arise in the future with respect to the ownership of rights to technology developed with, licensed to or licensed from corporate partners;
- disagreements with corporate partners could result in loss of intellectual property rights, delay or terminate the research, development or commercialization of product candidates or result in litigation or arbitration;
- contracts with our corporate partners may fail to provide sufficient protection of our intellectual property;
- we may have difficulty enforcing the contracts if one of these partners fails to perform;
- corporate partners have considerable discretion in electing whether to pursue the development of any additional products and may pursue technologies or products either on their own or in collaboration with our competitors; and
- corporate partners with marketing rights may choose to devote fewer resources to the marketing of our products than they do to
  products of their own development.

Given these risks, a great deal of uncertainty exists regarding the success of our current and future collaborative efforts. Failure of these efforts could delay, impair or prevent the development and commercialization of our products and adversely affect our business, financial condition and results of operations.

# Our growth strategy includes acquiring complementary businesses or technologies that may not be available or, if available and purchased or licensed, might not improve our business, financial condition or results of operations.

As part of our business strategy, we expect to pursue acquisitions and in-license new products and technologies. Nonetheless, we cannot assure you that we will identify suitable acquisitions or products or that we can make such acquisitions or enter into such license agreements on acceptable terms. If we acquire businesses, those businesses may require substantial capital, and we cannot provide assurance that such capital will be available in sufficient amounts or that financing will be available in amounts and on terms that we deem acceptable. Furthermore, the integration of acquired businesses may result in unforeseen difficulties that require a disproportionate amount of management's attention and our other resources. Finally, we cannot provide assurance that we will achieve productive synergies and efficiencies from these acquisitions.

We intend to conduct proprietary development programs with collaborators, and any conflicts with them could harm our business, financial condition and results of operations. We intend to enter into collaborative relationships which will involve our collaborator conducting proprietary development programs. Any conflict with our collaborators could reduce our ability to obtain future collaboration agreements and negatively influence

our relationship with existing collaborators, which could reduce our revenues and have an adverse effect on our business, financial condition and results of operations. Moreover, disagreements with our collaborators could develop over rights to our intellectual property.

Certain of our collaborators could also be or become competitors. Our collaborators could harm our product development efforts by:

- · developing competing products;
- precluding us from entering into collaborations with their competitors;
- failing to obtain timely regulatory approvals;
- · terminating their agreements with us prematurely; or
- failing to devote sufficient resources to the development and commercialization of products.

# We face uncertainties related to patents and proprietary technology that may materially adversely affect our business, financial condition and results of operations.

Our success will depend in part on our ability to:

- obtain patent protection for our products;
- prevent third parties from infringing on our patents; and
- refrain from infringing on the patents of others, both domestically and internationally.

Our patent positions are highly uncertain, and any future patents we receive for our potential products will be subject to this uncertainty, which may adversely affect our business, financial condition and results of operations. We intend to actively pursue patent protection for products arising from our research and development activities that have significant potential commercial value. Nevertheless, it is possible that, in the patent application process, certain claims may be rejected or achieve such limited allowance that the value of the patents would be diminished. Further, there can be no assurance that any patents obtained will afford us adequate protection. In addition, any patents we procure may require cooperation with companies holding related patents. We may have difficulty forming a successful relationship with these other companies.

We can give no assurance that a third party will not claim (with or without merit) that we have infringed or misappropriated their proprietary rights. A variety of third parties have obtained, and are attempting to obtain, patent protection relating to the production and use of rhIGF-I and/or rhIGFBP-3. We can give no assurances as to whether any issued patents, or patents that may later issue to third parties, would affect our contemplated commercialization of rhIGF-I/rhIGFBP-3 or rhIGFBP-3. We can give no assurances that such patent(s) can be avoided, invalidated or licensed. If any third party were to assert a claim for infringement, we can give no assurances that we would be successful in the litigation or that such litigation would not have a material adverse effect on our business, financial condition and results of operation. Furthermore, we may not be able to afford the expense of defending against such a claim.

Third parties, including Genentech Inc. and Chiron Corporation hold United States and/or foreign patents possibly directed to the composition, production and/or use of rhIGF-I, rhIGFBP-3, rhIGF-I/rhIGFBP-3 and/or recombinant proteins in general. After examining these patents, we do not believe they present an obstacle to our plans to commercialize rhIGF-I/rhIGFBP-3 and rhIGFBP-3. However, we can provide no assurance that any one of these third parties will not assert in the future a contrary position, for instance in the context of an infringement action. Moreover, while we cannot predict with certainty the outcome of such a proceeding, an adverse ruling could impact our ability to make, use or sell our products.

In addition, Novartis AG and Chiron Corporation have rights to United States and foreign patents relating to the use of IGF-1 for the treatment of type 1 diabetes, and Novartis owns United States and foreign patents

relating to the treatment of osteoporosis with IGF-1. Genentech, Inc. owns U.S. and foreign patents directed to using IGF-I to increase the growth rate of certain patients with non-GH-deficient short stature and patients having partial growth hormone insensitivity syndrome. We do not expect that we will infringe these patents. We can give no assurances, however, that such patents can be avoided, invalidated or licensed. Thus, the patents could potentially have an adverse effect on our ability to make, use or sell rhIGF-I/rhIGFBP-3 for certain indications.

We may have to undertake costly litigation to enforce any patents issued or licensed to us or to determine the scope and validity of another party's proprietary rights. We can give no assurances that a court of competent jurisdiction would validate our issued or licensed patents. An adverse outcome in litigation or an interference or other proceeding in a court or patent office could subject us to significant liabilities to other parties, require us to license disputed rights from other parties or require us to cease using such technology, any of which could materially adversely affect our business, financial condition and results of operations.

# Confidentiality agreements with employees and others may not adequately prevent disclosure of trade secrets and other proprietary information. Disclosure of this information may materially adversely affect our business, financial condition and results of operations.

In order to protect our proprietary technology and processes, we rely in part on confidentiality agreements with our corporate partners, employees, consultants, outside scientific collaborators and sponsored researchers and other advisors. These agreements may not effectively prevent disclosure of confidential information and may not provide an adequate remedy in the event of unauthorized disclosure of confidential information. In addition, others may independently discover trade secrets and proprietary information. Costly and time-consuming litigation could be necessary to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain trade secret protection could adversely affect our competitive business position.

# Third-party claims that our products infringe on their proprietary rights may materially adversely affect our business, financial condition and results of operations.

We have entered into license agreements, and may enter into future license agreements, with various licensees to develop and market our products, and we can give no assurances that third parties will not claim that we and/or our licensees, by practicing our technology, are infringing on their proprietary rights. If other companies successfully bring legal actions against us or our licensees claiming patent or other intellectual property infringements, in addition to any potential liability for damages, a court could require us and/or our licensees to obtain a license in order to continue to use the affected processes or to manufacture or use the affected products, or alternatively, require us and/or our licensees to cease using such products or processes. Such a result may have an adverse effect on our business, financial condition and results of operations. Any such claim, with or without merit, could result in costly litigation or might require us and/or our licensees to enter into royalty or licensing agreements, all of which could delay or otherwise adversely impact the development of our potential products for commercial use. If a court requires us to obtain licenses, there can be no assurance that we and/or our licensees will be able to obtain them on commercially favorable terms, if at all. Without such licenses, we and/or our licensees may be unable to develop certain products. Our breach of an existing license or our failure to obtain, or our delay in obtaining, a license to any technology that we require to commercialize our products may materially adversely impact our business, financial condition and results of operations.

On December 20, 2004, Tercica, Inc. filed a complaint against Avecia Limited, Insmed, Inc. and Genentech, Inc. in the United Kingdom at the High Court of Justice, Chancery Division, Patents Court alleging infringement of EP patent No. 571,417 ("the 417 patent"). The '417 patent has claims directed to particular uses of a combination of IGFBP-3 and IGF-I. In the complaint, Tercica, Inc. asked the court for an injunction to restrain allegedly infringing activity, for a declaration that the '417 patent is valid and infringed, for an order requiring the delivery or destruction of allegedly infringing articles and materials and for an inquiry into possible economic damages.

On February 11, 2005, Avecia and Insmed filed a Defense and Counterclaim to Tercica Inc.'s suit. In its Defense, Avecia and Insmed asserted, among other things, that the '417 patent is invalid and that the Claimant failed to properly register its license. In this Counterclaim, Avecia and Insmed also asked the court to revoke the '417 patent.

Insmed cannot predict with certainty the outcome of this proceeding. We note, however, that an adverse ruling could impact our ability to make, use or sell our products.

Tercica, Inc. filed, on December 23, 2004, a complaint against Insmed in the United States District Court for the Northern District of California alleging infringement of U.S. patent Nos. 5,187,151 and 6,331,414. These patents are directed to certain methods of using IGF-I/IGFBP-3 and methods of producing human IGF-I, respectively. On February 16, 2005, Tercica, Inc. and Genentech, Inc. filed an Amended Complaint, adding allegations of infringement of U.S. patent No. 5,258,287 ("the '287 patent"). The claims of the '287 patent are directed to DNA encoding BP53 (i.e. IGFBP-3) and recombinant constructs, transformed host cells and methods for using same.

On February 18, 2005, Insmed filed a motion to dismiss the Amended Complaint. In the motion, Insmed asserted that all alleged activities fall within the statutory safe-harbor provided by 35 U.S.C. § 271(e)(1), commonly called the clinical trial exemption. This exemption prevents patent infringement actions from being filed against activities reasonably related to obtaining FDA approval of a product, such as when the product is still being tested in clinical trials. Insmed further asserted, among other things, that Plaintiffs have failed to state a claim for the requested relief, have not sued the proper party, have failed to name all the proper plaintiffs and have failed to establish the existence of a sufficiently real and substantial controversy between the parties. Insmed requested immediate dismissal or Summary Judgment against the plaintiff's allegation on these grounds.

Insmed cannot predict with certainty the outcome of this proceeding. We note, however, that an adverse ruling could impact our ability to make, use or sell our products.

### An inability to compete successfully will materially adversely affect our business, financial condition and results of operations.

We engage in a business characterized by extensive research efforts, rapid developments and intense competition. We cannot assure that our products will compete successfully or that research and development by others will not render our products obsolete or uneconomical. Our failure to compete effectively would materially adversely affect our business, financial condition and results of operations. We expect that successful competition will depend, among other things, on product efficacy, safety, reliability, availability, timing and scope of regulatory approval and price. Specifically, we expect crucial factors will include the relative speed with which we can develop products, complete the clinical testing and regulatory approval processes and supply commercial quantities of the product to the market. We expect competition to increase as technological advances are made and commercial applications broaden. In each of our potential product areas, we face substantial competition from large pharmaceutical, biotechnology and other companies, as well as universities and research institutions. Relative to us, most of these entities have substantially greater capital resources, research and development staffs, facilities and experience in conducting clinical trials and obtaining regulatory approvals, as well as in manufacturing and marketing pharmaceutical products. Many of our competitors may achieve product commercialization or patent protection earlier than we will. Furthermore, we believe that our competitors have used, and may continue to use, litigation to gain a competitive advantage. Finally, our competitors may use different technologies or approaches to the development of products similar to the products we are seeking to develop.

Since all of our products are under development, we cannot predict the relative competitive position of our products if they are approved for use. However, we expect that the following factors, among others, will determine our ability to compete effectively:

- · safety and efficacy;
- product price;

- ease of administration; and
- marketing and sales capability.

Currently, no drug in the United States or Europe is approved and marketed as replacement therapy for the treatment of GHIS. We are aware of only one other company, Tercica, Inc., that is pursuing development of a product for this indication or a similar indication. On February 28, 2005 Tercica announced that it had submitted an NDA for the use of rhIGF-I in the long term treatment of growth failure in children with a severe form of primary IGF deficiency. We believe this indication would include patients with GHIS. We believe Tercica may also be planning to develop rhIGF-I for some of the same indications that we plan to pursue with rhIGF-I/rhIGFBP-3.

Growth hormone may also be a competitive product for the treatment of some indications that we may pursue with rhIGF-I/rhIGFBP-3. The major suppliers of commercially available growth hormone are Genentech, Eli Lilly, Novo Nordisk, Pfizer and Serono. We believe that Novo Nordisk may be conducting clinical trials for the use of its growth hormone in pediatric IGF-I deficiency. We are also aware that Serono is conducting a Phase III trial with growth hormone for the treatment of HIV associated adipose redistribution syndrome.

In addition, we believe that Genentech, Merck, Novo Nordisk and Pfizer have previously conducted research and development of orally-available small molecules that cause the release of growth hormone, known as growth hormone secretagogues. We are not aware of any continued clinical development of these molecules by these companies. We believe that Rejuvenon Corporation may have licensed certain rights to Novo Nordisk's growth hormone secretagogues, which are in pre-clinical development. We are also aware that Theratechnologies is developing various peptides that stimulate the release of hormones that could be used in the treatment of some of the same indications we plan to pursue with rhIGF-I/rhIGFBP-3.

Many companies are seeking to develop products and therapies for the treatment of diabetes. Our competitors include multinational pharmaceutical companies, specialized biotechnology firms, and universities and other research institutions. Our largest competitors include Amylin Pharmaceuticals, Bristol-Myers Squibb Company, Eli Lilly, GlaxoSmithKline, Merck, Novartis, Novo Nordisk and Takeda Chemical Industries. Various products are currently available to treat type 2 diabetes, such as insulin and oral hypoglycemic drugs.

In addition, several companies are developing various new approaches to improve the treatments of type 1 and type 2 diabetes. Specifically, Amylin Pharmaceuticals has conducted and is continuing to conduct clinical trials for two products, Symlin and Exenatide, for the treatment of type 2 diabetes. Tercica has indicated that it plans to pursue the development of rhIGF-I in the treatment of severe forms of diabetes

Many companies are pursuing the development of products for the treatment of cancer. Our competitors include multinational pharmaceutical companies, specialized biotechnology firms, and universities and other research institutions. Although we are unaware of any companies developing rhIGFBP-3 for cancer we are aware of companies who are developing products that are intended to target the same pathway as rhIGFBP-3.

