

SEATTLE GENETICS INC /WA

Form 424B5

January 14, 2008

Table of Contents

The information in this preliminary prospectus supplement is not complete and may be changed. A registration statement relating to these securities has been declared effective by the Securities and Exchange Commission. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell these securities, and we are not soliciting offers to buy these securities in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED JANUARY 14, 2008

**Filed Pursuant to Rule 424(b)(5)
Registration No. 333-147282**

PRELIMINARY PROSPECTUS SUPPLEMENT

(To Prospectus dated December 11, 2007)

10,000,000 Shares

Common Stock

We are offering 10,000,000 shares of our common stock, par value \$0.001 per share.

Entities affiliated with one of our directors and principal stockholders, Felix Baker, have indicated an interest in purchasing up to 1,610,000 shares of our common stock in this offering at the public offering price. Because indications of interest are not binding agreements or commitments to purchase, the Baker entities may purchase fewer or no shares in this offering.

Our common stock is quoted on The Nasdaq Global Market under the symbol **SGEN**. On January 10, 2008, the last sale price of our common stock as reported on The Nasdaq Global Market was \$11.89 per share.

Investing in our common stock involves a high degree of risk. Before buying any shares, you should read carefully the discussion of material risks of investing in our common stock under the heading Risk factors beginning on page S-13 of this prospectus supplement and in the documents incorporated by reference in this prospectus supplement and the accompanying prospectus.

| | Per share | Total |
|--|-----------|-------|
| Public offering price | \$ | \$ |
| Underwriting discounts and commissions | \$ | \$ |
| Proceeds, before expenses, to us | \$ | \$ |

We have granted the underwriters the right to purchase up to 1,500,000 additional shares of common stock to cover any over-allotments. The underwriters can exercise this right at anytime within 30 days after this offering.

Neither the Securities and Exchange Commission nor any other regulatory body has approved or disapproved of these securities or determined if this prospectus supplement or the accompanying prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The underwriters expect to deliver shares against payment on _____, 2008.

JPMorgan

UBS Investment Bank

RBC Capital Markets

Needham & Company, LLC

William Blair & Company

The date of this prospectus supplement is _____

, 2008

Table of Contents

Table of contents

Prospectus supplement

| | Page |
|--|-------------|
| <u>About this Prospectus Supplement</u> | S-ii |
| <u>Prospectus Supplement Summary</u> | S-1 |
| <u>Risk Factors</u> | S-13 |
| <u>Forward-Looking Statements</u> | S-25 |
| <u>Use of Proceeds</u> | S-26 |
| <u>Capitalization</u> | S-27 |
| <u>Dilution</u> | S-28 |
| <u>Price Range of Our Common Stock</u> | S-29 |
| <u>Dividend Policy</u> | S-29 |
| <u>Material United States Federal Income and Estate Tax Considerations for Non-United States Holders</u> | S-30 |
| <u>Underwriting</u> | S-33 |
| <u>Legal Matters</u> | S-37 |
| <u>Experts</u> | S-37 |
| <u>Where You Can Find More Information</u> | S-37 |
| <u>Information Incorporated by Reference</u> | S-37 |

Prospectus

| | Page |
|--|-------------|
| <u>Seattle Genetics, Inc.</u> | 3 |
| <u>About this Prospectus</u> | 3 |
| <u>Risk Factors</u> | 4 |
| <u>Special Note Regarding Forward-Looking Statements</u> | 4 |
| <u>Use of Proceeds</u> | 5 |
| <u>Description of Capital Stock</u> | 5 |
| <u>Plan of Distribution</u> | 8 |
| <u>Legal Matters</u> | 10 |
| <u>Experts</u> | 10 |
| <u>Where You Can Find More Information</u> | 10 |
| <u>Information Incorporated by Reference</u> | 10 |

You should rely only on the information contained or incorporated by reference in this prospectus supplement, the accompanying prospectus and any free writing prospectus that we authorize to be distributed to you. We have not, and the underwriters have not, authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not, and the underwriters are not, making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference in this prospectus supplement and the accompanying prospectus, and any free writing prospectus is accurate only as of the date of those respective documents. Our business, financial condition, results of operations and prospects may have changed since those dates. You should read this prospectus supplement, the accompanying prospectus, the documents incorporated by reference in this prospectus supplement and the accompanying prospectus, and any free writing prospectus when making your investment decision. You should also read and consider the information in the documents we have referred you to in the sections of this prospectus supplement entitled **Information Incorporated by Reference and of the prospectus entitled **Where You Can Find More Information** and **Information Incorporated by Reference**.**

Table of Contents

About this Prospectus Supplement

This document is in two parts. The first part is this prospectus supplement, which describes the terms of this offering of common stock and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference. The second part is the accompanying prospectus, which gives more general information, some of which may not apply to this offering of common stock. To the extent the information contained in this prospectus supplement differs or varies from the information contained in the accompanying prospectus or any document incorporated by reference, the information in this prospectus supplement shall control.

All references in this prospectus supplement and the accompanying prospectus to Seattle Genetics, the Company, we, us, our, or similar references refer to Seattle Genetics, Inc., and its subsidiary, except where the context otherwise requires or as otherwise indicated.

S-ii

Table of Contents

Prospectus Supplement Summary

This summary highlights selected information contained elsewhere or incorporated by reference in this prospectus supplement and the accompanying prospectus. This summary may not contain all the information that you should consider before investing in our common stock. You should read the entire prospectus supplement and the accompanying prospectus carefully, including the factors described under the heading Risk Factors in this prospectus supplement and in our annual report on Form 10-K, and the financial statements and other information incorporated by reference in this prospectus supplement and the accompanying prospectus, before making an investment decision.

Company Overview

We are a clinical stage biotechnology company focused on the development and commercialization of monoclonal antibody-based therapies for the treatment of cancer and autoimmune disease. Our pipeline of product candidates is based upon two technologies: engineered monoclonal antibodies and antibody-drug conjugates, or ADCs. We genetically engineer our antibodies to reduce non-human protein sequences, thereby lowering the potential for patients to develop a neutralizing immune response and extending the duration of their use in therapy. We also empower antibodies by attaching them through stable linkers to highly-potent, cell-killing drugs to form ADCs. The resulting ADCs are designed to be stable in the bloodstream but to release their drug payloads once internalized within tumor cells, thereby increasing antitumor activity and minimizing normal tissue toxicity.

We are developing three lead clinical product candidates, SGN-40, SGN-33 and SGN-35, each of which has demonstrated multiple objective responses as a single agent in clinical trials. SGN-40 is a humanized anti-CD40 monoclonal antibody in phase I and phase II clinical development for non-Hodgkin lymphoma and multiple myeloma pursuant to a worldwide collaboration with Genentech Inc. Under the terms of the Genentech collaboration, we received an upfront payment of \$60 million, and are entitled to receive potential milestone payments exceeding \$800 million and escalating double-digit royalties starting in the mid-teens on net sales of SGN-40. We also have an option to co-promote SGN-40 in the United States. Genentech funds development, manufacturing and commercialization expenses for SGN-40, including reimbursing us for costs incurred in connection with activities we conduct for the program. To date, we have achieved milestones triggering a total of \$20 million in payments from Genentech associated with SGN-40 clinical trial initiations. SGN-33, or lintuzumab, is a humanized anti-CD33 monoclonal antibody in phase I and phase II clinical development for acute myeloid leukemia, or AML, and myelodysplastic syndromes, or MDS. SGN-35 is an anti-CD30 ADC in phase I clinical development for Hodgkin lymphoma and T-cell lymphomas. We currently retain worldwide commercial rights to both SGN-33 and SGN-35.

We also have three preclinical product candidates that could provide us with new Investigational New Drug, or IND, filings in each of the next several years. We are planning to file an IND for SGN-70 in 2008 for the treatment of autoimmune disease and an IND for SGN-75 in 2009 for the treatment of hematologic malignancies and solid tumors. We are also developing an anti-CD19 ADC for the treatment of B-cell derived hematologic malignancies. We currently retain worldwide commercial rights to all three of these preclinical programs.