Biotechnology and related pharmaceutical technology have undergone and should continue to experience rapid and significant change. We expect that the technologies associated with biotechnology research and development will continue to develop rapidly. Our future will depend in large part on our ability to maintain a competitive position with respect to these technologies. Any compounds, products or processes that we develop may become obsolete before we recover any expenses incurred in connection with their development. Rapid technological change could make our products obsolete, which could materially adversely affect our business, financial condition and results of operations.

Our inability to compete in our industry could materially adversely affect our business, financial condition and results of operations.

# Our research, development and manufacturing activities involve the use of hazardous materials, which could expose us to damages that could materially adversely affect our business, financial condition and results of operations.

Our research, development and manufacturing activities involve the controlled use of hazardous materials, including hazardous chemicals and radioactive materials. We believe that our procedures for handling hazardous materials comply with federal and state regulations; however, there can be no assurance that accidental injury or contamination from these materials will not occur. In the event of an accident, we could be held liable for any damages, which could exceed our available financial resources, including our insurance coverage. This liability could materially adversely affect our business, financial condition and results of operations.

We are subject to federal, state and local laws and regulations governing the use, manufacture, storage, handling and disposal of hazardous materials and waste products. These laws and regulations may require us to incur significant costs to comply with environmental laws and regulations in the future that could materially adversely affect our business, financial condition and results of operations.

We may be subject to product liability claims if our products harm people, and we have only limited product liability insurance.

The manufacture and sale of human therapeutic products involve an inherent risk of product liability claims and associated adverse publicity. We currently have only limited product liability insurance for clinical trials and no commercial product liability insurance. We do not know if we will be able to maintain existing or obtain additional product liability insurance on acceptable terms or with adequate coverage against potential liabilities. This type of insurance is expensive and may not be available on acceptable terms. If we are unable to obtain or maintain sufficient insurance coverage on reasonable terms or to otherwise protect against potential product liability claims, we may be unable to commercialize our products. A successful product liability claim brought against us in excess of our insurance coverage, if any, may require us to pay substantial amounts. This could have a material adverse effect our business, financial condition and results of operations.

# The market price of our stock has been and may continue to be highly volatile, and we do not anticipate paying any cash dividends on our common stock in the foreseeable future.

Our common stock is listed on the Nasdaq National Market under the ticker symbol "INSM." The market price of our stock has been and may continue to be highly volatile, and announcements by us or by third parties may have a significant impact on our stock price. These announcements may include:

- our listing status on the Nasdaq National Market;
- results of our clinical trials and pre-clinical studies, or those of our corporate partners or our competitors;
- · our operating results;
- developments in our relationships with corporate partners;
- · developments affecting our corporate partners;
- negative regulatory action or regulatory approval with respect to our announcement or our competitors' announcement of new products;
- government regulations, reimbursement changes and governmental investigations or audits related to us or to our products;
- developments related to our patents or other proprietary rights or those of our competitors;
- changes in the position of securities analysts with respect to our stock; and/or
- operating results below the expectations of public market analysts and investors.

In addition, the stock market has from time to time experienced extreme price and volume fluctuations, which have particularly affected the market prices for emerging biotechnology and biopharmaceutical

companies, and which have often been unrelated to their operating performance. These broad market fluctuations may adversely affect the market price of our common stock.

In the past, when the market price of a stock has been volatile, holders of that stock have often instituted securities class action litigation against the company that issued the stock. If any of our shareholders brought a lawsuit against us, we could incur substantial costs defending the lawsuit. The lawsuit could also divert the time and attention of our management.

Future sales by existing shareholders may lower the price of our common stock, which could result in losses to our shareholders. Future sales of substantial amounts of common stock in the public market, or the possibility of such sales occurring, could adversely affect prevailing market prices for our common stock or our future ability to raise capital through an offering of equity securities. Substantially all of our common stock is freely tradable in the public market without restriction under the Securities Act of 1933, unless these shares are held by "affiliates" of our company, as that term is defined in Rule 144 under the Securities Act.

We have never paid dividends on our common stock. We currently intend to retain our future earnings, if any, to fund the development and growth of our businesses and, therefore, we do not anticipate paying any cash dividends in the foreseeable future.

# Certain provisions of Virginia law, our articles of incorporation and our amended and restated bylaws, and our Stockholder Rights Plan make a hostile takeover by a third party difficult.

Certain provisions of Virginia law and our articles of incorporation and amended and restated bylaws could hamper a third party's acquisition of, or discourage a third party from attempting to acquire control of us. The conditions could also limit the price that certain investors might be willing to pay in the future for shares of our common stock. These provisions include:

- a provision allowing us to issue preferred stock with rights senior to those of the common stock without any further vote or action by
  the holders of the common stock. The issuance of preferred stock could decrease the amount of earnings and assets available for
  distribution to the holders of common stock or could adversely affect the rights and powers, including voting rights, of the holders of
  the common stock. In certain circumstances, such issuance could have the effect of decreasing the market price of the common stock;
- the existence of a staggered board of directors in which there are three classes of directors serving staggered three-year terms, thus expanding the time required to change the composition of a majority of directors and perhaps discouraging someone from making an acquisition proposal for us;
- the amended and restated bylaws' requirement that shareholders provide advance notice when nominating our directors;
- the inability of shareholders to convene a shareholders' meeting without the Chairman of the Board, the President or a majority of the board of directors first calling the meeting; and
- the application of Virginia law prohibiting us from entering into a business combination with the beneficial owner of 10% or more of our outstanding voting stock for a period of three years after the 10% or greater owner first reached that level of stock ownership, unless we meet certain criteria.

In addition, in May 2001 our board of directors approved the adoption of a Shareholder Rights Plan under which shareholders received rights to purchase new shares of preferred stock if a person or group acquires 15% or more of our common stock. These provisions are intended to discourage acquisitions of 15% or more of our common stock without negotiations with the board. The rights trade with our common stock, unless and until they are separated upon the occurrence of certain future events. Our board of directors may redeem the rights at a price of \$0.01 per right prior to the time a person acquires 15% or more of our common stock.

### Available Information and Corporate Governance Documents.

Our Internet website address is: <a href="www.insmed.com">www.insmed.com</a>. We make available free of charge through our website our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, as soon as reasonably practicable after such documents are electronically filed with, or furnished to, the Securities and Exchange Commission. In addition, our Corporate Governance Guidelines, Code of Business Conduct and Ethics, and the charters of our Audit, Compensation and Nominating of Governance Committees are available on our website and are available in print, without charge, to any shareholder upon written request by writing our Treasurer and Controller at 4851 Lake Brook Drive, Glen Allen, Virginia 23060. The information on our website is not, and shall not be deemed to be, a part of this report or incorporated into any other filings we make with the Securities and Exchange Commission.

### ITEM 2. PROPERTIES

We occupy 46,000 square feet of office and laboratory space in Glen Allen, Virginia and 30,000 square feet of manufacturing and warehouse space in Boulder, Colorado. Our annual cash cost for the Virginia space including utilities and services in 2004 was approximately \$1.1 million under an operating lease that contains annual escalations of 1.75% and expires in October 2006. Our annual cash cost for the Colorado space including utilities and services in 2004 was approximately \$0.6 million under an operating lease that contains an annual escalation of 3% and expires in February 2008. We believe that our existing facilities are adequate for our current needs and that suitable additional or alternate space will be available on commercially reasonable terms when our lease expires or when we need additional space.

### ITEM 3. LEGAL PROCEEDINGS

On December 20, 2004, Tercica, Inc. and Genentech Inc. filed a complaint against Avecia Limited and Insmed, Inc. in the United Kingdom at the High Court of Justice, Chancery Division, Patents Court alleging infringement of EP patent No. 571,417 ("the 417 patent"). The '417 patent has claims directed to particular uses of a combination of IGFBP-3 and IGF-I. In the complaint, Tercica, Inc. asked the court for an injunction to restrain allegedly infringing activity, for a declaration that the '417 patent is valid and infringed, for an order requiring the delivery or destruction of allegedly infringing articles and materials and for an inquiry into possible economic damages.

On February 11, 2005, Avecia and Insmed filed a Defense and Counterclaim to Tercica Inc.'s suit. In its Defense, Avecia and Insmed asserted, among other things, that the '417 patent is invalid and that the Claimant failed to properly register its license. In its Counterclaim, Avecia and Insmed also asked the court to revoke the '417 patent.

Insmed cannot predict with certainty the outcome of this proceeding. We note, however, that an adverse ruling could impact our ability to make, use or sell our products.

Tercica, Inc. filed, on December 23, 2004, a complaint against Insmed in the United States District Court for the Northern District of California alleging infringement of U.S. patent Nos. 5,187,151 and 6,331,414. These patents are directed to certain methods of using IGF-I/IGFBP-3 and methods of producing human IGF-I, respectively. On February 16, 2005, Tercica, Inc. and Genentech, Inc. filed an Amended Complaint, adding allegations of infringement of U.S. patent No. 5,258,287 ("the '287 patent"). The claims of the '287 patent are directed to DNA encoding BP53 (i.e. IGFBP-3) and recombinant constructs, transformed host cells and methods for using same.

On February 18, 2005, Insmed filed a motion to dismiss the Amended Complaint. In the motion, Insmed asserted that all alleged activities fall within the statutory safe-harbor provided by 35 U.S.C. § 271(e)(1), commonly called the clinical trial exemption. This exemption prevents patent infringement actions from being

filed against activities reasonably related to obtaining FDA approval of a product, such as when the product is still being tested in clinical trials. Insmed further asserted, among other things, that Plaintiffs have failed to state a claim for the requested relief, have not sued the proper party, have failed to name all the proper plaintiffs and have failed to establish the existence of a sufficiently real and substantial controversy between the parties. Insmed requested immediate dismissal or Summary Judgment against the plaintiff's allegation on these grounds.

Insmed cannot predict with certainty the outcome of this proceeding. We note however, that an adverse ruling could impact our ability to make, use or sell our products.

### ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

There were no matters submitted to a vote of our shareholders during the quarter ended December 31, 2004.

### **PART II**

# ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER REPURCHASES OF EQUITY SECURITIES

Our common stock began trading on The Nasdaq SmallCap Market on June 1, 2000. We moved from The Nasdaq SmallCap Market to the Nasdaq National Market on August 8, 2000.

Our trading symbol is "INSM." The following table lists, for the periods indicated, the high and low sale prices per share for our common stock as reported on The Nasdaq National Market.

Insmed

	Common Stock				
Fiscal Year 2004	High	Low			
Fourth Quarter Third Quarter Second Quarter First Quarter	\$2.48 2.33 3.40 4.28	\$1.24 1.00 1.98 2.87			
Fiscal Year 2003	High	Low			
Fourth Quarter Third Quarter Second Quarter First Quarter	\$3.40 3.74 3.56 0.65	\$2.50 1.96 0.60 0.39			

On February 28, 2005, the last reported sale price for our common stock on the Nasdaq National Market was \$1.29 per share. As of February 28, 2005, there were 565 holders of record of our common stock.

We have never declared or paid dividends on our common stock. We anticipate that we will retain all earnings, if any, to support operations and to finance the growth and development of our business. Therefore, we do not expect to pay cash dividends in the foreseeable future. Any future determination as to the payment of dividends will be at the sole discretion of our board of directors and will depend on our financial condition, results of operations, capital requirements and other factors our board of directors deems relevant.

### ITEM 6. SELECTED FINANCIAL DATA

In the table below, we provide you with selected consolidated financial data. We have prepared this information using the consolidated financial statements of Insmed for the five years ended December 31, 2004. The acquisition of Celtrix closed on May 31, 2000. The purchase method of accounting was used to account for the transaction. Accordingly, the results of operations for Celtrix are included in the historical financial information commencing June 1, 2000. The financial statements for each of the five fiscal years ended December 31, 2004 have been audited by Ernst & Young LLP, our independent registered public accounting firm.

When you read this selected historical financial data, it is important that you also read the historical financial statements and related notes, as well as "Management's Discussion and Analysis of Financial Condition and Results of Operations" on pages 31 to 35.

	Year Ended December 31,					
	1999	2000	2001	2002	2003	2004
Historical Statement of Operations Data: Revenues Operating expenses:	\$ —	\$ 60	\$ 296	\$ 1,955	\$ 150	\$ 137
Research and development General and administrative Operational restructuring charge Goodwill write-off	5,657 2,189 —	21,608 5,989 —	35,506 4,881 —	18,077 2,984 2,533 15,385	7,140 3,477 —	23,320 4,242 —
Purchased research and development Stock compensation	285	50,434 3,564	95		119	
Total operating expenses	8,131	81,595	40,482	38,979	10,736	27,562
Operating loss Interest income, net	(8,131) 338	(81,535) 1,873	(40,186) 3,017	(37,024) 607	(10,586) 288	(27,425) 222
Loss before income taxes Income tax expense	(7,793) —	(79,662) 200	(37,169)	(36,417)	(10,298)	(27,203)
Net loss Basic and diluted net loss per share Weighted average shares	(7,793) (2.47) 3,155	(79,862) (4.36) 18,319	(37,169) (1.13) 32,871	(36,417) (1.10) 33,066	(10,298) (0.29) 35,600	(27,203) (0.69) 39,160
Historical Balance Sheet Data: Cash, cash equivalents and marketable securities Total assets Stockholders' equity	\$ 4,635 5,296 4,462	\$ 83,083 102,718 96,782	\$ 51,250 71,606 59,695	\$ 27,337 28,308 23,446	\$ 29,526 29,812 26,220	\$ 9,222 13,011 7,235

### ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion also should be read in conjunction with the Consolidated Financial Statements and notes thereto.

### Overview

We discover and develop pharmaceutical products for the treatment of metabolic and endocrine disorders. We have 3 lead drug candidates—rhIGF-I/rhIGFBP-3, rhIGFBP-3 and INSM-18. During 2004 we initiated a pivotal Phase III study with rhIGF-I/rhIGFBP-3 in GHIS and a Phase I study with rhIGFBP-3 in cancer. Also during 2004 we were successful in manufacturing clinical grade rhIGF-I/rhIGFBP-3 at Avecia and commissioned our ITP facility in Boulder, Colorado. On January 3, 2005 we submitted an NDA to the FDA for the use of rhIGF-1/rhIGFBP-3 in the treatment of GHIS, and on March 4, 2005 we received acceptance of the filing for FDA review. We are continuing our Phase III clinical trial in order to obtain long term data and plan to submit a MAA to the EMEA for this indication. Our plans for 2005 include:

- Obtain NDA approval for rhIGF-I/rhIGFBP-3 in GHIS
- Initiate clinical trials to expand rhIGF-I/rhIGFBP-3 into additional niche indications
- Establish commercial activities consistent with FDA approval process
- Capitalize through debt/equity and partnership fees to sustain 2005/2006 operations
- Establish European partner for rhIGF-I/rhIGFBP-3 and global partner for rhIGFBP-3
- · Aggressively defend patent lawsuits in the United States and United Kingdom

We have not been profitable and have accumulated deficits of approximately \$213.7 million through December 31, 2004. We expect to incur significant additional losses for at least the next several years until such time as sufficient revenues are generated to offset expenses. In general, our expenditures may increase as development of our product candidates progresses. However, there will be fluctuations from period to period caused by differences in project costs incurred at each stage of development.

The full cost and completion dates, through commercialization, of our current research and development projects, rhIGF-I/rhIGFBP-3 and rhIGFBP-3, are entirely dependent on the results of our current Phase II and III clinical trials for rhIGF-I/rhIGFBP-3, together with the subsequent review of the Phase III results with the FDA, and our Phase I and pre-clinical trials with rhIGFBP-3. Therefore, the estimated full cost of completion and the final completion dates for our current research and development projects are unknown at this time.

## **Results of Operations**

Year Ended December 31, 2004 compared to Year Ended December 31, 2003

For the year ended December 31, 2004, we recorded a net loss of \$27.2 million. Research and development expenses (which consist primarily of costs associated with clinical trials of our product candidates, including the costs of manufacturing, compensation and other expenses related to research and development personnel and facilities expenses) increased \$16.2 million from \$7.1 million in 2003 to \$23.3 million in 2004. This rise in spending resulted from a broader clinical trials program and an increase in manufacturing activity at our ITP facility and at our contract manufacturer Avecia to produce rhIGF-I/rhIGFBP-3 for our clinical trials,

General and administrative expenses increased \$0.7 million from \$3.6 million for 2003 to \$4.3 million for 2004. The increase was due to higher external service and personnel costs in support of our business. Revenues decreased \$13,000 from \$150,000 in 2003 to \$137,000 in 2004 due to a slight decline in royalties.

As of December 31, 2004, cash and cash equivalents decreased to \$9.2 million from \$29.5 million at December 31, 2003. As a result of a lower average cash balance and lower interest rates in 2004 compared to 2003, net interest income decreased \$66,000 from \$288,000 in 2003 to \$222,000 million in 2004.

Accounts payable and accrued project costs increased \$1.1 million from \$2.4 million at December 31, 2003 to \$3.5 million at December 31, 2004 as a result of increased clinical and manufacturing activity. Stockholders' equity decreased \$19.0 million mainly as a result of the net loss for 2004 of \$27.2 million being partially offset by approximately \$8.0 million in net proceeds received in connection with a private placement of our common stock on November 8, 2004. The accumulated deficit at December 31, 2004 increased to approximately \$213.8 million due to our 2004 net loss of \$27.2 million.

Year Ended December 31, 2003 compared to Year Ended December 31, 2002

For the year ended December 31, 2003, we recorded a net loss of \$10.3 million. Research and development expenses (which consist primarily of costs associated with clinical trials of our product candidates, including the costs of manufacturing, compensation and other expenses related to research and development personnel and facilities expenses) decreased \$11.0 million from \$18.1 million in 2002 to \$7.1 million in 2003 as a result of decreased clinical trial activity.

Clinical and contract manufacturing costs related to the development of rhIGF-I/rhIGFBP-3 decreased approximately \$0.3 million from \$3.5 million in 2002, to \$3.2 million in 2003 as we completed the development phase and began to scale up our production process for rhIGF-I/rhIGFBP-3 with our contract manufacturer, Avecia.

General and administrative expenses increased \$0.5 million from \$3.0 million for 2002 to \$3.5 million for 2003. The increase, although seen across all support services, was primarily due to higher external service costs.

In the third quarter of 2002, we recorded a restructuring charge of \$2.5 million related to the previously announced discontinuation of our INS-1 development program. The components of this charge include expenses of \$1.2 million related to the anticipated payouts under lease agreements for laboratory space no longer utilized at our headquarters, \$0.7 million related to the impairment of idle laboratory equipment at our headquarters, and \$0.6 million related to the cost of severance benefits following the termination of approximately 55% of our workforce. We also recorded a \$15.4 million goodwill write off in the fourth quarter of 2002 relating to the Celtrix acquisition in 2000.

Revenues decreased \$1.8 million from \$2.0 million in 2002 to \$0.2 million in 2003. The decrease in revenues as compared with 2002 is due to the recognition of approximately \$1.7 million of revenue from an international license fee for INS-1 from Taisho Pharmaceutical Co., Ltd. This represents revenues, previously deferred, from a cash payment made by Taisho at the inception of the Joint Development Agreement with us in 2000, which was being recognized as revenue over the life of the corresponding patent. As Taisho announced the termination of this agreement, the balance of the unrecognized revenue was recorded in the third quarter of 2002.

As of December 31, 2003, cash and cash equivalents increased to \$29.5 million from \$27.3 million at December 31, 2002. As a result of a lower average cash balance and lower interest rates in 2003 compared to 2002, net interest income decreased \$0.3 million from \$0.6 million in 2003 to \$0.3 million in 2003.

Accounts payable and accrued project costs decreased \$0.8 million from \$3.2 million at December 31, 2002 to \$2.4 million at December 31, 2003 as a result of decreased clinical and manufacturing activity. Stockholders' equity increased \$2.8 as a result of approximately \$13.0 million in proceeds received by us in connection with a private placement of our common stock on July 15, 2003, net of the loss in 2004. The accumulated deficit at December 31, 2003 increased to approximately \$186.5 million due to our 2003 net loss of \$10.3 million.

### **Liquidity and Capital Resources**

There is considerable time and cost associated with developing a potential drug or pharmaceutical product to the point where FDA approval for sales is received. In our financial management, we seek to raise the funds necessary for such development primarily through the issuance of equity securities in private placement transactions. However, it is our intention to pursue additional financing options, including entering into agreements with corporate partners in order to provide milestone payments, license fees and equity investments.

### Capital Requirements

Expenditures in the year ended December 31, 2004 were principally related to the research and development, increased clinical trial activity and manufacturing activities at our site in Boulder, Colorado, as well as administrative support activities. In the short-term, we will need to raise substantial additional funds to continue the development and approval process with respect to our lead drug products. In the longer-term, we will require substantial additional funds for the commercialization of those products. Our continuation as a going concern depends on our ability to obtain such additional financing and, ultimately, to generate positive cash flow and attain profitability. There can be no assurance that adequate funds will be available when we need them or on favorable terms. If at any time we are unable to obtain sufficient additional funds, we will be required to delay, restrict or eliminate some or all of our research or development programs, dispose of assets or technology or cease operations.

Planned expenditures in 2005 include the funding of our ongoing R & D activity, such as manufacturing and clinical trial costs, General and Administrative support costs plus initial commercialization efforts associated with the anticipated approval of our NDA.

### Capital Resources

We have funded our operations to date primarily through public and private placements of equity securities. We plan to continue incurring losses as we expand our research and development and do not expect material revenues for at least the next several years. At December 31, 2004, our cash and cash investments were approximately \$9.2 million and were invested in money market instruments. This is a decrease from \$29.5 million at December 31, 2003, despite the conclusion, in November 2004, of a private placement of 6,455,551 shares of our common stock to a group of institutional investors at a price of \$1.35 per share, which raised a total of approximately \$8.7 million. The placement agent in the transaction received approximately \$572,000 in fees and expenses (including fees paid to the placement agent's attorneys) resulting in net proceeds of approximately \$8.0 million. We also issued warrants to purchase an additional 3,227,775 shares of our common stock with an exercise price of \$2.00 per share.

On March 15, 2005, we entered into several purchase agreements with a group of institutional investors, pursuant to which we issued and sold to the investors approximately \$35,000,000 aggregate principal amount of 5.5% convertible notes, which notes are convertible into our common stock, par value \$0.01 per share, as well as warrants to purchase, in the aggregate, 14,864,883 shares of our common stock, at an exercise price of \$1.36 per share. The principal of each note will mature and be payable in nine quarterly installments of approximately \$3,890,000 commencing on March 1, 2008. Any outstanding notes must be repaid in cash or converted by March 1, 2010. Commencing on June 1, 2005, the notes will bear interest at a rate of 5.5% per annum and is payable quarterly commencing on March 1, 2008. The holders of the notes may convert the notes into our common stock at a conversion price of \$1.295 per share as adjusted in accordance with certain adjustments for stock splits, dividends and the like at any time prior to the close of business on March 1, 2010. The notes are convertible into, in the aggregate, 27,027,027 shares of our common stock. The warrants are immediately exercisable for 14,864,883 shares of our common stock at an exercise price of \$1.36 per share. The warrants will expire on March 15, 2010. The holders of the notes have the right to require us to repurchase the notes with cash payments up on the occurrence of specified "events of default" and "repurchase events." The investors also have the right to participate in future financings undertaken by us prior to March 16, 2005, subject to certain exceptions. In connection with issuance of the notes and warrants, we entered into registration rights agreements with the

investors pursuant to which we agreed to file a Registration Statement under the Securities Act of 1933, registering for resale the shares of common stock issuable upon the conversion of the notes or exercise of the warrants.

With this additional funding the company believes it has sufficient capital resources to fund our operations through the next twelve months.

Our business strategy contemplates raising additional capital through equity sales. We also plan to enter into agreements with corporate partners in order to fund research and development and to provide milestone payments, license fees and equity investments to fund our operations.

### **Off-Balance Sheet Arrangements**

We do not have any off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on our financial condition, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources that we believe is material to investors.

### **Contractual Obligations**

We are obligated to make future payments under various contracts as set forth below:

(in thousands)			
	Less than		
Total	1 year	1-4 years	
2,472	1,153	1,319	
\$2,472	\$ 1,153	\$1,319	
	2,472	Less than  Total 1 year  2,472 1,153	

Payments due by period

### **Critical Accounting Policies**

Preparation of financial statements requires us to make estimates and assumptions affecting the reported amounts of assets, liabilities, revenues and expenses and the disclosures of contingent assets and liabilities. We use our historical experience and other relevant factors when developing our estimates and assumptions. We continually evaluate these estimates and assumptions. The accounting policies discussed below are those we consider critical to an understanding of our consolidated financial statements because their application places the most significant demands on our judgment. Our financial results might have been different if different assumptions had been used or other conditions had prevailed. For additional accounting policies, see Note 1 to our consolidated financial statements – "Description of the Business and Summary of Significant Accounting Policies"

### Research and Development

Research and development costs are expensed as incurred. Research and development expenses consist primarily of salaries and related expenses, cost to develop and manufacture products and amounts paid to contract research organizations, hospitals and laboratories for the provision of services and materials for drug development and clinical trials.

### Stock-Based Compensation

We recognize expense for stock-based compensation in accordance with the provisions of Accounting Principles Board Opinion No. 25, Accounting for Stock Issued to Employees, and related interpretations. Accordingly, compensation cost is recognized for the excess, if any, of the estimated fair value of the stock at the grant date over the exercise price. Disclosures regarding alternative fair value measurement and recognition methods prescribed by Financial Accounting Standards Board ("FASB") Statement No. 123, Accounting for Stock-Based Compensation, as amended by FASB Statement No. 148, Accounting for Stock-Based Compensation – Transition and Disclosure, are presented in Notes 1 and 2. The fair value for these awards was estimated at the date of grant using the Black-Scholes pricing method assuming a weighted average volatility, a risk-free interest rate, no dividends, and a weighted-average expected life of the option.

Stock options granted to non-employees are accounted for in accordance with the Emerging Issues Task Force (EITF) 96-18, *Accounting for Equity Instruments that are issued to Other than Employees for Acquiring, or in Conjunction with Selling Goods or Services*. Accordingly, the estimated fair value of the equity instrument is recorded on the earlier of the performance commitment date or the date the services required are completed.

### ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We invest excess cash in investment grade, interest-bearing securities and, at December 31, 2004, had \$9.2 million invested in money market instruments. Such investments are subject to interest rate and credit risk. Our policy of investing in highly rated securities whose maturities at December 31, 2004, are all less than 3-months minimizes such risks. In addition, while a hypothetical 1.0% per annum decrease in market interest rates would reduce interest income in 2005, it would not result in a loss of the principal and the decline in interest income would be deemed immaterial.

### ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by Item 8 is set forth on pages F-1 to F-13.

### ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

### ITEM 9A. CONTROLS AND PROCEDURES

### Disclosure Controls and Procedures

Based on their evaluation, as of December 31, 2004, Insmed Incorporated's Chief Executive Officer and Chief Financial Officer have concluded that Insmed Incorporated's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended) are effective.

### Management's Report on Internal Control Over Financial Reporting

The management of Insmed Incorporated is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934, as amended). Insmed Incorporated's internal control over financial reporting was designed to provide reasonable assurance to Insmed Incorporated's management and board of directors regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

Insmed Incorporated's management assessed the effectiveness of Insmed Incorporated's internal control over financial reporting as of December 31, 2004 based on the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control — Integrated Framework*. Management's assessment included an evaluation of the design of Insmed Incorporated's internal control over financial reporting and testing of the operational effectiveness of Insmed Incorporated's internal control over financial reporting. Based on this assessment, Insmed Incorporated's management concluded that, as of December 31, 2004, Insmed Incorporated's internal control over financial reporting was effective.