We have engaged in corporate partnering transactions with leading biotechnology and pharmaceutical companies to advance the development and commercialization of some of our product candidates, supplement our internal pipeline and generate cash flow and revenues. In addition to our SGN-40 collaboration with Genentech, we have licensed our ADC technology to Genentech, Bayer Pharmaceuticals Corporation, CuraGen Corporation, Progenics Pharmaceuticals, Inc. and MedImmune, Inc., which was recently acquired by AstraZeneca, Inc. We also have an ADC co-development agreement with Agensys, Inc., which recently announced plans to be acquired by Astellas Pharma, Inc.

Table of Contents**Product Development Pipeline**

The following table summarizes our product development pipeline:

| Product | Description | Commercial | |
|-------------------------|------------------------------|---|--|
| | | Rights | Status |
| SGN-40 | Humanized anti-CD40 antibody | Genentech (We have an option to co-promote in the United States) | Phase II single agent trial ongoing in diffuse large B-cell lymphoma, or DLBCL; expected to complete enrollment in 2008 Phase Ib Revlimid® combination trial ongoing in multiple myeloma Randomized phase IIb Rituxan®-ICE chemotherapy combination trial ongoing in DLBCL Phase Ib Rituxan combination trial initiated by Genentech in follicular and marginal zone non-Hodgkin lymphoma Phase Ib Rituxan/Gemzar® combination trial planned to start in the first half of 2008 for DLBCL Phase Ib Velcade® combination trial planned to be initiated by Genentech in the first half of 2008 for multiple myeloma |
| SGN-33 | Humanized anti-CD33 antibody | Seattle Genetics | Phase Ib trial ongoing in AML and MDS; expected to complete enrollment and report data in 2008 Randomized phase IIb low dose cytarabine combination trial ongoing in AML Phase Ib Revlimid combination trial in MDS open for accrual |
| SGN-35 | Anti-CD30 ADC | Seattle Genetics | Phase I single agent trial ongoing in Hodgkin lymphoma and CD30-positive T-cell lymphomas |
| SGN-70 | Humanized anti-CD70 antibody | Seattle Genetics | IND filing planned in 2008 for autoimmune disease |
| SGN-75 | Anti-CD70 ADC | Seattle Genetics | IND filing planned in 2009 for CD70-positive hematologic malignancies and solid tumors |
| Anti-CD19 ADC SGN-40 | Anti-CD19 ADC | Seattle Genetics | Future IND candidate for CD19-positive hematologic malignancies |

Edgar Filing: SEATTLE GENETICS INC /WA - Form 424B5

SGN-40 is a humanized monoclonal antibody that is currently in phase I and phase II clinical trials for non-Hodgkin lymphoma and multiple myeloma under a worldwide collaboration with Genentech. SGN-40 targets the CD40 antigen, which is expressed on B-cell lineage hematologic malignancies, as well as solid tumors such as bladder, renal and ovarian cancer. We also believe SGN-40 may have applications in the treatment of autoimmune disease. We have received orphan drug designation from the U.S. Food and Drug Administration, or FDA, for SGN-40 in multiple myeloma and chronic lymphocytic leukemia.

S-2

Table of Contents

Market Opportunities

Non-Hodgkin lymphoma. Non-Hodgkin lymphoma is the most common form of hematologic malignancy. According to the American Cancer Society, during 2007 approximately 63,200 cases of non-Hodgkin lymphoma were expected to be diagnosed in the United States and approximately 18,700 people were expected to die from the disease. Advances made with combined chemotherapy and the use of Rituxan, a monoclonal antibody, have resulted in high remission rates for front-line therapy in early stage disease. However, therapeutic options for refractory or relapsed patients are still limited, and there are significant opportunities for new treatments in this patient population, especially in aggressive lymphoma subtypes such as DLBCL.

Multiple Myeloma. The American Cancer Society estimated that approximately 19,900 cases of multiple myeloma were expected to be diagnosed in the United States during 2007, and approximately 10,800 people were expected to die from the disease. Therapeutic advances in recent years, such as the approval of Velcade, Thalomid® and Revlimid by the FDA have expanded the treatment options for patients with multiple myeloma. However, multiple myeloma remains an incurable disease, and current therapies have limited response duration and significant toxic side effects. Therefore, we believe that a well-tolerated, monoclonal antibody represents a substantial opportunity in this disease either as a single agent or in combination with other treatments.

Clinical Results and Development Plan

We reported preliminary phase I data from our non-Hodgkin lymphoma and multiple myeloma studies at the American Society of Hematology, or ASH, annual meeting in December 2006. In both studies, patients received escalating doses of SGN-40 to determine tolerability, safety profile, immunogenicity and pharmacokinetic parameters. In the non-Hodgkin lymphoma study, we reported data from the first 35 patients enrolled with various subtypes of disease, including diffuse large B-cell, follicular, mantle cell, marginal zone and small lymphocytic lymphomas. Out of 31 evaluable patients, five had objective responses, including one complete response ongoing after 41 weeks. Four patients achieved partial responses, three of which were ongoing with durations of 10, 18 and 31 weeks, and eight patients had stable disease. Notably, of the five objective responses, three were in patients with DLBCL. In the multiple myeloma study, we reported data from the first 32 patients, showing that SGN-40 was well-tolerated with evidence of antitumor activity. Based on the data observed and to explore additional aspects of the dose and schedule, the multiple myeloma protocol was amended to test higher doses of SGN-40. We expect to report final phase I data from both studies during 2008.

In collaboration with Genentech, we are conducting a broad development plan for SGN-40 that includes six clinical trials of SGN-40 both as a single agent and combined with standard therapies for non-Hodgkin lymphoma and multiple myeloma. These include:

Phase II Single Agent Study. In December 2006, we initiated a phase II single agent study of SGN-40 in patients with relapsed or refractory DLBCL. This study is designed to assess the antitumor activity, tolerability and pharmacokinetic profile of SGN-40 in approximately 40 patients at multiple sites in the United States. We expect to complete enrollment of this study during 2008.

Phase Ib Revlimid Combination Study. In November 2007, we initiated a phase Ib combination study of SGN-40 plus Revlimid in patients with relapsed or refractory multiple myeloma. This study is expected to enroll up to approximately 40 patients at multiple sites in the United States. Patients will receive escalating doses of SGN-40 in combination with Revlimid and weekly dexamethasone, a steroid. The study is designed to assess safety and tolerability, preliminary activity and pharmacokinetics of the combination therapy. Initiation of this study triggered a \$4 million milestone payment from Genentech.

Phase IIb R-ICE Combination Study. In December 2007, we initiated a phase IIb randomized, double blind, placebo-controlled combination study of Rituxan and ifosfamide, carboplatin and

Table of Contents

etoposide, or ICE, chemotherapy plus or minus SGN-40. This trial, which is named SeaGen MARINER, is expected to enroll approximately 220 relapsed or refractory DLBCL patients at more than 60 sites worldwide. Patients will receive either R-ICE plus SGN-40 or R-ICE plus placebo. The primary endpoint of the study is complete response rate. Additional endpoints include safety, tolerability, failure-free survival and overall survival. Initiation of this study triggered a \$12 million milestone payment from Genentech.

Phase Ib Rituxan Combination Study. In January 2008, Genentech initiated a phase Ib combination study of SGN-40 plus Rituxan in patients with relapsed or refractory follicular or marginal zone non-Hodgkin lymphoma. This study, which is being conducted at multiple U.S. sites, is designed to assess safety, pharmacokinetics and preliminary activity of escalating doses of SGN-40 when combined with Rituxan. Initiation of this study triggered a \$4 million milestone payment from Genentech.

Phase Ib Rituxan/Gemzar Combination Study. We plan to initiate a phase Ib combination study of SGN-40 plus Rituxan and Gemzar in patients with relapsed or refractory DLBCL during the first half of 2008. This trial, which we plan to conduct at multiple U.S. sites, will assess safety, pharmacokinetics and preliminary activity of escalating doses of SGN-40 plus the combination therapy.

Phase Ib Velcade Combination Study. Pursuant to our joint development plan, Genentech plans to initiate a phase Ib combination study of SGN-40 plus Velcade in patients with relapsed or refractory multiple myeloma during the first half of 2008. This trial, which we expect to be conducted at multiple sites in the United States and Europe, will assess safety, pharmacokinetics and preliminary activity of escalating doses of SGN-40 combined with Velcade.