Ernst & Young LLP, an independent registered public accounting firm, has issued an audit report on management's assessment of Insmed Incorporated's internal control over financial reporting. The report of Ernst & Young LLP is contained in Item 8 of this Annual Report on Form 10-K.

There have been no changes in Insmed Incorporated's internal control over financial reporting that occurred during the three months ended December 31, 2004 that have materially affected, or are reasonably likely to materially affect, such internal control over financial reporting.

### ITEM 9B. OTHER INFORMATION

None.

### **PART III**

#### ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

The information presented under the captions "Nominees," "Directors Whose Terms Expire at the 2006 Annual Meeting (Class III Directors)," "Directors Whose Terms Expire at the 2007 Annual Meeting (Class I Directors)," "Executive Officers (other than those who are also Directors." "Section 16(a) Beneficial Ownership Reporting Compliance" and "Meetings of the Board and its Committees – Audit Committee" of the Company's definitive Proxy Statement for the 2005 Annual Meeting of Shareholders (the "2005 Proxy Statement") is incorporated herein by reference. Such 2005 Proxy Statement will be filed with the Securities and Exchange Commission in April 2005.

We have adopted a Code of Business Conduct and Ethics that applies to all of our directors, officers and employees (including our President and Chief Executive Officer and our Treasurer and Controller) and have posted the Code of Business Conduct and Ethics on our website. We intend to satisfy the disclosure requirement under Item 10 of Form 8-K relating to amendments to or waivers from any provision of our Code of Business Conduct and Ethics applicable to our President and Chief Executive Officer and our Treasurer and Controller by posting this information on our website. Our Internet website address is <a href="www.insmed.com">www.insmed.com</a>. The information on our website is not, and shall not be deemed to be, part of this report or incorporated into any other filings we make with the Securities and Exchange Commission.

### ITEM 11. EXECUTIVE COMPENSATION

The information presented under the captions "Executive Officer Compensation" and "Director Compensation" of the 2005 Proxy Statement is incorporated herein by reference.

### ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The information presented under the captions "Stock Ownership" and "Equity Compensation Plan Information" of the 2005 Proxy Statement is incorporated herein by reference.

### ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information presented under the caption "Certain Relationships and Related Transactions" of the 2005 Proxy Statement is incorporated herein by reference.

### ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information presented under the captions "Fees Paid to Ernst & Young LLP" and "Audit Committee Pre-Approval Policy" of the Audit Committee Report included in the 2005 Proxy Statement is incorporated herein by reference.

#### PART IV

### ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES, AND REPORTS ON FORM 8-K

- (a) Documents filed as part of this report.
  - **1. FINANCIAL STATEMENTS.** The following consolidated financial statements of the Company are set forth herein, beginning on page F-1:
    - (i) Report of Ernst & Young LLP, Independent Registered Public Accounting Firm.
    - (ii) Consolidated Balance Sheets.

- (iii) Consolidated Statements of Operations.
- (iv) Consolidated Statements of Stockholders' Equity.
- (v) Consolidated Statements of Cash Flows.
- (vi) Notes to Consolidated Financial Statements.

### 2. FINANCIAL STATEMENT SCHEDULES.

None required.

### 3. EXHIBITS.

The exhibits that are required to be filed or incorporated by reference herein are listed in the Exhibit Index. Exhibit 10.17, 10.19 and 10.20 constitute management contracts or compensatory plans or arrangements required to be filed as exhibits hereto.

### (b) Reports on Form 8-K.

A report on Form 8-K (Items 1.01, 3.02, 8.01 and 9.01), dated November 5, 2004, was furnished to report, among other things, that the Insmed Incorporated issued a press release announcing its financial position, result of operations and cash flows for the three-month and nine-month periods ended September 30, 2004 (not incorporated by reference).

A report on Form 8-K, dated November 8, 2004 (Item 2.02), was furnished to report that Insmed Incorporated issued a press release announcing that it had raised approximately \$8.7 million in gross proceeds from a private offering of its common stock.

A report on Form 8-K, dated December 21, 2004 (Item 8.01 and 9.01), was furnished to report that Insmed Incorporated issued a press release in response to the commencement of a lawsuit by Tercica Inc. against the Company and the delivery of a cease and desist letter sent by Tercica to the Company.

A report on Form 8-K, dated December 30, 2004 (Item 8.01 and 9.01), was furnished to report that Insmed Incorporated issued a press release in response to a lawsuit filed by Tercica Inc. filed in the United States District Court for the Northern District of California against the Company.

### **SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Richmond, Commonwealth of Virginia, on the 16 th day of March, 2005.

I NSMED I NCORPORATED a Virginia corporation (Registrant)

By: /s/ G EOFFREY A LLAN
Geoffrey Allan, Ph.D.

Chairman of the Board, President and Chief Executive Officer (Principal Executive Officer)

Title

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities indicated on the 16 th day of March, 2005.

Cianatura

Signature	Title
/s/ G eoffrey A llan	Chairman of the Board, President and Chief Executive Officer (Principal Executive Officer)
Geoffrey Allan, Ph.D.	,
/s/ K EVIN P. T ULLY	Treasurer and Controller (Principal Financial and Accounting Officer)
Kevin P. Tully C.G.A.	Officer)
/s/ K enneth G. C ondon	Director
Kenneth G. Condon	
/s/ G raham K. C rooke	Director
Graham K. Crooke, MB.BS	
/s/ S TEINAR J. E NGELSEN	Director
Steinar J. Engelsen, M.D.	
/s/ $M$ elvin $S$ haroky	Director
Melvin Sharoky, M.D.	
/s/ R ANDALL W. W HITCOMB	Director
Randall W. Whitcomb, M.D.	

### Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders Insmed Incorporated

We have audited the accompanying consolidated balance sheets of Insmed Incorporated (the "Company") as of December 31, 2004 and 2003, and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2004. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Insmed Incorporated at December 31, 2004 and 2003, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2004, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the effectiveness of Insmed Incorporated's internal control over financial reporting as of December 31, 2004, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 15, 2005 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

McLean, Virginia March 15, 2005

### Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders Insmed Incorporated

We have audited management's assessment, included in the accompanying "Management's Report on Internal Control over Financial Reporting", that Insmed Incorporated maintained effective internal control over financial reporting as of December 31, 2004, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (the COSO criteria). Insmed Inc.'s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting. Our responsibility is to express an opinion on management's assessment and an opinion on the effectiveness of the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, evaluating management's assessment, testing and evaluating the design and operating effectiveness of internal control, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, management's assessment that Insmed Incorporated maintained effective internal control over financial reporting as of December 31, 2004, is fairly stated, in all material respects, based on the COSO criteria. Also, in our opinion, Insmed Incorporated maintained, in all material respects, effective internal control over financial reporting as of December 31, 2004, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Insmed Incorporated as of December 31, 2004 and 2003, and the related consolidated statements of operations, stockholders' equity and cash flows for each of the three years in the period ended December 31, 2004, and our report dated March 15, 2005, expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

McLean, Virginia March 15, 2005

### INSMED INCORPORATED

## CONSOLIDATED BALANCE SHEETS (in thousands)

	December 31, 2004			
Assets				
Current assets:				
Cash and cash equivalents	\$	9,222	\$	29,526
Restricted cash Other current assets		285 174		225
Other current assets	_	1/4	_	223
Total current assets		9,681		29,751
Long-term assets:		,		,
Restricted cash—long-term portion		3,303		_
Property and equipment, net		27		61
Total assets	\$	13,011	\$	29,812
Total assets	φ	13,011	Þ	29,812
Liabilities and stockholders' equity				
Current liabilities:				
Accounts payable	\$	2,621	\$	660
Accrued project costs		884		1,747
Payroll liabilities Restructuring reserve		1,183 360		205 334
Restructuring reserve		300	_	334
Total current liabilities		5,048		2,946
Long-term liabilities:		,		
Asset retirement obligation		443		_
Restructuring reserve—long-term portion		285		646
Total liabilities		5,776		3,592
Total habilities		3,770	_	3,392
Stockholders' equity:				
Common stock, \$.01 par value; authorized shares 500,000,000; issued and outstanding shares				
44,893,496 in 2004 and 38,394,994 in 2003		449		384
Additional capital		220,515		212,362
Accumulated deficit	(	213,729)		186,526)
Net stockholders' equity		7,235		26,220
Total liabilities and stockholders' equity	\$	13,011	\$	29,812
Toma intermited and described by equity	Ψ	15,011	Ψ	27,012

### INSMED INCORPORATED

### CONSOLIDATED STATEMENTS OF OPERATIONS

(in thousands, except per share data)

INSMED INCORPORATED
Condensed Consolidated Statements of Operations (in thousands, except per share data)

> Twelve Months Ended December 31,

	2004	2003	2002
Revenues	\$ 137	\$ 150	\$ 1,955
Operating expenses: Research and development	23,320	7,140	18,077
General and administrative	4,242	3,596	2,984
Operational restructuring charge			2,533
Goodwill impairment charge			15,385
Total operating expenses	27,562	10,736	38,979
Operating loss	(27,425)	(10,586)	(37,024)
Interest income Net loss	222 \$(27,203)	288 \$(10,298)	607 \$(36,417)
Basic and diluted net loss per share	\$ (0.69)	\$ (0.29)	\$ (1.10)
Shares used in computing basic and diluted net loss per share	39,160	35,600	33,066

See accompanying notes.

### INSMED INCORPORATED

# CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY YEARS ENDED DECEMBER 31, 2004, 2003, AND 2001 (in thousands, except share amounts)

		mmon Stock	Additional Capital	Accumulated  Deficit	Comp	mulated Other rehensive ne (Loss)	Total
Balance at December 31, 2001	\$	329	\$199,177	\$ (139,811)	\$	_	\$ 59,695
Issuance of 198,282 shares of common stock upon exercise of stock options		2	125	_		_	127
Issuance of 56,289 shares of common stock from Employee Stock Purchase Plan		1	42	_		_	43
Comprehensive earnings:				(26.417)			(26.417)
Net loss Comprehensive loss	_	_		(36,417)			(36,417) (36,417)
Balance at December 31, 2002 Issuance of 53,171 shares of common stock upon exercise of		332	199,344	(176,228)		_	23,448
stock options Issuance of 36,439 shares of common stock from Employee Stock Purchase Plan		1	53	_		_	54
		_	27	_		_	27
Issuance of 5,146,846 shares of common stock and 1,544,046 warrants for cash, net of offering costs of \$972,593		51	12,872	_		_	12,923
Recognition of stock compensation expense for consultants Stock re-purchase from Taisho		1 (1)	118 (52)	_		_	119 (53)
Comprehensive earnings: Net loss				(10,298)			(10,298)
Comprehensive loss		<u> </u>		(10,298)			(10,298)
Balance at December 31, 2003		384	212,362	(186,526)		_	26,220
Issuance of 6,091 shares of common stock upon exercise of stock options		_	3	_		_	3
Issuance of 36,860 shares of common stock from Employee Stock Purchase Plan			69	_		_	69
Issuance of 6,455,551 shares of common stock and 3,227,775 warrants for cash, net of offering costs of \$602,472		65	8,048	_		_	8,113
Recognition of stock compensation expense for consultants Comprehensive earnings:			33	_		_	33
Net loss		_	_	(27,203)		_	(27,203)
Comprehensive loss		_					(27,203)
Balance at December 31, 2004	\$	449	\$220,515	\$ (213,729)	\$		\$ 7,235

See accompanying notes.

# INSMED INCORPORATED CONSOLIDATED STATEMENTS OF CASH FLOWS (in thousands)

	Twelve Months Ended December 31,	
	2004	2003
Operating activities		
Net loss	\$(27,203)	\$(10,298)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	34	96
Stock issued for services	33	119
Changes in operating assets and liabilities:		
Due from Taisho Pharmaceutical Co., Ltd.	_	199
Other assets	51	390
Accounts payable	1,961	(281)
Accrued project costs	(863)	(536)
Payroll liabilities	978	(153)
Restructuring reserve	(335)	(298)
Asset retirement obligation	443	
Net cash used in operating activities	(24,901)	(10,762)
Financing activities		
Proceeds from issuance of common stock	8,185	12,951
Cash restricted to support letters of credit	(3,588)	_
Net cash provided by financing activities	4,597	12,951
(Decrease) Increase in cash and cash equivalents	(20,304)	2,189
Cash and cash equivalents at beginning of period	29,526	27,337
Cash and cash equivalents at end of period	\$ 9,222	\$ 29,526

See accompanying notes.

## INSMED INCORPORATED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

### 1. Description of the Business and Summary of Significant Accounting Policies

Insmed Incorporated (the "Company") discovers and develops pharmaceutical products for the treatment of metabolic and endocrine diseases. Abnormalities in the Growth Hormone (GH)/ Insulin-like Growth Factor I (IGF-I) axis often manifests in multiple endocrine and metabolic conditions, such as growth disorders. Additionally, other conditions such as diabetes are exacerbated by imbalances in the GH/ IGF-I axis. Insmed's cancer development program focuses on rhIGFBP-3, the primary binding protein of IGF-I and INSM-18. Insmed's rhIGFBP-3 technology may curtail abnormal cell growth by introducing an excess of rhIGFBP-3 to bind and regulate free IGF-I. Since rhIGFBP-3 interrupts the cell growth signal early in the sequence, rhIGFBP-3 is considered an upstream growth factor inhibitor. INSM-18 binds to and inhibits one of the key enzymes involved in the downstream signaling pathway for IGF-I.

Insmed has three lead drug candidates: rhIGF-I/rhIGFBP-3, which is expected to began Phase III Clinical testing for GHIS in 2005, rhIGFBP-3 is currently undergoing Phase I and Pre-Clinical trials in the oncology area and INSM-18 will enter clinical trials in 2005. The Company is actively developing rhIGF-I/rhIGFBP-3 to treat GHIS and diabetes, and are concurrently continuing Phase I and pre-clinical studies on rhIGFBP-3 in the cancer indication as an anti-tumor agent.

### Principles of Consolidation

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries, Insmed Therapeutic Proteins, Insmed Pharmaceuticals, Inc. and Celtrix Pharmaceuticals, Inc. ("Celtrix"). All significant intercompany balances and transactions have been eliminated.