SGN-33 (Lintuzumab)

SGN-33, or lintuzumab, is a humanized monoclonal antibody that targets the CD33 antigen, which is highly expressed on myeloid malignancies and several myeloproliferative disorders. We are currently conducting phase I and phase II clinical development of SGN-33 in patients with AML or MDS, and have received orphan drug designation from the FDA for SGN-33 in both diseases. We have retained worldwide commercial rights to SGN-33.

Market Opportunities

Acute Myeloid Leukemia. AML, the most common type of acute leukemia in adults, results in uncontrolled growth and accumulation of malignant cells, or blasts, which fail to function normally and inhibit the production of normal blood cells. Progression of AML often leads to a deficiency of red cells, platelets and normal white cells in the blood, which can cause infections and bleeding. According to the American Cancer Society, approximately 13,400 cases of AML were expected to be diagnosed in the United States during 2007, and 9,000 people were expected to die of the disease. Approximately two-thirds of AML patients are over 60 years of age at diagnosis, and median survival for these patients is less than six months. Currently approved therapies for AML include chemotherapy drugs such as cytarabine, daunorubicin or mitoxantrone and an ADC, Mylotarg[®]. However, these therapies have low cure rates, usually lead to relatively short disease remissions and can have life-threatening side effects such as severe neutropenia, especially in older patients. In addition, stem cell transplantation, which may offer a higher probability of cure, is not an option for many patients due to potential toxicity of this treatment or the absence of an appropriate stem cell donor. As such, we believe there is a significant need for well-tolerated, targeted therapies for patients who cannot tolerate chemotherapy or stem cell transplant.

Myelodysplastic Syndromes. MDS includes a heterogeneous group of hematologic myeloid malignancies that occur when blood cells remain in an immature stage within the bone marrow and never develop into mature cells capable of performing their necessary functions. Eventually, the bone marrow may be

Table of Contents

filled with immature cells, which suppresses normal cell development. According to the American Cancer Society, 10,000 to 15,000 new cases of MDS are diagnosed annually in the United States, with this number increasing each year. Mean survival rates range from approximately six months to six years for the different stages of MDS, with approximately 30 percent of MDS cases eventually transforming into AML. MDS patients must often rely on blood transfusions or growth factors to manage symptoms of fatigue, bleeding and frequent infections. Many MDS patients die from complications of the disease prior to developing acute leukemia, establishing a critical unmet medical need for new therapies targeting the cause of the condition and helping to restore normal blood cell production as well as delay the onset of leukemia.

Clinical Results and Development Plan

During 2007, we completed a phase Ia single agent dose escalation study of SGN-33 in patients with AML or MDS who were not eligible for intensive chemotherapy or stem cell transplantation or had failed previous therapy. This study, which was conducted at multiple U.S. sites, was designed to evaluate safety, pharmacokinetic profile and antitumor activity of escalating doses of SGN-33 from 1.5 to 8 milligrams per kilogram. The data from this study was reported at the ASH annual meeting in December 2007 and demonstrated that SGN-33 induced objective responses in seven out of 17 AML patients treated, including four complete remissions, one complete remission with incomplete platelet recovery and two partial remissions. In this study SGN-33 also showed signs of activity in MDS, with six out of ten patients experiencing stable disease, several of whom had improving blood counts or increased transfusion independence. Overall, SGN-33 was well-tolerated in this study, with no dose-limiting toxicities or immunogenicity identified, and high CD33 bone marrow saturation levels were achieved at the top dose of 8 milligrams per kilogram. Based on this data, we have advanced SGN-33 into a phase Ib single-agent study in 50 additional AML and MDS patients to further evaluate the response rate and duration of response to single-agent SGN-33. Enrollment in this study is underway and we expect data to be available in 2008.

In November 2007, we also initiated a randomized, double blind, placebo-controlled, phase IIb study of low-dose cytarabine chemotherapy plus or minus SGN-33 in approximately 210 patients with AML. This study is enrolling newly diagnosed AML patients over 60 years old who decline or are ineligible for induction chemotherapy. Currently, a significant percentage of older AML patients do not receive treatment with any chemotherapy, and even those who do receive chemotherapy have a median survival of less than six months. The primary goal of this study is to determine whether the addition of SGN-33 prolongs survival of older AML patients who do not receive aggressive chemotherapy. In addition, the trial will evaluate whether patients receiving SGN-33 experience reduced infections, transfusion independence, fewer hospitalizations and improved quality of life. We believe there is a compelling opportunity in this patient population to combine a well-tolerated antibody with low-dose cytarabine to potentially prolong survival without meaningful added toxicity. We expect data from this study to be available in late 2009 or early 2010.

In addition to treatment of older AML patients, we are pursuing opportunities for SGN-33 in MDS, as well as considering strategies for expanding into treatment of younger AML patients. Our phase Ib study evaluating the combination of SGN-33 and Revlimid for patients with intermediate and high-risk MDS is open for accrual. Preclinical data demonstrate that Revlimid can augment immune effector function, which is a primary mechanism of action for SGN-33. This study will enroll approximately 30 patients with intermediate or high-risk MDS at escalating doses of SGN-33 combined with Revlimid to evaluate both tolerability and antitumor activity. We are also considering potential combination studies of SGN-33 plus other standard therapies in MDS, such as Vidaza[®] or Dacogen[®], based on emerging clinical data with both drugs.

SGN-35

SGN-35 is an ADC composed of an anti-CD30 monoclonal antibody attached by our proprietary, enzyme-cleavable linker to a derivative of the highly potent class of cell-killing drugs called auristatins. The CD30 antigen is an attractive target for cancer therapy because it is expressed on hematologic malignancies

Table of Contents

including Hodgkin lymphoma and several types of T-cell lymphoma but has limited expression on normal tissues. We are currently conducting a phase I dose escalation study of SGN-35 for patients with relapsed or refractory CD30-positive malignancies, primarily Hodgkin lymphoma. We have received orphan drug designation from the FDA for SGN-35 in Hodgkin lymphoma, and have retained worldwide commercial rights to the program.

Market Opportunities

According to the American Cancer Society, approximately 8,200 cases of Hodgkin lymphoma were expected to be diagnosed in the United States during 2007, and an estimated 1,100 people were expected to die of the disease. An additional 2,000 to 3,000 patients per year in the United States are diagnosed with anaplastic large cell lymphoma, a T-cell lymphoma that expresses the CD30 antigen. Advances made in the use of combined chemotherapy and radiotherapy for malignant lymphomas have resulted in high remission rates for front-line therapy in early stage lymphomas. However, a significant number of these patients relapse and require additional treatments including other chemotherapy regimens and autologous stem cell transplant, or ASCT. We believe there is a strong need for therapies that can maintain patients in remission prior to and after ASCT and provide a high rate of durable responses in post-ASCT relapses. According to a recognized cancer database and primary market research we conducted with physicians, we believe that there are several thousand newly relapsed or refractory Hodgkin lymphoma patients in the United States each year who would be eligible for treatment with SGN-35, and that the United States prevalence population of these patients is roughly 10,000 to 12,000 individuals.

Clinical Results and Development Plan

We are currently conducting a phase I clinical trial of SGN-35 in patients with relapsed or refractory CD30-positive hematologic malignancies, primarily Hodgkin lymphoma. This single-agent, dose-escalation study is designed to evaluate the safety, pharmacokinetic profile and antitumor activity of SGN-35 administered every three weeks, and is expected to enroll up to approximately 50 patients at multiple sites in the United States. We presented preliminary data from this study at the 7th International Symposium on Hodgkin Lymphoma in Cologne, Germany during November 2007. Of the first 23 patients treated at doses from 0.1 up to 1.8 milligrams per kilogram, there were four patients who achieved partial responses, 12 patients with stable disease and seven patients with progressive disease. More than 75 percent of patients treated across all dose levels had measurable reductions in tumor volume. SGN-35 was well-tolerated with no dose-limiting toxicities or immunogenicity observed. Dose escalation is currently ongoing at the 2.7 milligram per kilogram cohort.

We believe this reported clinical data on SGN-35, although preliminary, indicates the therapeutic potential of our ADC technology to empower antibodies. We previously conducted clinical trials of an unconjugated anti-CD30 monoclonal antibody, SGN-30, which is the same antibody used in SGN-35. At the ASH annual meeting in December 2005, we reported data from a phase II single agent trial of SGN-30, where the antibody alone was not sufficiently active as a single agent to demonstrate any objective responses in 35 patients with relapsed or refractory Hodgkin lymphoma treated at weekly doses up to 12 milligrams per kilogram. In contrast, SGN-35 has demonstrated multiple objective responses in a similar patient population at much lower doses with a less frequent dosing schedule.

We are continuing dose-escalation of SGN-35 in the ongoing phase I trial and plan to report further data, including additional objective responses, during the first half of 2008. We are also planning to initiate a second phase I study of SGN-35 during the first quarter of 2008, which will further investigate the promising tolerability observed to date to evaluate more frequent dosing of SGN-35. Our future clinical trial plans and registration strategy for SGN-35 will be guided by the response rate, duration of response and safety profile observed in our ongoing and planned phase I trials.

SGN-70

SGN-70 is a humanized anti-CD70 monoclonal antibody with potent effector function and intrinsic cell-killing ability. We believe that SGN-70 has significant application for the treatment of autoimmune diseases

Table of Contents

where the body's immune system malfunctions and attacks its own healthy cells. Many therapies for autoimmune disease rely on suppressing the immune system to prevent further damage to normal tissues, but have the unwanted side effect of making the patient more susceptible to infection or cancer. The CD70 antigen is expressed on activated T- and B-cells but is absent on these cells when in a resting state. Since resting T- and B-cells make up the majority of those types of cells circulating in the body, SGN-70 may be able to prevent or reduce a damaging immune response without globally suppressing the patient's immune system. We have presented preclinical data demonstrating that SGN-70 selectively depletes CD70-positive activated T-cells and limits expansion of CD70-positive lymphocytes. During 2008, we plan to present additional data demonstrating activity of SGN-70 in preclinical models of autoimmune disease at scientific meetings and to file an IND for SGN-70 in an autoimmune disease indication.

SGN-75

SGN-75 is an ADC composed of an anti-CD70 monoclonal antibody linked to a potent auristatin derivative using our proprietary ADC technology. The CD70 antigen has a broad expression profile in multiple types of cancer, including multiple myeloma, lymphoma, renal cancer, glioblastoma and several other solid tumors. We presented data at the American Academy of Cancer Research annual meetings in both April 2006 and April 2007 demonstrating that CD70 has high expression in primary renal cell samples and that SGN-75 has potent antitumor activity at well-tolerated doses in preclinical models of renal cell cancer. We are planning to file an IND for SGN-75 in hematologic malignancies and solid tumors during 2009.

Anti-CD19 ADC

We are conducting preclinical development of an anti-CD19 ADC for the treatment of hematologic malignancies. CD19 is a B-cell antigen that is expressed in non-Hodgkin lymphoma, chronic lymphocytic leukemia and acute lymphocytic leukemia. We reported data at the American Association for Cancer Research-National Cancer Institute-European Organization for Research and Treatment of Cancer conference in October 2007 demonstrating that our anti-CD19 ADC effectively binds to target cells with high affinity, internalizes and induces potent cancer-cell-killing activity and durable tumor regressions at low doses in multiple cancer models.

Research Programs

In addition to our pipeline of product candidates and antibody-based technologies, we have internal research programs directed towards identifying novel antigen targets and monoclonal antibodies, advancing our antibody engineering initiatives and developing new classes of stable linkers and potent, cell-killing drugs.

Novel Antigen Targets and Monoclonal Antibodies. We are actively engaged in internal efforts to identify and develop monoclonal antibodies and ADCs with novel specificities and activities against selected antigen targets. We focus on proteins that are highly expressed in cancer to identify molecules that are located on the surface of cancer cells that may serve as targets for monoclonal antibodies or ADCs. We then create and screen panels of cancer-reactive monoclonal antibodies in our laboratories to identify those with the desired specificity. We supplement these internal efforts by evaluating opportunities to in-license targets and antibodies from academic groups and other biotechnology and pharmaceutical companies, such as our ongoing collaboration with Agensys.

Antibody Engineering. We have substantial internal expertise in antibody engineering, both for antibody humanization and engineering of antibodies to improve drug linkage sites for use with our ADC technology. By modifying the number and type of drug-linkage sites found on our antibodies, we believe we can improve the robustness and cost-effectiveness of our manufacturing processes for conjugation of ADCs.

New Cell-Killing Drugs. We continue to study new cell-killing drugs that can be linked to antibodies, such as the auristatins that we currently use in our ADC technology. We are evaluating multiple auristatin derivatives, as well as other classes of cell-killing drugs, for potential applications as ADCs.

Table of Contents

Corporate Collaborations

We seek collaborations with leading biotechnology and pharmaceutical companies to advance the development and commercialization of our product candidates and to supplement our internal pipeline. When partnering, we seek to retain significant future participation in product sales through either profit-sharing or royalties paid on annual net sales. We also license our ADC technology to collaborators to empower their own antibodies. These ADC deals benefit us in many ways, including generating revenues that partially offset expenditures on our internal research and development programs, expanding our knowledge base regarding ADCs across multiple targets and antibodies provided by our collaborators and providing us with future pipeline opportunities through co-development or opt-in rights to new ADC product candidates.

In addition to our SGN-40 product collaboration with Genentech, we have the following principal collaborations:

ADC Collaborations. We have active ADC collaborations with each of Genentech, Bayer, CuraGen, Progenics and MedImmune. Under the terms of these multi-year agreements, we exclusively license our ADC technology on per target basis in exchange for upfront payments, research and material supply fees, progress-dependent milestone payments and royalties on net sales of any resulting ADC products. Our collaborators are responsible for all costs associated with the development, manufacturing and marketing of any ADC products generated under the collaborations. One of our collaborators, CuraGen, is currently conducting phase I clinical development of CR011-ADC for the treatment of metastatic melanoma, and several others are planning INDs for their ADC product candidates during 2008 and 2009.

Agensys Co-Development Agreement. In January 2007, we entered into an agreement with Agensys to jointly develop and commercialize ADCs for cancer. The collaboration encompasses combinations of our ADC technology with fully-human antibodies developed by Agensys to proprietary cancer targets. Under the terms of the multi-year agreement, we and Agensys will jointly screen ADCs to an initial target that has already been selected, co-fund all preclinical and clinical development and share equally in any profits. Agensys will also conduct further preclinical studies aimed at identifying ADCs for up to three additional targets. We have the right to exercise a co-development option for one of these additional ADCs at IND filing, and Agensys has the right to develop and commercialize the other two ADCs on its own, subject to paying us fees, milestones and royalties. Either party may opt out of co-development and profit-sharing in return for receiving milestones and royalties from the continuing party. We and Agensys are currently collaborating on preclinical development of AGS-5 ADC for the treatment of solid tumors.

Our Strategy

Our goal is to become a leading developer and marketer of monoclonal antibody-based therapies for cancer and autoimmune disease. Key elements of our strategy are to:

Advance our Three Lead Clinical Programs towards Regulatory Approval and Commercialization. Our primary goal is to advance our three lead clinical product candidates, SGN-40, SGN-33 and SGN-35, through late-stage clinical trials to regulatory approval and commercialization. During 2007, we substantially expanded our clinical group and continued to broaden our relationships with experts in hematology and oncology at leading cancer centers in the United States and Europe to support aggressive advancement of our ongoing and planned clinical trials. We have also built strong internal expertise in our development and regulatory groups and entered into key relationships with scientific advisors, research organizations and contract manufacturers to supplement our internal efforts.

Enter into Strategic Partnering Transactions to Generate Capital and Supplement our Internal Resources. We enter into collaborations at appropriate stages in our drug development process to accelerate clinical trials and commercialization of our product candidates. Collaborations can

Table of Contents

generate significant capital, supplement our own internal expertise in key areas such as manufacturing, regulatory affairs and clinical development and provide us with access to our collaborators' marketing, sales and distribution capabilities. When establishing strategic collaborations, we seek strong financial terms and endeavor to retain significant product rights, such as our SGN-40 collaboration with Genentech.

Maintain a Strong Product Pipeline by Advancing our Preclinical Programs towards Clinical Trials. We believe it is important to maintain a diverse pipeline of antibody-based product candidates to sustain our future growth. To accomplish this, we are currently conducting preclinical development of three lead preclinical programs, SGN-70, SGN-75 and an anti-CD19 ADC. These programs could provide us with new IND filings in each of the next several years. We also have an ADC co-development agreement with Agensys that provides us with the opportunity to co-develop up to two ADCs targeting solid tumors.