### Cash and Cash Equivalents

The Company considers investments with maturities of three months or less when purchased to be cash equivalents.

On April 14, 2004 the Company announced that it had acquired a lease to operate a recombinant protein manufacturing facility located in Boulder, Colorado. The Company intends to use the facility for the commercial manufacture of its Phase III development product, rhIGF-I/rhIGFBP-3. Insmed provided a Letter of Credit to the landlord of the Boulder facility in the amount of \$1.6 million for prepayment of the outstanding lease term of 4 years and a Letter of Credit to Baxter Healthcare Corporation for \$2.0 million to cover facility restoration expenses on termination of the lease. These amounts are supported by segregated cash and cash equivalents and classified as restricted cash on the balance sheet.

### Property and Equipment

Depreciation is provided using the straight-line method over periods ranging from three to seven years. Property and equipment is stated at cost and consists of the following:

December 31,

	2004	2003
	(in thou	ısands)
Furniture and office equipment	\$ 511	\$ 511
A 1.11 2.2	511	511
Accumulated depreciation	(484)	(450)
Property and equipment, net	\$ 27	\$ 61

# INSMED INCORPORATED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

### Fair Value of Financial Instruments

The Company considers the recorded cost of its financial assets and liabilities, which consist primarily of cash and cash equivalents, accounts payable, and accrued expenses to approximate the fair value of the respective assets and liabilities at December 31, 2004 and 2003 due to the short-term maturities of these instruments.

### Stock-Based Compensation

The Company recognizes expense for stock-based compensation in accordance with the provisions of Accounting Principles Board Opinion No. 25, *Accounting for Stock Issued to Employees*, and related interpretations. Accordingly, compensation cost is recognized for the excess, if any, of the estimated fair value of the stock at the grant date over the exercise price. Disclosures regarding alternative fair value measurement and recognition methods prescribed by Financial Accounting Standards Board ("FASB") Statement No. 123, *Accounting for Stock-Based Compensation*, are presented in Note 3. Stock options granted to non-employees are accounted for in accordance with EITF 96-18, *Accounting for Equity Instruments that are issued to Other than Employees for Acquiring, or in Conjunction with Selling Goods or Services*. Accordingly, the estimated fair value of the equity instrument is recorded on the earlier of the performance commitment date or the date the services required are completed.

In accordance with FASB Statement No. 148, *Accounting for Stock-Based Compensation—Transition and Disclosure* ("SFAS 148"), the effect on net loss and net loss per share if the Company had applied the fair value recognition provisions of SFAS No. 123 to stock-based employee compensation is as follows:

### Stock Compensation Expense (in thousands, except per share data)

	Year Ended December 31,			
	2004	2003	2002	
Net Loss	\$(27,203)	\$(10,298)	\$(36,417)	
Net Loss Per Share (Basic and Diluted)	\$ (0.69)	\$ (0.29)	\$ (1.10)	
Stock based employee compensation cost (under APB 25) Pro-forma Fair value stock compensation expense	(1,851)	(2,001)	(2,731)	
Pro-Forma Net Income	(29,054)	(13,131)	(39,148)	
Pro-Forma Net Loss Per Share (Basic and Diluted)	\$ (0.74)	\$ (0.37)	\$ (1.18)	

The fair value for these awards was estimated at the date of grant using the Black-Scholes pricing method assuming a weighted average volatility of 89% in 2004, 127% in 2003, and 106% in 2002, a risk-free interest rate of 3.83% in 2004, 3.0% in 2003, and 3.0% in 2002, no dividends, and a weighted-average expected life of the option of 5 years in 2004, 4.93 years in 2003 and 5.7 years in 2002. Compensation expense for fixed awards with pro-rata vesting is recognized under the straight-line method.

### Revenue Recognition

Revenue from license agreements is generally recognized over the term of the agreement, or in certain circumstances, when milestones are met. Amounts received for which there is a future performance obligation, are deferred and recognized on a straight-line basis over the life of the agreement.

# INSMED INCORPORATED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

### Research and Development

Research and development costs are expensed as incurred. Research and development expenses consist primarily of salaries and related expenses, cost to develop and manufacture products and amounts paid to contract research organizations, hospitals and laboratories for the provision of services and materials for drug development and clinical trials.

#### Income Taxes

Income taxes are accounted for using the liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

#### Net Loss Per Share

Basic net loss per share is computed based upon the weighted average number of common shares outstanding during the year. The Company's diluted net loss per share is the same as its basic net loss per share because all stock options, warrants, and other potentially dilutive securities are antidilutive and, therefore, excluded from the calculation of diluted net loss per share.

### Segment Information

The Company currently operates in one business segment, which is the development and commercialization of pharmaceutical products for the treatment of metabolic and endocrine diseases associated with insulin resistance. The Company is managed and operated as one business. A single management team that reports to the Chief Executive Officer comprehensively manages the entire business. The Company does not operate separate lines of business with respect to its products or product candidates. Accordingly, the Company does not have separately reportable segments as defined by FASB Statement No. 131, *Disclosure about Segments of an Enterprise and Related Information*.

### Use of Estimates

The preparation of the consolidated financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Actual results could differ from those estimates.

### Recent Accounting Pronouncements

On December 16, 2004, the Financial Accounting Standards Board (FASB) issued a revision of Statement of Financial Accounting Standards No. 123 (revised 2004), Share-Based Payment (Statement 123(R)), which is a revision of FASB Statement No. 123, Accounting for Stock-Based Compensation. Statement 123(R) supersedes APB Opinion No. 25, Accounting for Stock Issued to Employees, and amends FASB Statement No. 95, Statement of Cash Flows. Generally, the approach in Statement 123(R) is similar to the approach described in Statement 123. Statement 123(R) will be adopted by Insmed Incorporated on July 1, 2005.

### INSMED INCORPORATED

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

As permitted by Statement 123, Insmed Incorporated currently accounts for share-based payments to employees using Opinion 25's intrinsic value method and, as such, generally recognizes no compensation cost for employee stock options. However, Statement 123(R) requires all share-based payments to employees, including grants of employee stock options, to be recognized in the income statement based on their fair values over the expected period of service.

The full impact of adoption of Statement 123(R) cannot be predicted at this time because it will depend on levels of share-based payments granted in the future. However, had Insmed Incorporated adopted Statement 123(R) in prior periods, the impact of that standard would have approximated the impact of Statement 123 as described in the disclosure of pro forma net income and earnings per share in Note 1 to the consolidated financial statements. Statement 123(R) also requires the benefits of tax deductions in excess of recognized compensation cost to be reported as a financing cash flow, rather than as an operating cash flow as required under current literature. This requirement will reduce net operating cash flows and increase net financing cash flows in periods after adoption. Insmed Incorporated is unable to estimate what those amounts will be in the future because they depend on, among other things, when employees exercise stock options.

### Operational Restructuring

On September 10, 2002, the Company announced that it would immediately discontinue the internal development of one of its investigational drug candidates, INS-1, based on the results of the then recently completed Phase II clinical trials. At December 31, 2004, approximately \$0.4 million of the related restructuring costs remain accrued in the current portion of the restructuring reserve and \$0.3 million in the long-term portions of the restructuring reserve. These balances are expected to closely approximate the remaining costs to be incurred by the Company for lease obligations. Lease termination costs are anticipated to extend through 2006.

### 2. Stockholders' Equity

### Common Stock

On November 19, 2004 Insmed Incorporated concluded a private placement of 6,455,551 shares of common stock to a group of institutional investors at a price of \$1.35 per share, raising a total of approximately \$8.7 million received in gross proceeds. The placement agent in the transaction received approximately \$572,000 in fees and expenses (including fees paid to the placement agent's attorneys) resulting in net proceeds to the Company of approximately \$8.0 million. The Company also issued warrants to purchase an additional 3,227,775 shares of common stock with an exercise price of \$2.00 per share.

Periodically, the Company has issued shares of common stock in exchange for services provided by shareholders and others. These issuances have been recorded at their estimated fair value at the time of the respective transactions and corresponding amounts have been reflected as expense in the accompanying consolidated statements of operations.

## INSMED INCORPORATED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

Stock Warrants and Options

The Company issues stock options to attract and retain executive officers, key employees, non-employee directors and other non-employee advisors and service providers. The maximum number of shares issuable under the plan is 6,250,000. Options may be granted at the discretion of the board of directors, compensation committee or a delegate. The weighted-average fair value of options granted during 2004, 2003, and 2002 was \$2.12, \$1.72, and \$1.36 respectively. A summary of stock option activity is as follows:

		Weighted		Weighted		Weighted
Description	2004	Average Exercise Price	2003	Average Exercise Price	2002	Average Exercise Price
Options outstanding at January 1	3,900,516	\$ 4.06	3,250,227	\$ 4.49	3,143,561	\$ 6.11
Granted	976,000	2.12	1,349,000	1.72	1,984,750	1.98
Exercised	(6,091)	0.50	(53,171)	1.01	(198,282)	0.64
Cancelled	(6,000)	2.20	(645,540)	1.59	(1,679,802)	5.01
Options outstanding at December 31	4,864,425	\$ 3.68	3,900,516	\$ 4.06	3,250,227	\$ 4.49

The following table summarizes options outstanding at December 31, 2004:

		<b>Options Outstanding</b>			Exercisable
Range of Exercise Prices	Number Outstanding	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price	Number Exercisable	Weighted Average Exercise Price
\$ 0.172 - \$ 1.00	690,811	5.32	0.74	352,365	0.72
\$ 0.172 - \$ 1.00 \$ 1.06 - \$ 2.92	1,985,433	6.65	1.98	413,003	1.99
\$ 3.00 - \$ 8.25	1,737,793	4.04	4.35	900.787	4.81
\$ 8.30 - \$ 32.12	450,389	2.61	13.09	450,389	13.09
	4,864,425	5.15	3.70	2,116,544	5.34

A total of 11,463,585 shares of common stock were reserved at December 31, 2004 in connection with stock options, stock warrants, and the employee stock purchase plan.

### 3. Income Taxes

The deferred tax assets of approximately \$104.2 million and \$93.8 million at December 31, 2004 and 2003, respectively, arise primarily due to net operating loss carryforwards for income tax purposes. Due to the Company's anticipated future losses, these amounts have been entirely offset by a valuation allowance.

At December 31, 2004 and 2003, the Company had net operating loss carryforwards for income tax purposes of approximately \$261.0 million and \$232.8 million, respectively, expiring in various years beginning in 2005 through 2024. Utilization of these carryforwards will be significantly limited due to changes in the ownership of the Company's common stock.

# INSMED INCORPORATED NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

Deferred tax assets (liabilities) consist of the following at December 31:

	2004	2003
	(in thou	sands)
Deferred tax assets		
General Business Credits	4,224	4,224
Other	1,106	1,174
NOL Carryforwards	99,064	88,385
Total deferred tax assets	104,394	93,783
Deferred tax liabilities		
Other	(224)	(2)
Total deferred tax liabilities	(224)	(2)
Tax deferred asset/(liability)	104,170	93,781
Valuation allowance	(104,170)	(93,781)
Net deferred tax asset/(liability)		

The differences between the U.S. federal statutory tax rate and the Company's effective tax rate are as follows:

	2004	2003
	_	
Statutory federal tax rate	34%	34%
State income taxes net of federal benefit	4	4
Research and development credit	_	(45)
Other	0	0
Change in valuation allowance	(38)	6
Total Expense	0%	0%

### 4. Leases

The Company leases office and laboratory space in Glen Allen, Virginia under an operating lease agreement expiring in October 2006. The lease provides for monthly rent of approximately \$30,500 for the office space and \$28,000 for the lab space with a 1.75% escalation per year. With the discontinuation of INS-1 and subsequent abandonment of the lab space, the company recognized \$1.2 million of restructuring charge relating to this lease during the third quarter of 2003. The Company also leases a manufacturing facility and warehouse in Boulder, Colorado under an operating lease agreement expiring in February 2008. The lease provides for monthly rent of approximately \$30,000 with a 3% escalation per year. The Company also leases a vehicle and office equipment. Future minimum payments on all these leases at December 31, 2004 approximate \$1,153,000, \$861,000, \$365,000, \$79,700 and \$12,500 in 2005, 2006, 2007, 2008, and 2009 respectively. Rent expense for all operating leases approximated \$869,000 in 2004, \$535,000 in 2003, and \$702,000 in 2002.

### 5. Employee Benefit Plans

In 2000, the Company adopted a stock purchase plan whereby eligible employees may purchase common stock. Purchases may be made through payroll deductions subject to annual limitations. The purchase price per share under the plan is the lesser of 85% of the fair market value of a share of common stock at the beginning of each offering period or 85% of the fair market value on the date the purchase is made. As of December 31, 2004 there were 250,000 shares authorized for issuance under the plan and 147,991 have been issued.

#### INSMED INCORPORATED

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

The Company also maintains a tax-qualified employee savings and retirement plan, (the "401(k) plan") for eligible employees. Participating employees may defer up to the lesser of 25% of W-2 compensation or the maximum amount permitted by the Internal Revenue Code, as amended. The 401(k) plan permits the Company to make matching contributions on behalf of all participants who have elected to make deferrals. To date, the Company has not made any contributions to the plan.

### 6. License and Collaborative Agreements

### Tzamal Pharmaceutical

In October 2004, we entered into a letter of intent promotion agreement with Tzamal Pharma, a subsidiary of Fox Pharma headquartered in Jerusalem Israel. The agreement calls for Tzamal to be our exclusive distributor in Israel and Palestinian autonomous territories, West Bank and Gaza. The agreement has a term of one year and on the anniversary of the agreement it may be renewed via joint agreement between Insmed and Tzamal for another twelve months.

### Fujisawa Pharmaceutical Co., Ltd.

In January 2004, Insmed was granted a non-exclusive license to patent rights pertaining to the use of IGF-I therapy for the treatment of extreme or severe insulin resistant diabetes from Fujisawa Pharmaceutical Co., Ltd. Under the terms of the agreement, Insmed obtained worldwide rights in territories (excluding Japan) where a valid patent claim exists, including the United States and Europe. We have made a commitment to use reasonable commercial efforts to make rhIGF-I/rhIGFBP-3 available on a named patient basis to patients with extreme insulin resistance.