Continue to Leverage our Industry-Leading ADC Technology. We have developed proprietary ADC technology designed to empower monoclonal antibodies. We are currently developing several product candidates that employ our ADC technology, including SGN-35, SGN-75 and an anti-CD19 ADC. We also license our ADC technology to leading biotechnology and pharmaceutical companies to generate near-term revenue and funding, as well as potential future milestones and royalties. Presently, we have active ADC collaborations with Genentech, Bayer, CuraGen, Progenics, MedImmune and Agensys. Our technology licensing deals have generated more than \$60 million through a combination of upfront and research support fees, milestones and equity purchases.

Ensure Future Growth of our Pipeline through Internal Research Efforts and Strategic In-Licensing. We have internal research programs directed towards identifying novel antigen targets and monoclonal antibodies, creating new antibody engineering techniques and developing new classes of stable linkers and potent, cell-killing drugs for our ADC technology. In addition, we supplement these internal efforts through ongoing initiatives to identify products and technologies to in-license from biotechnology and pharmaceutical companies and academic institutions. We have entered into such license agreements with Bristol-Myers Squibb, PDL BioPharma, Eli Lilly (formerly ICOS Corporation), University of Miami, Arizona State University, Mabtech AB and CLB Research and Development, among others.

Corporate Information

We were incorporated in Delaware on July 15, 1997. Our principal executive offices are located at 21823 30th Drive SE, Bothell, WA 98021. Our telephone number is (425) 527-4000. Our web site is www.seattlegenetics.com. The information contained in, or that can be accessed through, our website is not part of this prospectus supplement or the accompanying prospectus and should not be considered part of this prospectus supplement or the accompanying prospectus.

Seattle Genetics® is our registered trademark in the United States. All other trademarks, tradenames and service marks appearing in this prospectus supplement are the property of their respective owners.

Table of Contents

The Offering

| | |
|---|---|
| Issuer | Seattle Genetics, Inc. |
| Common stock we are offering | 10,000,000 shares |
| Common stock to be outstanding after this offering | 77,524,182 shares |
| Use of proceeds | We intend to use the net proceeds of this offering to fund our research and development efforts, including clinical trials, and for general corporate purposes, including working capital. See Use of Proceeds. |
| Nasdaq Global Market symbol | SGEN |
| Transfer Agent | Mellon Investor Services |
| Risk Factors | See Risk Factors beginning on page S-13 for a discussion of factors you should carefully consider before deciding to invest in shares of our common stock. |
| Entities affiliated with one of our directors and principal stockholders, Felix Baker, have indicated an interest in purchasing up to 1,610,000 shares of our common stock in this offering at the public offering price. Because indications of interest are not binding agreements or commitments to purchase, the Baker entities may purchase fewer or no shares in this offering. | |

The total shares of our common stock outstanding immediately before this offering is based on 67,524,182 shares of common stock outstanding as of December 31, 2007 and excludes:

7,458,214 shares of common stock issuable upon exercise of outstanding stock options at a weighted average exercise price of \$7.02 per share;

5,460,000 shares of common stock reserved for issuance under our 2000 Directors Stock Option Plan and our 2007 Equity Incentive Plan;

588,275 shares of common stock reserved for issuance under our 2000 employee stock purchase plan; and

1,925,000 shares of our common stock subject to warrants outstanding at an exercise price of \$6.25 per share. Unless otherwise indicated, all information contained in this prospectus supplement assumes:

No exercise of the underwriters over-allotment option to purchase 1,500,000 additional shares of our common stock; and

No exercise of outstanding options or warrants to purchase shares of common stock.

Table of Contents**Summary Consolidated Financial Data**

The tables below present our summary consolidated statement of operations and balance sheet data. We have derived our summary consolidated statement of operations data for the years ended December 31, 2006, 2005 and 2004 from our audited consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2006 and incorporated by reference in this prospectus supplement and the accompanying prospectus. We have derived our summary consolidated statement of operations data for the nine months ended September 30, 2007 and 2006 and our summary consolidated balance sheet data as of September 30, 2007 from our unaudited consolidated financial statements included in our Quarterly Report on Form 10-Q for the quarter ended September 30, 2007 and incorporated by reference in this prospectus supplement and the accompanying prospectus. The unaudited consolidated financial statements include, in our opinion, all adjustments, consisting only of normal recurring adjustments, that are necessary for a fair presentation of our financial position and results of operations for these periods. Operating results for the nine months ended September 30, 2007 are not necessarily indicative of the results that may be expected in the fiscal year ending December 31, 2007 or any other period. The as adjusted balance sheet data gives effect to the issuance of 10,000,000 shares of our common stock in this offering at an assumed price of \$11.89 per share, the closing price of our common stock on January 10, 2008, after deductions, underwriting discounts and commissions and estimated offering expenses payable by us.

This information is summary and should be read in conjunction with Management's Discussion and Analysis of Financial Condition and Results of Operations and our consolidated financial statements and related notes contained in our periodic reports on file with the SEC and incorporated by reference in this prospectus supplement and the accompanying prospectus.

| Statements of operations data: | Years Ended December 31, | | | Nine Months Ended September 30, | |
|--|--|-------------|-------------|------------------------------------|-------------|
| | 2006 | 2005 | 2004 | 2007 | 2006 |
| | (in thousands, except per share amounts) | | | | |
| Revenues | \$ 10,005 | \$ 9,757 | \$ 6,701 | \$ 14,584 | \$ 7,422 |
| Operating Expenses: | | | | | |
| Research and development | 40,136 | 34,683 | 37,208 | 44,719 | 29,055 |
| General and administrative | 10,074 | 7,145 | 7,161 | 8,931 | 7,328 |
| Loss from operations | (40,205) | (32,071) | (37,668) | (39,066) | (28,961) |
| Investment income, net | 4,190 | 2,638 | 2,229 | 5,075 | 2,966 |
| Net loss | (36,015) | (29,433) | (35,439) | (33,991) | (25,995) |
| Non-cash preferred stock deemed dividend | | | (36,558) | | |
| Net loss attributable to common stockholders | \$ (36,015) | \$ (29,433) | \$ (71,997) | \$ (33,991) | \$ (25,995) |
| Basic and diluted net loss per share attributable to common stockholders | \$ (0.74) | \$ (0.70) | \$ (1.80) | \$ (0.57) | \$ (0.54) |
| Weighted-average shares used in computing basic and diluted net loss per share | 48,659 | 42,238 | 39,985 | 59,228 | 47,862 |

Table of Contents

| | As of September 30, 2007 | |
|--|----------------------------------|----------------------------------|
| | Actual | As adjusted⁽¹⁾ |
| Balance sheet data: | (unaudited, in thousands) | |
| Cash, cash equivalents and short and long-term investments | \$ 124,228 | \$ 235,991 |
| Working capital | 77,417 | 189,180 |
| Total assets | 141,345 | 253,108 |
| Stockholders' equity | 64,669 | 176,432 |

- (1) Each \$1.00 increase or decrease in the assumed offering price per share would increase or decrease the as adjusted figure shown above for each of cash, cash equivalents and short and long-term investments, working capital, total assets and stockholders' equity by approximately \$9.4 million, after deducting estimated underwriting discounts and commissions. We may also increase or decrease the number of shares we are offering. An increase or decrease of 1,000,000 shares in the number of shares offered by us at the assumed offering price would increase or decrease the as adjusted figure above for each of cash, cash equivalents and short and long-term investments, working capital, total assets, and stockholders' equity by approximately \$11.2 million, after deducting estimated underwriting discounts and commissions.

Table of Contents

Risk Factors

You should carefully consider the following risk factors, in addition to the other information contained in this prospectus supplement and the accompanying prospectus, before purchasing shares of our common stock. Investing in our common stock involves a high degree of risk. If any of the events described in the following risk factors occurs, our business, operating results and financial condition could be seriously harmed. In addition, the trading price of our common stock could decline due to the occurrence of any of such events, and you may lose all or part of your investment.

Risks Related to Our Business

Our product candidates are at early stages of development and, if we are not able to successfully develop and commercialize them, we may not generate sufficient revenues to continue our business operations.

The drug discovery and development process is highly uncertain and we have not developed, and may never develop, a product candidate that ultimately leads to a commercially viable product. All of our product candidates are in early stages of development. Significant further research and development, financial resources and personnel will be required to develop commercially viable products and obtain regulatory approvals. Currently, SGN-40, SGN-33 and SGN-35 are in clinical trials and SGN-70, SGN-75 and an anti-CD19 ADC are in preclinical development. We expect that much of our effort and many of our expenditures over the next few years will be devoted to these clinical and preclinical product candidates. We have no products that have received regulatory approval for commercial sale.

The research, testing, manufacturing, labeling, approval, selling, marketing and distribution of drug products are subject to extensive regulation by the FDA and other regulatory authorities in the United States and other countries, which regulations differ from country to country. Our ability to commercialize our product candidates depends on first receiving FDA approval. Thereafter, the commercial success of these product candidates will depend upon their acceptance by physicians, patients, third party payors and other key decision-makers as therapeutic and cost-effective alternatives to currently available products. With respect to SGN-40, commercial success will depend in large part on Genentech's actions to commercialize the product candidate. Additionally, our product candidates may not gain market acceptance among physicians, patients, healthcare payors and the medical community. The degree of market acceptance of any approved product candidate will depend on a number of factors, including: establishment and demonstration of clinical efficacy and safety; cost-effectiveness of a product; its potential advantage over alternative treatment methods; and marketing and distribution support for the product. If we fail to gain approval from the FDA or to produce a commercially successful product, we may not be able to earn sufficient revenues to continue as a going concern.

Clinical trials for our product candidates are expensive, time consuming and their outcome is uncertain.

Neither we nor our collaboration partners are permitted to market our product candidates in the United States until we obtain marketing approval from the FDA or other foreign regulatory authorities. Obtaining marketing approval is a lengthy, expensive and uncertain process and approval is never assured. In addition, failure to comply with FDA and other applicable United States and foreign regulatory requirements may subject us to administrative or judicially imposed sanctions. An application for marketing approval must be supported by complete preclinical development and extensive clinical trials in humans to demonstrate its safety and efficacy, as well as extensive information regarding manufacturing, process and controls to demonstrate the safety and effectiveness of the product candidate. Each of these trials requires the investment of substantial expense and time. We are currently conducting multiple phase I and phase II clinical trials of our clinical product candidates, and we expect to commence additional trials of these and other product candidates in the future. There are numerous factors that could delay each of these clinical trials or prevent us from completing these trials successfully, including:

obtaining regulatory approval to commence a clinical trial;

reaching agreement on acceptable terms with prospective clinical research organizations, or CROs, and trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;

Table of Contents

manufacturing sufficient quantities of a product candidate for use in clinical trials;

obtaining institutional review board, or IRB, approval to conduct a clinical trial at a prospective site;

recruiting and enrolling patients to participate in clinical trials for reasons including competition from other clinical trial programs for the same or similar indications; and

retaining patients who have initiated a clinical trial but may be prone to withdraw due to side effects from the therapy, lack of efficacy or personal issues, or who are lost to further follow-up.

In addition, a clinical trial may be suspended or terminated by us, the FDA or other regulatory authorities due to a number of factors, including:

failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols;

inspection of the clinical trial operations or trial sites by the FDA or other regulatory authorities resulting in the imposition of a clinical hold;

new information suggesting unacceptable risk to subjects, or unforeseen safety issues or any determination that a trial presents unacceptable health risks; or

lack of adequate funding to continue the clinical trial, including the incurrence of unforeseen costs due to enrollment delays, requirements to conduct additional trials and studies and increased expenses associated with the services of our CROs and other third parties.

Commercialization of our product candidates will ultimately depend upon successful completion of additional research and development and testing in both clinical trials and preclinical models. At the present time, SGN-40, SGN-33 and SGN-35 are our only product candidates in clinical development and SGN-70, SGN-75 and an anti-CD19 ADC are our lead preclinical product candidates. As a result, any delays or difficulties we encounter with these product candidates may impact our ability to generate revenue and cause our stock price to decline significantly.

Our clinical trials may fail to demonstrate acceptable levels of safety and efficacy of our product candidates, which could prevent or significantly delay their regulatory approval.

Ongoing and future clinical trials of our product candidates may not show sufficient safety or efficacy to obtain requisite regulatory approvals. We still only have limited efficacy data from our phase I and phase II clinical trials of SGN-40, SGN-33 and SGN-35. Phase I and phase II clinical trials are not primarily designed to test the efficacy of a product candidate but rather to test safety, to study pharmacokinetics and pharmacodynamics and to understand the product candidate's side effects at various doses and dosing schedules. Furthermore, success in preclinical and early clinical trials does not ensure that later large-scale trials will be successful nor does it predict final results. Acceptable results in early trials may not be repeated in later trials. We believe that any clinical trial designed to test the efficacy of SGN-40, SGN-33 or SGN-35, whether phase II or phase III, will likely involve a large number of patients to achieve statistical significance and will be expensive. We may conduct lengthy and expensive clinical trials of SGN-40, SGN-33 or SGN-35, only to learn that the product candidate is not an effective treatment. We may experience significant setbacks in advanced clinical trials, even after promising results in earlier trials, such as unexpected adverse events that occur when our product candidates are combined with other therapy which often occurs in later-stage clinical trials. For example, we are conducting phase II clinical trials with both SGN-40 and SGN-33 combined with other therapy, including chemotherapy, and may experience unexpected adverse events as a result of these combinations. In addition, clinical results are frequently susceptible to varying interpretations that may delay, limit or prevent regulatory approvals. Negative or inconclusive results or adverse medical events during a clinical trial could cause it to be redone or terminated. For example, based on data from our phase I and phase II clinical trials of SGN-30, during 2006 we decided to prioritize our other programs and collaborate with the National Cancer Institute (NCI) to conduct further SGN-30 clinical trials in combination with chemotherapy and to cease Company-sponsored clinical trials of SGN-30. Even if we believe the

data collected from clinical trials of our product candidates are

S-14

Table of Contents

promising, such data may not be sufficient to support approval by the FDA or any other U.S. or foreign regulatory authority. In addition, failure to construct appropriate clinical trial protocols could result in the test or control group experiencing a disproportionate number of adverse events and could cause a clinical trial to be redone or terminated. The length of time necessary to complete clinical trials and to submit an application for marketing approval for a final decision by the FDA or another regulatory authority may also vary significantly based on the type, complexity and novelty of the product involved, as well as other factors. The FDA has substantial discretion in the approval process, and when or whether regulatory approval will be obtained for any product we develop. Our business and reputation may be harmed by any failure or significant delay in receiving regulatory approval for the sale of any products resulting from our product candidates. If we or our collaborators receive regulatory approval for our product candidates, we will also be subject to ongoing FDA obligations and oversight, including adverse event reporting requirements, marketing restrictions and potential post-marketing obligations, all of which may result in significant expense and limit our ability to commercialize such products. The FDA's policies may also change and additional government regulations may be enacted that could prevent or delay regulatory approval of our product candidates or further restrict or regulate post-approval activities. We cannot predict the likelihood, nature or extent of adverse government regulation that may arise from future legislation or administrative action, either in the United States or abroad. If we are not able to maintain regulatory compliance, we may be subject to civil and criminal penalties, we may not be permitted to market our products and our business could suffer.

Our clinical trials may take longer to complete than we project or they may not be completed at all.

The timing of the commencement, continuation and completion of clinical trials may be subject to significant delays relating to various causes, including scheduling conflicts with participating clinicians and clinical institutions, difficulties in identifying and enrolling patients who meet trial eligibility criteria, failure of patients to complete the clinical trial, delay or failure to obtain institutional review board, or IRB, approval to conduct a clinical trial at a prospective site, and shortages of available drug supply. Patient enrollment is a function of many factors, including the size of the patient population, the proximity of patients to clinical sites, the eligibility criteria for the trial, the existence of competing clinical trials and the availability of alternative or new treatments. In addition, future SGN-40 clinical trials will be coordinated with Genentech, which may delay the commencement or affect the continuation or completion of these trials. We have experienced enrollment-related delays in our current and previous clinical trials and may experience similar delays in our future trials, particularly as we attempt to significantly increase patient size to those required for phase III studies. We depend on medical institutions and clinical research organizations to conduct our clinical trials and to the extent they fail to enroll patients for our clinical trials or are delayed for a significant time in achieving full enrollment, we may be affected by increased costs, program delays or both, which may harm our business. In addition, we may conduct clinical trials in foreign countries in the future which may subject us to further delays and expenses as a result of increased drug shipment costs, additional regulatory requirements and the engagement of foreign clinical research organizations, as well as expose us to risks associated with foreign currency transactions insofar as we might desire to use U.S. dollars to make contract payments denominated in the foreign currency where the trial is being conducted.