### Pharmacia

In August 2002 we entered into an agreement with Pharmacia that grants us an exclusive license to Pharmacia's portfolio of regulatory filings pertaining to rhIGF-I. In consideration for the exclusive license we have agreed to make therapy available to the 17 Growth Hormone Insensitivity Syndrome (GHIS) subjects that were previously being treated with rhIGF-I supplied by Pharmacia.

### Avecia Limited

In July 2002, we entered into an agreement with Avecia Limited, Europe's largest privately held specialty chemical company, for the process development and manufacture of rhIGF-I/rhIGFBP-3. In consideration for this process development and manufacturing agreement, we have paid for process development and manufacturing costs associated with production of rhIGF-I/rhIGFBP-3.

### Taisho Pharmaceutical Co., Ltd.

In July 2000, the Company entered into an agreement with Taisho Pharmaceutical Co., Ltd. ("Taisho") for the development and commercialization of INS-1 in Japan and certain other Asian countries. The collaboration included payments upon achievement of certain development and regulatory milestones as well as the receipt of royalties on INS-1 sales in Japan and the other Asian countries covered by the agreement. Taisho also funded 20% of the development costs for INS-1 in North America and Europe. Development costs reimbursable by Taisho approximated \$1.6 million in 2002. The agreement also provided for an initial license fee of \$2.0 million, which was previously being amortized into revenue, on a straight-line basis, over the estimated life of the corresponding patents. In addition, Taisho purchased 93,413 shares of the Company's common stock in 2000.

In September 2002, Taisho indicated its intention to discontinue its involvement in any future development in INS-1, and terminated the joint development agreement in accordance with the terms of the agreement. As a

### INSMED INCORPORATED

### NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

result of this termination the Company recognized the remaining amount of the deferred license fee of \$1.7 million in the 2002. In April of 2003 the Company repurchased the 93,413 shares of Insmed Incorporated stock that was being held by Taisho.

#### **UVA Patent Foundation**

In 1988, the Company entered into a license agreement with The University of Virginia Alumni Patents Foundation (the "Foundation"). The agreement, as amended, provides the Company with an exclusive, worldwide license to develop and sell products related to certain patent rights for insulin resistance and associated disorders. The Company discontinued the development of products covered under this license and terminated this agreement on June 29, 2004.

### 7. Legal Proceedings

On December 20, 2004, Tercica, Inc. filed a complaint against Avecia Limited and Insmed Incorporated in the United Kingdom at the High Court of Justice, Chancery Division, Patents Court alleging infringement of EP patent No. 571,417 ("the 417 patent"). The '417 patent has claims directed to particular uses of a combination of IGFBP-3 and IGF-I. In the complaint, Tercica, Inc. asked the court for an injunction to restrain allegedly infringing activity, for a declaration that the '417 patent is valid and infringed, for an order requiring the delivery or destruction of allegedly infringing articles and materials and for an inquiry into possible economic damages.

On February 11, 2005, Avecia and Insmed Incorporated filed a Defense and Counterclaim to Tercica Inc.'s suit. In its Defense, Avecia and Insmed Incorporated asserted, among other things, that the '417 patent is invalid and that the Claimant failed to properly register its license. In its Counterclaim, Avecia and Insmed also asked the court to revoke the '417 patent.

Insmed Incorporated cannot predict with certainty the outcome of this proceeding. We note, however, that an adverse ruling could impact our ability to make, use or sell our products.

Tercica, Inc. and Genentech, Inc. filed, on December 23, 2004, a complaint against Insmed Incorporated in the United States District Court for the Northern District of California alleging infringement of U.S. patent Nos. 5,187,151 and 6,331,414. These patents are directed to certain methods of using IGF-I/IGFBP-3 and methods of producing human IGF-I, respectively. On February 16, 2005, Tercica, Inc. and Genentech, Inc. filed an Amended Complaint, adding allegations of infringement of U.S. patent No. 5,258,287 ("the '287 patent"). The claims of the '287 patent are directed to DNA encoding BP53 (i.e. IGFBP-3) and recombinant constructs, transformed host cells and methods for using same.

On February 18, 2005, Insmed Incorporated filed a motion to dismiss the Amended Complaint. In the motion, Insmed Incorporated asserted that all alleged activities fall within the statutory safe-harbor provided by 35 U.S.C. § 271(e)(1), commonly called the clinical trial exemption. This exemption prevents patent infringement actions from being filed against activities reasonably related to obtaining FDA approval of a product, such as when the product is still being tested in clinical trials. Insmed Incorporated further asserted, among other things, that Plaintiffs have failed to state a claim for the requested relief, have not sued the proper party, have failed to name all the proper plaintiffs and have failed to establish the existence of a sufficiently real and substantial controversy between the parties. Insmed requested immediate dismissal or Summary Judgment against the plaintiff's allegation on these grounds.

Insmed Incorporated cannot predict with certainty the outcome of this proceeding, however, an adverse ruling could impact our ability to make, use or sell our products.

### 8. Quarterly Financial Data (Unaudited)

	Fir	First		Second		Third		Fourth	
	2004	2003	2004	2003	2004	2003	2004	2003	
Revenues Operating Loss Net Loss	\$ 61 (4,835) (4,759)	\$ 62 (2,301) (2,209)	\$ 29 (9,060) (9,011)	\$ 34 (3,313) (3,240)	\$ 24 (7,647) (7,596)	\$ 27 (2,468) (2,398)	\$ 23 (5,883) (5,837)	\$ 27 (2,504) (2,451)	
Net Loss Per Share (Basic and Diluted)	\$ (0.12)	\$ (0.07)	\$ (0.23)	\$ (0.10)	\$ (0.20)	\$ (0.06)	\$ (0.14)	\$ (0.06)	

### 9. Subsequent Events

On March 15, 2005, we entered into several purchase agreements with a group of institutional investors, pursuant to which we issued and sold to the investors approximately \$35,000,000 aggregate principal amount of 5.5% convertible notes, which notes are convertible into our common stock, par value \$0.01 per share, as well as warrants to purchase, in the aggregate, 14,864,883 shares of our common stock, at an exercise price of \$1.36 per share. The principal of each note will mature and be payable in nine quarterly installments of approximately \$3,890,000 commencing on March 1, 2008. Any outstanding notes must be repaid in cash or converted by March 1, 2010. Commencing on June 1, 2005, the notes will bear interest at a rate of 5.5% per annum and is payable quarterly commencing on March 1, 2008. The holders of the notes may convert the notes into our common stock at a conversion price of \$1.295 per share as adjusted in accordance with certain adjustments for stock splits, dividends and the like at any time prior to the close of business on March 1, 2010. The notes are convertible into, in the aggregate, 27,027,027 shares of our common stock. The warrants are immediately exercisable for 14,864,883 shares of our common stock at an exercise price of \$1.36 per share. The warrants will expire on March 15, 2010. The holders of the notes have the right to require us to repurchase the notes with cash payments up on the occurrence of specified "events of default" and "repurchase events." The investors also have the right to participate in future financings undertaken by us prior to March 16, 2005, subject to certain exceptions. In connection with issuance of the notes and warrants, we entered into registration rights agreements with the investors pursuant to which we agreed to file a Registration Statement under the Securities Act of 1933, registering for resale the shares of common stock issuable upon the conversion of the notes or exercise of the warrants.

### **EXHIBIT INDEX**

Exhibit Number	Exhibit Title
3.1	Articles of Incorporation of Insmed Incorporated, as amended (previously filed as Annex H to the Joint Proxy Statement/Prospectus contained in Part I of Insmed Incorporated's Registration Statement on Form S-4 (Registration No. 333-30098) and incorporated herein by reference).
3.2	Amended and Restated Bylaws of Insmed Incorporated (previously filed as Annex I to the Joint Proxy Statement/Prospectus contained in Part I of Insmed Incorporated's Registration Statement on Form S-4 (Registration No. 333-30098) and incorporated herein by reference).
3.3	Form of Articles of Amendment to Insmed Incorporated's Articles of Incorporation, as amended, creating a new series of Preferred Stock designated as Series A Junior Participating Preferred Stock (previously filed as Exhibit A to the Rights Agreement, dated as of May 16, 2001, between Insmed Incorporated and First Union National Bank, as Rights Agent, filed as Exhibit 4.4 to Insmed Incorporated's Registration Statement on Form 8-A filed with the Securities and Exchange Commission on May, 17, 2001 and incorporated herein by reference).
3.4	Amendment for Reverse Split (previously filed as Exhibit 3.4 to Insmed Incorporated's Annual Report on Form 10-K for the year ended December 31, 2003 and incorporated herein by reference).
4.1	Description of Capital Stock (contained in the Articles of Incorporation filed as Exhibit 3.1).
4.2	Specimen stock certificate representing common stock, \$.01 par value per share, of the Registrant (previously filed as Exhibit 4.2 to Insmed Incorporated's Registration Statement on Form S-4 (Registration No. 333-30098) and incorporated herein by reference).
4.3	Article VI of the Articles of Incorporation of Insmed Incorporated (previously filed as Exhibit 4.1 to Insmed Incorporated's Registration Statement on Form S-4 (Registration No. 333-30098) and incorporated herein by reference).
4.4	Rights Agreement, dated as of May 16, 2001, between Insmed Incorporated and First Union National Bank, as Rights Agent (which includes as (i) Exhibit A the form of Articles of Amendment to Insmed Incorporated's Articles of Incorporation, as amended, (ii) Exhibit B the form of Rights Certificate, and (iii) Exhibit C the Summary of the Rights to Purchase Preferred Stock) (previously filed as Exhibit 4.4 to Insmed Incorporated's Registration Statement on Form 8-A filed with the Securities and Exchange Commission on May 17, 2001 and incorporated herein by reference).
4.5	Form of Rights Certificate (previously filed as Exhibit B to the Rights Agreement, dated as of May 16, 2001, between Insmed Incorporated and First Union National Bank, as Rights Agent, filed as Exhibit 4.4 to Insmed Incorporated's Registration Statement on Form 8-A filed with the Securities and Exchange Commission on May 17, 2001 and incorporated herein by reference).
4.6	Form of Stock and Warrant Purchase Agreement by and between Insmed Incorporated and each of the investors in the July 2003 private placement of common stock and warrants to purchase common stock (previously filed as Exhibit 4.6 to Insmed Incorporated's Registration Statement on Form S-3 (Registration No. 333-107308) on July 24, 2003 and incorporated herein by reference).
4.7	Form of Warrant issued by Insmed Incorporated to each of the investors in July 2003 private placement of common stock and warrants to purchase common stock (previously filed as Exhibit 4.7 to Insmed Incorporated's Registration Statement on Form S-3 (Registration No. 333-107308) on July 24, 2003 and incorporated herein by reference).
4.8	Form of Stock and Warrant Purchase Agreement by and between Insmed Incorporated and each of the investors in the November 2004 private placement of common stock and warrants to purchase common stock (previously filed as Exhibit 10.1 to Insmed Incorporated's Current Report on Form 8-K on November 10, 2004 and incorporated herein by reference).

Exhibit Number	Exhibit Title
4.9	Form of Warrant issued by Insmed Incorporated to each of the investors in November 2004 private placement of common stock and warrants to purchase common stock (previously filed as Exhibit B to the Form of Stock and Warrant Purchase Agreement by and between Insmed Incorporated and each of the investors previously filed as Exhibit 10.1 to Insmed Incorporated's Current Report on Form 8-K on November 10, 2004 and incorporated herein by reference).
10.1	Insmed Incorporated 2000 Stock Purchase Plan (previously filed as Exhibit 10.1 to Insmed Incorporated's Registration Statement on Form S-4 (Registration No. 333-30098) and incorporated herein by reference).
10.2	Insmed Incorporated 2000 Stock Incentive Plan (previously filed as Exhibit 10.2 to Insmed Incorporated's Registration Statement on Form S-4 (Registration No. 333-30098) and incorporated herein by reference).
10.3	Amended and Restated License Agreement between Insmed Pharmaceuticals, Inc. and the University of Virginia Patent Foundation (previously filed as Exhibit 10.3 to Insmed Incorporated's Registration Statement on Form S-4 (Registration No. 333-30098) and incorporated herein by reference).
10.4+	Subscription, Joint Development and Operating Agreement by and among Celtrix Pharmaceuticals, Inc., Elan Corporation, plc, Elan International Services, Ltd., and Celtrix Newco Ltd. dated as of April 21, 1999 (previously filed as Exhibit 10.8 to Insmed Incorporated's Registration Statement on Form S-4 (Registration No. 333-30098) and incorporated herein by reference).
10.5+	License Agreement by and between Celtrix Newco Ltd. and Celtrix Pharmaceuticals, Inc. dated as of April 21, 1999 (previously filed as Exhibit 10.9 to Insmed Incorporated's Registration Statement on Form S-4 (Registration No. 333-30098) and incorporated herein by reference).
10.6+	License Agreement by and between Celtrix Newco Ltd. and Elan Pharmaceutical Technologies, a division of Elan Corporation, plc, dated as of April 21, 1999 (previously filed as Exhibit 10.10 to Insmed Incorporated's Registration Statement on Form S-4 (Registration No. 333-30098) and incorporated herein by reference).
10.7	License Agreement, dated as of April 1, 1993, between Genentech, Inc. and Celtrix Pharmaceuticals, Inc. (previously filed as Exhibit 10.11 to Insmed Incorporated's Registration Statement on Form S-4 (Registration No. 333-30098) and incorporated herein by reference).
10.8	Purchase Agreement among Insmed, Inc., Insmed Pharmaceuticals, Inc. and certain investors named therein dated January 13, 2000 (previously filed as Exhibit 10.12 to Insmed Incorporated's Registration Statement on Form S-4 (Registration No. 333-3098) and incorporated herein by reference).
10.9	Form of Warrant of Insmed to be issued pursuant to Purchase Agreement among Insmed Incorporated, Insmed Pharmaceuticals, Inc. and certain investors dated January 13, 2000 (previously filed as Exhibit 10.13 to Insmed Incorporated's Registration Statement on Form S-4 (Registration No. 333-30098) and incorporated herein by reference).
10.10	Form of Registration Rights Agreement among Insmed Incorporated, Insmed Pharmaceuticals, Inc. and certain investors party to the Purchase Agreement among Insmed Incorporated, Insmed Pharmaceuticals, Inc. and certain investors dated January 13, 2000 (previously filed as Exhibit 10.14 to Insmed Incorporated's Registration Statement on Form S-4 (Registration No. 333-30098) and incorporated herein by reference).
10.11+	License Agreement, dated as of July 10, 2000, between Insmed Pharmaceuticals, Inc. and Taisho Pharmaceutical Co., Ltd. (previously filed as Exhibit 10.15 to Insmed Incorporated's Registration Statement on Form S-1 (Registration No. 333-46552) and incorporated herein by reference).