Clinical trials must be conducted in accordance with FDA or other applicable foreign government guidelines and are subject to oversight by the FDA, other foreign governmental agencies and institutional review boards at the medical institutions where the clinical trials are conducted. In addition, clinical trials must be conducted with supplies of our product candidates produced under the FDA's current Good Manufacturing Practices and other requirements in foreign countries, and may require large numbers of test patients. We, the FDA or other foreign governmental agencies could delay or halt our clinical trials of a product candidate for various reasons, including:

deficiencies in the conduct of the clinical trial, including failure to conduct the clinical trial in accordance with regulatory requirements or clinical protocols;

deficiencies in the clinical trial operations or trial sites resulting in the imposition of a clinical hold;

the product candidate may have unforeseen adverse side effects;

Table of Contents

the time required to determine whether the product candidate is effective may be longer than expected;

fatalities or other adverse events arising during a clinical trial due to medical problems that may not be related to clinical trial treatments;

the product candidate may not appear to be more effective than current therapies;

quality or stability of the product candidate may fall below acceptable standards; or

we may not be able to produce sufficient quantities of the product candidate to complete the trials.

In addition, changes in regulatory requirements and guidance may occur and we may need to amend clinical trial protocols to reflect these changes. Amendments may require us to resubmit our clinical trial protocols to IRBs for reexamination, which may impact the costs, timing or successful completion of a clinical trial. Due to these and other factors, our current product candidates or any of our other future product candidates could take a significantly longer time to gain regulatory approval than we expect or may never gain approval, which could reduce or eliminate our revenue by delaying or terminating the potential commercialization of our product candidates.

In some circumstances we rely on collaborators to assist in the research and development of our product candidates, as well as to utilize our ADC technology. If we are not able to locate suitable collaborators or if our collaborators do not perform as expected, it may affect our ability to commercialize our product candidates and/or generate revenues through technology licensing.

We have established and intend to continue to establish alliances with third-party collaborators to develop and market some of our current and future product candidates. We entered into an exclusive worldwide collaboration agreement with Genentech in January 2007 for the development and commercialization of our SGN-40 product candidate. We also have active ADC collaborations with Genentech, Bayer, CuraGen, Progenics and MedImmune and an ADC co-development agreement with Agensys. These collaborations provide us with cash and revenues through technology access and license fees, sponsored research fees, equity sales and potential milestone and royalty payments, as well as potential revenues from future product sales in the case of Agensys. We use these funds to partially fund the development costs of our internal pipeline of product candidates. Collaborations can also create and strengthen our relationships with leading biotechnology and pharmaceutical companies and may provide synergistic benefits by combining our technologies with the technologies of our collaborators.

Under certain conditions, our collaborators may terminate their agreements with us and discontinue use of our technologies. In addition, we cannot control the amount and timing of resources our collaborators may devote to products incorporating our technology. Moreover, our relationships with our collaborators divert significant time and effort of our scientific staff and management team and require effective allocation of our resources to multiple internal and collaborative projects. Our collaborators may separately pursue competing products, therapeutic approaches or technologies to develop treatments for the diseases targeted by us or our collaborators. Even if our collaborators continue their contributions to the collaborative arrangements, they may nevertheless determine not to actively pursue the development or commercialization of any resulting products. Our collaborators may fail to perform their obligations under the collaboration agreements or may be slow in performing their obligations. If any of our collaborators terminate or breach our agreements with them, or otherwise fail to complete their obligations in a timely manner, it may have a detrimental effect on our financial position by reducing or eliminating the potential for us to receive technology access and license fees, milestones and royalties, as well as possibly requiring us to devote additional efforts and incur costs associated with pursuing internal development of product candidates. In particular, if Genentech determines to terminate the SGN-40 collaboration, we would not receive milestone payments or royalties for development or sale of SGN-40. Moreover, we would have to engage another collaborator to complete the development process or complete the process ourselves internally, either of which could significantly delay the development process and increase our costs. In turn, this could significantly harm our financial position, adversely affect our stock price and require us to incur all the costs of developing and commercializing SGN-40, which are now being

Table of Contents

reimbursed by Genentech. Furthermore, if our collaborators do not prioritize and commit substantial resources to programs associated with our product candidates, we may be unable to commercialize our product candidates, which would limit our ability to generate revenue and become profitable. In the future, we may not be able to locate third party collaborators to develop and market our product candidates and we may lack the capital and resources necessary to develop all our product candidates alone.

We depend on a small number of collaborators for most of our current revenue. The loss of any one of these collaborators could result in a substantial decline in our revenue.

We have collaborations with a limited number of companies. To date, almost all of our revenue has resulted from payments made under agreements with our corporate collaborators, and we expect that most of our future revenue will continue to come from corporate collaborations until the approval and commercialization of one or more of our product candidates and even then we may still be highly dependent on the collaborator for the approved product. For example, if SGN-40 receives regulatory approval, our revenues will still be dependent on Genentech's ability to market the approved product. The failure of our collaborators to perform their obligations under their agreements with us, including paying license or technology fees, milestone payments or royalties, could have a material adverse effect on our financial performance. In addition, a significant portion of revenue received from our corporate collaborators is derived from research and material supply fees, and a decision by any of our corporate collaborators to conduct more research and development activities themselves could significantly reduce the revenue received from these collaborations. Payments under our existing and future collaboration agreements are also subject to significant fluctuations in both timing and amount, which could cause our revenue to fall below the expectations of securities analysts and investors and cause a decrease in our stock price.

We currently rely on third-party manufacturers and other third parties for production of our drug products and our dependence on these manufacturers may impair the development of our product candidates.

We do not currently have the ability to manufacture ourselves the drug products that we need to conduct our clinical trials and rely upon a limited number of manufacturers to supply our drug products. For SGN-40, we have contracted with Abbott Laboratories for clinical and potential future commercial supplies. Decisions on future SGN-40 drug supply will be made jointly by us and Genentech through our collaboration. For SGN-33, we received clinical-grade material from PDL BioPharma to support ongoing and planned phase I trials, entered into a contract manufacturing arrangement with Laureate Pharma and are in the process of seeking regulatory approval from the FDA to use this material to supplement current supplies and provide later-stage clinical supplies. For the monoclonal antibody used in SGN-35, we also have contracted with Abbott Laboratories for clinical and potential future commercial supplies. We have also contracted with Laureate Pharma to manufacture the antibody component of SGN-70 and SGN-75 to enable future initiation of clinical trials. For our ADC technology, several contract manufacturers, including Albany Molecular and SAFC, supply us with drug-linker and several other contract manufacturers perform conjugation of the drug-linker to the antibody. In addition, we rely on other third parties to perform additional steps in the manufacturing process, including vialing and storage of our product candidates. For the foreseeable future, we expect to continue to rely on contract manufacturers and other third parties to produce, vial and store sufficient quantities of our product candidates for use in our clinical trials. If our contract manufacturers or other third parties fail to deliver our product candidates for clinical use on a timely basis, with sufficient quality, and at commercially reasonable prices, and we fail to find replacement manufacturers or to develop our own manufacturing capabilities, we may be required to delay or suspend clinical trials or otherwise discontinue development and production of our product candidates. In addition, we depend on outside vendors for the supply of raw materials used to produce our product candidates. If the third party suppliers were to cease production or otherwise fail to supply us with quality raw materials and we were unable to contract on acceptable terms for these raw materials with alternative suppliers, our ability to have our product candidates manufactured and to conduct preclinical testing and clinical trials of our product candidates would be adversely affected.