Exhibit Number	Exhibit Title
10.12	Sublease, dated March 30, 2001, between Rhodia Inc. and Insmed Incorporated (previously filed as Exhibit 10.15 to Insmed Incorporated's Quarterly Report on Form 10-Q for the quarter ended March 31, 2001 and incorporated herein by reference).
10.13	Consent to Sublease, dated as of April 12, 2001, among A & W Virginia Corporation, as Landlord, Rhodia Inc., as Tenant, and Insmed Incorporated, as Subtenant (previously filed as Exhibit 10.16 to Insmed Incorporated's Quarterly Report on Form 10-Q for the quarter ended March 31, 2001 and incorporated herein by reference).
10.14	Termination Agreement, dated as of February 3, 2003, between Insmed Pharmaceuticals, Inc. and Taisho Pharmaceutical Co., Ltd (previously filed as Exhibit 10.14 to Insmed Incorporated's Annual Report of Form 10-K for the year ended December 31, 2003 and incorporated herein by reference).
10.15+	Agreement, dated as of July 25, 2003, between Insmed Incorporated and Avecia Limited (previously filed as Exhibit 10.15 to Insmed Incorporated's Annual Report of Form 10-K for the year ended December 31, 2003 and incorporated herein by reference).
10.16+	License and Supply Agreement, dated as of August 28, 2003, between Insmed Incorporated and Pharmacia AB (previously filed as Exhibit 10.16 to Insmed Incorporated's Annual Report of Form 10-K for the year ended December 31, 2003 and incorporated herein by reference).
10.17	Agreement, dated as of March 3, 2004, between Insmed Incorporated and Geoffrey Allan, Ph.D. (Incorporated herein by reference).
10.18*	License Agreement, dated as of January 19, 2004, between Insmed Incorporated and Fujisawa Pharmaceutical Co., Ltd (Incorporated herein by reference).
10.19	Form of Change of Control Agreement entered into between Insmed Incorporated and certain of its executive officers.
21.1	Subsidiaries of Insmed Incorporated (previously filed as Exhibit 21.1 to Insmed Incorporated's Annual Report on Form 10-K for the year ended December 31, 2001 and incorporated herein by reference).
23.1	Consent of Ernst & Young LLP.
31.1	Certification of Geoffrey Allan, Ph.D., Chairman of the Board and Chief Executive Officer of Insmed Incorporated, pursuant to Rules 13a-14(a) and 15d-14(a) promulgated under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2003.
31.2	Certification of Kevin P. Tully C.G.A., Treasurer and Controller (Principal Financial and Accounting Officer) of Insmed Incorporated, pursuant to Rules 13a-14(a) and 15d-14(a) promulgated under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2003.
32.1	Certification of Geoffrey Allan, Ph.D., Chairman of the Board and Chief Executive Officer of Insmed Incorporated, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2003.
32.2	Certification of Kevin P. Tully, Treasurer and Controller (Principal Financial and Accounting Officer) of Insmed Incorporated, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2003.

+ The Securities and Exchange Commission has granted confidential treatment with respect to certain information in these exhibits. The confidential portions of these exhibits have been omitted and filed separately with the Securities and Exchange Commission.

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**Exhibit 10.19** 

### **AGREEMENT**

This Agreement dated as of \_\_\_\_\_, is entered into by and between \_\_\_\_("Employee") and Insmed Incorporated, a Virginia corporation ("Insmed").

Employee and Insmed hereby agree to the following terms and conditions:

- 1. **Purpose of Agreement.** The purpose of this Agreement is to provide that, in the event of a "Change in Control," Employee may become entitled to receive additional benefits in the event of his termination. It is believed that the existence of these potential benefits will benefit Insmed by discouraging turnover and causing such employee to be more able to respond to the possibility of a Change in Control without being influenced by the potential effect of a Change in Control on his job security.
- 2. Change in Control. As used in this Agreement, "Change in Control" means an event or occurrence set forth in any one or more of subsections (a) through (d) below (including an event or occurrence that constitutes a Change in Control under one of such subsections but is

<sup>\*</sup> Confidential treatment has been requested for certain portions of this exhibit. The confidential portions of this exhibit have been omitted and filed separately with the Securities and Exchange Commission.

specifically exempted from another such subsection):

(a) the acquisition by an individual, entity or group (within the meaning of Section 13(d)(3) or 14(d)(2) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")) (a "Person") of beneficial ownership of any capital stock of Insmed if, after such acquisition, such Person beneficially owns (within the meaning of Rule 13d-3 promulgated under the Exchange Act) 40% or more of either (x) the thenoutstanding shares of common stock of Insmed (the "Outstanding Company Common Stock") or (y) the combined voting power of the thenoutstanding securities of Insmed entitled to vote generally in the election of directors (the "Outstanding Company Voting Securities"); provided, however, that for purposes of this subsection (a), the following acquisitions shall not constitute a Change in Control: (i) any acquisition directly from Insmed (excluding an acquisition pursuant to the exercise, conversion or exchange of any security exercisable for, convertible into or exchangeable for common stock or voting securities of Insmed, unless the Person exercising, converting or exchanging such security acquired such security directly from Insmed or an underwriter or agent of Insmed), (ii) any acquisition by Insmed, (iii) any acquisition by any employee benefit plan (or related trust) sponsored or maintained by Insmed or any corporation controlled by Insmed, or (iv) any acquisition by any corporation pursuant to a transaction which complies with clauses (i) and (ii) of subsection (c) of this Section 2; or

(b) such time as the Continuing Directors (as defined below) do not constitute a majority of the Board of Directors of Insmed (the "Board") (or, if applicable, the Board of Directors of a successor corporation to Insmed), where the term "Continuing Director" means at any date a member of the Board (i) who was a member of the Board on the date of the execution of this Agreement or (ii) who was nominated or elected subsequent to such date by at least a majority of the directors who were Continuing Directors at the time of such nomination or election or whose election to the Board was recommended or endorsed by at least a majority of the directors who were Continuing Directors at the time of such nomination or election;

provided, however, that there shall be excluded from this clause (ii) any individual whose initial assumption of office occurred as a result of an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies or consents, by or on behalf of a person other than the Board; or

- (c) the consummation of a merger, consolidation, reorganization, recapitalization or statutory share exchange involving Insmed or a sale or other disposition of all or substantially all of the assets of Insmed in one or a series of transactions (a "Business Combination"), unless, immediately following such Business Combination, each of the following two conditions is satisfied: (i) all or substantially all of the individuals and entities who were the beneficial owners of the Outstanding Company Common Stock and Outstanding Company Voting Securities immediately prior to such Business Combination beneficially own, directly or indirectly, more than 60% of the then-outstanding shares of common stock and the combined voting power of the then-outstanding securities entitled to vote generally in the election of directors, respectively, of the resulting or acquiring corporation in such Business Combination (which shall include, without limitation, a corporation which as a result of such transaction owns Insmed or substantially all of the Insmed's assets either directly or through one or more subsidiaries) (such resulting or acquiring corporation is referred to herein as the "Acquiring Corporation") in substantially the same proportions as their ownership, immediately prior to such Business Combination, of the Outstanding Company Common Stock and Outstanding Company Voting Securities, respectively; and (ii) no Person (excluding the Acquiring Corporation or any employee benefit plan (or related trust) maintained or sponsored by Insmed or by the Acquiring Corporation) beneficially owns, directly or indirectly, 40% or more of the then outstanding shares of common stock of the Acquiring Corporation, or of the combined voting power of the then-outstanding securities of such corporation entitled to vote generally in the election of directors (except to the extent that such ownership existed prior to the Business Combination); or
  - (d) approval by the stockholders of Insmed of a complete liquidation or dissolution of Insmed.
- 3. **Rights and Obligations Prior to a Change in Control**. Prior to a Change in Control the rights and obligations of Employee with respect to his employment by Insmed shall be whatever rights and obligations are negotiated between Insmed and Employee from time to time. The existence of this Agreement, which deals with such rights and obligations subsequent to a Change in Control, shall not be treated as raising any inference with respect to what rights and obligations exist prior to a Change in Control unless specifically stated elsewhere in this Agreement.
- 4. **Effect of a Change in Control** . In the event of a Change in Control and the Employee's employment is terminated pursuant to a "Qualifying Termination" (as set forth below) on or prior to the date that is within twelve (12) months of the effective date of the Change in Control (the "Change in Control Date"), the Employee shall be entitled to the severance payments and other benefits set forth in this Agreement.

- 5. **Qualifying Termination** . If, subsequent to a Change in Control, Employee's employment terminates within one year of the Change in Control Date, such termination shall be considered a Qualifying Termination unless:
- (a) Employee voluntarily terminates employment. However, it shall not be considered a voluntary termination of employment if, following the Change in Control, Employee's compensation or duties are changed in any material respect from what they were immediately prior to a Change in Control, and subsequent to such change Employee elects to terminate employment. A "change in any material respect" shall encompass (i) any significant diminution in Employee's position, authority, duties, responsibilities, or reporting relationship, (ii) any material reduction in Employee's then compensation and/or benefits, unless such reduction is an across-the-board reduction of the compensation and/or benefits of all similarly situated executives, (iii) any change in Employee's job location to a site more than 50 miles away from his place of employment prior to the Change in Control or (iv) the failure of Insmed to obtain the agreement of any successor to Insmed to assure and agree to perform this Agreement.
- (b) The termination is on account of Employee's death or disability. As used herein, "disability" refers to an illness or accident that causes Employee to be unable to perform the duties of his job for at least six consecutive months, as determined by a physician mutually acceptable to Insmed and the Employee.
- (c) Employee is involuntarily terminated for "Cause", or it is determined that the facts conclusively demonstrate that Employee would have been terminated had any of the events set forth in clauses (i) through (iii) below had been known at the date of termination. For this purpose "Cause" means:
  - (i) the Employee's willful and continued failure to substantially perform his reasonable assigned duties (other than any such failure resulting from incapacity due to physical or mental illness or any failure after the Employee gives notice of termination for any of the reasons set forth in Section 5(a)), which failure is not cured within 60 days after a written demand for substantial performance is received by the Employee from the Chief Executive Officer which specifically identifies the manner in which the Chief Executive Officer believes the Employee has not substantially performed his duties;
  - (ii) the Employee's willful engagement in illegal conduct or gross misconduct that is materially and demonstrably injurious to Insmed; or
    - (iii) the Employee's conviction of a felony involving a crime of moral turpitude.

For purposes of this Section 5(c), no act or failure to act by the Employee shall be considered "willful" unless it is done, or omitted to be done, in bad faith and without reasonable belief that the Employee's action or omission was in the best interests of Insmed.

- 6. **Constructive Qualifying Termination** . If within six months prior to a Change in Control Employee's employment terminates as a result of any change described in Section 5(a) of this Agreement, Employee shall be entitled to the compensation, payments and other benefits that the Employee would have received if such termination had occurred after a Change in Control.
- 7. **Date and Notice of Termination**. Any termination of Employee's employment by Insmed or by Employee shall be communicated by a written notice of termination to the other party (the "Notice of Termination"). Where applicable, the Notice of Termination shall indicate the specific termination provision in this Agreement relied upon and shall set forth in reasonable detail the facts and circumstances claimed.
- 8. **Severance Payments** . If Employee is terminated as a result of a Qualifying Termination, Insmed shall pay Employee within 30 days of said Qualifying Termination a cash lump sum equal 1.0 times Employee's "Compensation" as a severance payment ("Severance Payment").
- (a) "Compensation" means the sum of Employee's highest annual salary rate (i.e. the Employee's highest rate of annual salary while an employee of Insmed) plus a bonus calculated by multiplying an employee's annual salary by the maximum bonus potential for the change of control year prorated as of the date of the Change of Control.
- (b) In lieu of a cash lump sum, Employee may, at his option, elect in writing to receive the payments provided by this Section 8 in equal monthly installments over 18 months.
- (c) The Severance Payment set forth in this Section 8 is in lieu of any severance payments that Employee might otherwise be entitled to receive from Insmed under the terms of any severance pay arrangement not referred to in this Agreement.
- 9. **Stock Option Grants and Other Forms of Employee Compensation**. In the event of a Change in Control, (i) all stock options then held by Employee shall remain exercisable for the term of the option period set forth in his option agreement(s), and (ii) any restricted stock held by Employee shall remain subject to the restrictions set forth in his restricted stock agreement.
- 10. **Additional Benefits** . In the event of a Qualifying Termination, Insmed shall continue to provide to the Employee health, dental, long-term disability, life insurance, continuation of D&O insurance, and the other fringe benefits that Employee received prior to the Qualifying Termination on the same terms and conditions as though the Employee had remained

an active employee of Insmed for the 18 month period immediately subsequent to the Qualifying Termination. Insmed shall provide COBRA benefits to the Employee following the end of this 18-month period, such benefits to be determined as though the Employee's employment had terminated at the end of such period.

### 11. **Taxes** .

- (a) The benefits that an Employee may be entitled to receive under this Agreement and other benefits that an Employee is entitled to receive under other plans, agreements and arrangements (which, together with the benefits provided under this Plan, are referred to as "Payments"), may constitute Parachute Payments that are subject to the "golden parachute" rules of Section 280G of the Internal Revenue Code of 1986 (the "Code") and the excise tax of Code Section 4999. As provided in this Section 11, the Parachute Payments will be reduced if, and only to the extent that, a reduction will allow an Employee to receive a greater Net After Tax Amount than an Employee would receive absent a reduction.
- (b) The Accounting Firm will first determine the amount of any Parachute Payments that are payable to an Employee. The Accounting Firm also will determine the Net After Tax Amount attributable to the Employee's total Parachute Payments.
- (c) The Accounting Firm will next determine the largest amount of Payments that may be made to the Employee without subjecting the Employee to tax under Code Section 4999 (the "Capped Payments"). Thereafter, the Accounting Firm will determine the Net After Tax Amount attributable to the Capped Payments.
- (d) The Employee will receive the total Parachute Payments or the Capped Payments, whichever provides the Employee with the higher Net After Tax Amount. If the Employee will receive the Capped Payments, the total Parachute Payments will be adjusted by first reducing the amount of any noncash benefits under this Agreement or any other plan, agreement or arrangement (with the source of the reduction to be directed by the Employee) and then by reducing the amount of any cash benefits under this Agreement or any other plan, agreement or arrangement (with the source of the reduction to be directed by the Employee). The Accounting Firm will notify the Employee and Insmed if it determines that the Parachute Payments must be reduced to the Capped Payments and will send the Employee and Insmed a copy of its detailed calculations supporting that determination.
- (e) As a result of the uncertainty in the application of Code Sections 280G and 4999 at the time that the Accounting Firm makes its determinations under this Section 11, it is possible that amounts will have been paid or distributed to the Employee that should not have been paid or distributed under this Section 11 ("Overpayments"), or that additional amounts should be paid or distributed to the Employee under this Section 11 ("Underpayments"). If the Accounting Firm determines, based on either the assertion of a deficiency by the Internal Revenue Service against Insmed or the Employee, which assertion the Accounting Firm believes has a high probability of success or controlling precedent or substantial authority, that an

Overpayment has been made, that Overpayment will be treated for all purposes as a loan *ab initio* that the Employee must repay to Insmed together with interest at the applicable Federal rate under Code Section 7872; provided, however, that no loan will be deemed to have been made and no amount will be payable by the Employee to Insmed unless, and then only to the extent that, the deemed loan and payment would either reduce the amount on which the Employee is subject to tax under Code Section 4999 or generate a refund of tax imposed under Code Section 4999. If the Accounting Firm determines, based upon controlling precedent or substantial authority, that an Underpayment has occurred, the Accounting Firm will notify the Employee and Insmed of that determination and the amount of that Underpayment will be paid to the Employee promptly by Insmed.

- (f) For purposes of this Section 11, the following terms shall have their respective meanings:
- (i) "Accounting Firm" means the independent accounting firm engaged by Insmed immediately before the Change in Control Date.
- (ii) "Net After Tax Amount" means the amount of any Parachute Payments or Capped Payments, as applicable, net of taxes imposed under Code Sections 1, 3101(b) and 4999 and any State or local income taxes applicable to the Employee on the date of payment. The determination of the Net After Tax Amount shall be made using the highest combined effective rate imposed by the foregoing taxes on income of the same character as the Parachute Payments or Capped Payments, as applicable, in effect on the date of payment.
- (iii) "Parachute Payment" means a payment that is described in Code Section 280G(b)(2), determined in accordance with Code Section 280G and the regulations promulgated or proposed thereunder.
- 12. **Term of Agreement**. This Agreement shall be effective from \_\_\_\_\_through \_\_\_\_\_. Insmed may, in its sole discretion and for any reason, provide written notice of termination (effective as of the then applicable expiration date) to Employee no later than 60 days before expiration date of this Agreement. If written notice is not so provided, this Agreement shall be automatically extended for an additional period of 12 months past the expiration date. This Agreement shall continue to be automatically extended for an additional twelve (12) months at the end of such 12-month period and each succeeding 12-month period unless notice is given in the manner described in this Section 12.
- 13. **Governing Law**. Except to the extent that federal law is applicable, this Agreement is made and entered into in the Commonwealth of Virginia and the laws of Virginia shall govern its validity and interpretation in the performance by the parties hereto of their respective duties and obligations hereunder.

- 14. **Entire Agreement**. This Agreement constitutes the entire agreement between the parties respecting the compensation, payments and benefits due Employee in the event of a Change in Control followed by a Qualifying Termination, and there are no representations, warranties or commitments, other than those set forth herein, which relate to such benefits. This Agreement may be amended or modified only by an instrument in writing executed by Insmed and the Employee.
- 15. **No Duty to Mitigate** . Employee shall not be required to mitigate the amount of any payment contemplated by this Agreement (whether by seeking new employment or in any other manner), nor shall any earnings that Employee may receive from any other source reduce any such payment.

### 16. Successors: Binding Agreement.

- (a) Assumption by Successor. Insmed shall require any successor (whether direct or indirect, by purchase, merger, consolidation or otherwise) to all or substantially all of the business or assets of Insmed expressly to assume and to agree to perform its obligations under this Agreement in the same manner and to the same extent that Insmed would be required to perform such obligations if no such assumption had occurred. As used herein, Insmed shall mean any successor to its business and/or assets as aforesaid that assumes and agrees to perform its obligations by operation of law or otherwise.
- (b) Enforceability by Beneficiaries. This Agreement shall be binding upon and inure to the benefit of Employee (and Employee's personal representatives and heirs) and Insmed and any organization which succeeds to substantially all of the business or assets of Insmed, whether by means of merger, consolidation, acquisition of all or substantially all of the assets of Insmed or otherwise, including, without limitation, as a result of a Change in Control, or by operation of law. This Agreement shall inure to the benefit of and be enforceable by Employee's personal or legal representatives, executors, administrators, successors, heirs, distributees, devisees and legatees. If the Employee should die while any amount would still be payable to such Employee hereunder if he had continued to live, all such amounts, unless otherwise provided herein, shall be paid in accordance with the terms of this Agreement to his designee or, if there is no such designee, to his estate.
- 17. **Confidentiality**. Employee acknowledges that in the course of his employment with Insmed, he has acquired non-public privileged or confidential information and trade secrets concerning the operations, future plans and methods of doing business ("Proprietary Information") of Insmed, and the Employee agrees that it would be extremely damaging to Insmed if such Proprietary Information were disclosed to a competitor of Insmed or to any other person or corporation. Employee understands and agrees that all Proprietary Information Employee has acquired during the course of such employment has been divulged to Employee in confidence and further understands and agrees to keep all Proprietary Information secret and confidential (except for such information which is or becomes publicly available other than as a result of a breach by Employee of this provision) without limitation in time. In view of the

nature of Employee's employment and the Proprietary Information Employee has acquired during the course of such employment, Employee likewise agrees that Insmed would be irreparably harmed by any disclosure of Proprietary Information in violation of the terms of this Section 16 and that Insmed shall therefore be entitled to preliminary and/or permanent injunctive relief prohibiting Employee from engaging in any activity or threatened activity in violation of the terms of this Section and to any other judicial relief available to it. Inquiries regarding whether specific information constitutes Proprietary Information shall be directed to Insmed's General Counsel (or, if such position is vacant, Insmed's Chairman of the Compensation Committee); provided, however, that Insmed shall not unreasonably classify information as Proprietary Information.

### 18. Non-Competition.

- (a) For a period of twelve (12) months after the termination of Employee's employment with Insmed, Employee will not:
- (i) as an individual proprietor, partner, stockholder, officer, director, employee, director, joint venturer, investor, lender, or in any capacity whatsoever (other than as the holder of not more than one percent (1%) of the total outstanding stock of a publicly held company), engage in any business that competes directly with the products or services provided by Insmed at the time of termination or for which definitive Insmed plans then exist to so provide such products or services;
- (ii) directly or indirectly recruit or solicit any person who is then an employee of Insmed or was an employee of Insmed at any time within six months prior to such retirement or solicitation; or
- (iii) solicit, divert or take away, or attempt to divert or to take away, the business or patronage of any of the clients, customers or accounts, or prospective clients, customers or accounts of Insmed.
- (b) If any restriction set forth in this Section 18 is found by any court of competent jurisdiction to be unenforceable because it extends for too long a period of time or over too great a range of activities or in too broad a geographic area, it shall be interpreted to extend only over the maximum period of time, range of activities or geographic area to which it may be enforceable.
- (c) The restrictions contained in this Section 18 are necessary for the protection of the business and goodwill of Insmed and are considered by Employee to be reasonable for such purpose. Employee agrees that any breach of this Section will cause Insmed substantial and irrevocable damage and therefore, in the event of any such breach, in addition to such other remedies that may be available, Insmed shall have the right to seek specific performance and injunctive relief.

- 19. **Outplacement Services** . In the event the Employee is terminated by Insmed (other than for Cause, disability or death), or the Employee voluntarily terminates employment for the reasons set forth in Section 5(a), within twelve (12) months following the Change in Control Date, Insmed shall provide outplacement services through one or more outside firms of the Employee's choosing up to an aggregate of \$10,000, with such services to extend until the earlier of (i) 12 months following termination of Employee's employment or (ii) the date the Employee secures full time employment.
- 20. **Notices** . All notices, instructions and other communications given hereunder or in connection herewith shall be in writing. Any such notice, instruction or communication shall be sent either (i) by registered or certified mail, return receipt requested, postage prepaid, or (ii) prepaid via a reputable nationwide overnight courier service, in each case addressed to Insmed and to the Employee at their respective addresses set forth below (or to such other address as either Insmed or the Employee may have furnished to the other in writing in accordance herewith). Any such notice, instruction or communication shall be deemed to have been delivered five business days after it is sent by registered or certified mail, return receipt requested, postage prepaid, or two business days after it is sent via a reputable nationwide overnight courier service. Either party may give any notice, instruction or other communication hereunder using any other means, but no such notice, instruction or other communication shall be deemed to have been duly delivered unless and until it actually is received by the party for whom it is intended.

### If to Insmed:

Insmed Incorporated 4851 Lake Brook Drive Glen Allen, Virginia 23058-2400 Attention: Chairman, Compensation Committee

### If to Employee:

- 21. Captions. The captions of this Agreement are inserted for convenience and do not constitute a part hereof.
- 22. **Severability** . In case any one or more of the provisions contained in this Agreement shall for any reasons be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provision of this Agreement, but this Agreement shall be construed as if such invalid, illegal or unenforceable provision had never been contained herein and there shall be deemed substituted such other provision as will most nearly accomplish the intent of the parties to the extent permitted by applicable law. In case this Agreement, or any one or more of the provisions hereof, shall be

held to be invalid, illegal or unenforceable within any governmental jurisdiction or subdivision thereof, this Agreement or any such provision thereof shall not as a consequence thereof be deemed to be invalid, illegal or unenforceable in any other governmental jurisdiction or subdivision thereof.

23. **Counterparts** . This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same Agreement.

### [Signature Page Follows]

Witness

INSMED INCORPORATED

By

Geoffrey Allan, President and CEO

IN WITNESS HEREOF, the parties hereto have caused this Agreement to be duly executed and delivered as of the day and year first

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**Employee** 

**EXHIBIT 23.1** 

### **Consent of Independent Registered Public Accounting Firm**

We consent to the incorporation by reference in each Registration Statement filed on Form S-3 (Registration Nos. 333-120639 and 333-107308) pertaining to securities sold in July 2003 and November 2004 and Form S-8 (Registration Nos. 333-87878, 333-39198 and 333-39200) pertaining to the Insmed Incorporated Employee Stock Purchase Plan and the Insmed Incorporated Stock Incentive Plan, of our reports dated March 15, 2005, with respect to the consolidated financial statements of Insmed Incorporated, Insmed Incorporated management's assessment of the effectiveness of internal control over financial reporting, and the effectiveness of internal control over financial reporting of Insmed Incorporated included in this Annual Report (Form 10-K) for the year ended December 31, 2004.

/s/ Ernst & Young LLP

McLean, Virginia March 15, 2005

Witness

**EXHIBIT 31.1** 

### SECTION 302 CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER

- I, Geoffrey Allan, Chairman of the Board and Chief Executive Officer of Insmed Incorporated, certify that:
- (1) I have reviewed this Annual Report on Form 10-K for the year ended December 31, 2004, of Insmed Incorporated;
- (2) Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- (3) Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- (4) The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principals;
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- (5) The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 16, 2005

Geoffrey Allan, Ph.D. Chairman of the Board and Chief Executive Officer (Principal Executive Officer)

**EXHIBIT 31.2** 

### SECTION 302 CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER

- I, Kevin P. Tully C.G.A., Treasurer and Controller of Insmed Incorporated, certify that:
- (1) I have reviewed this Annual Report on Form 10-K for the year ended December 31, 2004, of Insmed Incorporated;
- (2) Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- (3) Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- (4) The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principals;
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- (5) The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 16, 2005

/s/ Kevin P. Tully

Kevin P. Tully C.G.A.
Treasurer and Controller
(Principal Financial and Accounting Officer)

**EXHIBIT 32.1** 

# CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2003

In connection with the Annual Report on Form 10-K of Insmed Incorporated (the "Company") for the period ending December 31, 2004 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Geoffrey Allan, Ph.D., Chairman of the Board and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2003, that:

- (1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) the information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

/s/ Geoffrey Allan, Ph.D.

Geoffrey Allan, Ph.D. Chairman of the Board and Chief Executive Officer March 16, 2005

A signed original of this written statement required by § 906 of the Sarbanes-Oxley Act of 2003 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

**EXHIBIT 32.2** 

# CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2003

In connection with the Annual Report on Form 10-K of Insmed Incorporated (the "Company") for the period ending December 31, 2004 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Kevin P. Tully, Treasurer and Controller (Principal Financial and Accounting Officer) of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2003, that:

- (1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
- (2) the information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

/s/ Kevin P. Tully

Kevin P. Tully C.G.A. Treasurer and Controller (Principal Financial and Accounting Officer) March 16, 2005

A signed original of this written statement required by § 906 of the Sarbanes-Oxley Act of 2003 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

**End of Filing** 



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