We do not yet have agreements for the supply of our product candidates in quantities sufficient for phase III clinical trials or commercial sale and may not be able to establish or maintain commercial manufacturing arrangements on commercially reasonable terms. Securing phase III and commercial quantities of our product

Table of Contents

candidates from contract manufacturers will require us to commit significant capital and resources. We may also be required to enter into long-term manufacturing agreements that contain exclusivity provisions and/or substantial termination penalties. In addition, contract manufacturers have a limited number of facilities in which our product candidates can be produced and any interruption of the operation of those facilities due to events such as equipment malfunction or failure or damage to the facility by natural disasters could result in the cancellation of shipments, loss of product in the manufacturing process or a shortfall in available product candidates.

Our contract manufacturers are required to produce our clinical product candidates under FDA current Good Manufacturing Practices, or cGMP, in order to meet acceptable standards for our clinical trials. If such standards change, the ability of contract manufacturers to produce our product candidates on the schedule we require for our clinical trials may be affected. In addition, contract manufacturers may not perform their obligations under their agreements with us or may discontinue their business before the time required by us to successfully produce and market our product candidates. We and our contract manufacturers are subject to ongoing periodic unannounced inspection by the FDA and corresponding state and foreign authorities to ensure strict compliance with cGMP and other applicable government regulations and corresponding foreign standards. We do not have control over a third-party manufacturer's compliance with these regulations and standards. Any difficulties or delays in our contractors' manufacturing and supply of product candidates or any failure of our contractors to maintain compliance with the applicable regulations and standards could increase our costs, cause us to lose revenue, make us postpone or cancel clinical trials, or cause our products to be recalled or withdrawn.

The FDA requires that we demonstrate structural and functional comparability between the same product candidates manufactured by different organizations. Because we have used or intend to use multiple sources to manufacture many of our product candidates, we will need to conduct comparability studies to assess whether manufacturing changes have affected the product safety, identity, purity or potency of any recently manufactured product candidate compared to the product candidate used in prior clinical trials. If we are unable to demonstrate comparability, the FDA could require us to conduct additional clinical trials, which would be expensive and may significantly delay our clinical progress and the possible commercialization of such product candidates. Similarly, if we believe there may be comparability issues with any one of our product candidates, we may postpone or suspend manufacture of the product candidate to conduct further process development of such product candidate in order to alleviate such product comparability concerns, which may significantly delay the clinical progress of such product candidate or increase its manufacturing costs.

Our ADC technology is still at an early-stage of development.

Our ADC technology, utilizing proprietary stable linkers and highly potent cell-killing drugs, is still at a relatively early stage of development. This ADC technology is used in our SGN-35, SGN-75 and anti-CD19 ADC product candidates and is the basis of our collaborations with Genentech, Bayer, CuraGen, Progenics, MedImmune and Agensys. We and our corporate collaborators are conducting toxicology, pharmacology, pharmacokinetics and other preclinical studies and, although both we and CuraGen initiated clinical trials of ADC product candidates during 2006, significant additional studies may be required before other ADC product candidates enter human clinical trials. For example, we have observed evidence of toxicity in some preclinical models with certain drug-linkers and are focusing our efforts on drug-linkers with the best efficacy and lowest toxicity in order to maximize the therapeutic window of our ADC technology. In addition, preclinical models to study anti-cancer activity of compounds are not necessarily predictive of toxicity or efficacy of these compounds in the treatment of human cancer and there may be substantially different results in clinical trials from the results obtained in preclinical studies. Any failures or setbacks in our ADC program, including adverse effects resulting from the use of this technology in humans, could have a detrimental impact on our internal product candidate pipeline and our ability to maintain and/or enter into new corporate collaborations regarding these technologies, which would negatively affect our business and financial position.

We have a history of net losses. We expect to continue to incur net losses and may not achieve or maintain profitability for some time, if at all.

We have incurred substantial net losses in each of our years of operation and, as of September 30, 2007, we had an accumulated deficit of approximately \$213.6 million. We expect to make substantial expenditures to

Table of Contents

further develop and commercialize our product candidates, some of which will be reimbursed by Genentech as part of our SGN-40 collaboration, and anticipate that our rate of spending will accelerate as the result of the increased costs and expenses associated with research, development, clinical trials, manufacturing, regulatory approvals and commercialization of our potential products. In the near term, we expect our revenues to be derived from technology licensing fees, sponsored research fees and milestone payments under existing and future collaborative arrangements. In the longer term, our revenues may also include royalties from collaborations with current and future strategic partners and commercial product sales. However, our revenue and profit potential is unproven and our limited operating history makes our future operating results difficult to predict. We have never been profitable and may never achieve profitability and if we do achieve profitability, it may not be sustainable.

We will continue to need significant amounts of additional capital that may not be available to us.

We expect to make additional capital outlays and to increase operating expenditures over the next several years as we hire additional employees and support our preclinical development, manufacturing and clinical trial activities. Some of these expenditures will be reimbursed by Genentech as part of our SGN-40 collaboration; however, we may need to seek additional funding through public or private financings, including equity financings, and through other means, such as collaborations and license agreements. In addition, changes in our business may occur that would consume available capital resources sooner than we expect. If adequate funds are not available to us, we will be required to delay, reduce the scope of or eliminate one or more of our development programs. We do not know whether additional financing will be available when needed, or that, if available, we will obtain financing on terms favorable to our stockholders or us. Our future capital requirements will depend upon a number of factors, including:

the size, complexity, timing, and number of clinical programs;

our receipt of milestone-based payments or other revenue from our collaborations or license arrangements, including reimbursements for expenses pursuant to our SGN-40 collaboration with Genentech;

the ability to manufacture sufficient drug supply to complete clinical trials;

progress with clinical trials;

the time and costs involved in obtaining regulatory approvals;

the costs associated with acquisitions or licenses of additional products, including licenses we may need to commercialize our products;

the costs involved in preparing, filing, prosecuting, maintaining and enforcing patent claims;

the potential costs associated with state and federal taxes;

the timing and cost of milestone payment obligations as our product candidates progress towards commercialization;

competing technological and market developments; and

preparation for product commercialization.

To the extent that we raise additional capital by issuing equity securities, our stockholders may experience substantial dilution. To the extent that we raise additional funds through collaboration and licensing arrangements, we may be required to relinquish some rights to our technologies or product candidates, or grant licenses on terms that are not favorable to us.

We rely on license agreements for certain aspects of our product candidates and technology. Failure to maintain these license agreements or to secure any required new licenses could prevent us from developing or commercializing our product candidates and technology.

We have entered into agreements with third-party commercial and academic institutions to license technology for use in our product candidates and ADC technology. Currently, we have license agreements with

S-19

Table of Contents

Bristol-Myers Squibb, Arizona State University, Genentech, PDL BioPharma, CLB Research and Development, Eli Lilly (formerly ICOS), Mabtech AB, and the University of Miami, among others. Some of these license agreements contain diligence and milestone-based termination provisions, in which case our failure to meet any agreed upon diligence requirements or milestones may allow the licensor to terminate the agreement. Many of our license agreements grant us exclusive licenses to the underlying technologies. If our licensors terminate our license agreements or if we are unable to maintain the exclusivity of our exclusive license agreements, we may be unable to continue to develop and commercialize our product candidates. In addition, continued development and commercialization of our product candidates will likely require us to secure licenses to additional technologies. We may not be able to secure these licenses on commercially reasonable terms, if at all.

We rely on third parties to provide services in connection with our preclinical and clinical development programs. The inadequate performance by or loss of any of these service providers could affect our product candidate development.

Several third parties provide services in connection with our preclinical and clinical development programs, including *in vitro* and *in vivo* studies, assay and reagent development, immunohistochemistry, toxicology, pharmacokinetics and other outsourced activities. If these service providers do not adequately perform the services for which we have contracted or cease to continue operations and we are not able to quickly find a replacement provider or we lose information or items associated with our product candidates, our development programs may be delayed.

If we are unable to enforce our intellectual property rights, we may not be able to commercialize our product candidates. Similarly, if we fail to sustain and further build our intellectual property rights, competitors may be able to develop competing therapies.

Our success depends, in part, on obtaining and maintaining patent protection and successfully defending these patents against third party challenges in the United States and other countries. We own multiple U.S. and foreign patents and pending patent applications for our technologies. We also have rights to issued U.S. patents, patent applications, and their foreign counterparts, relating to our monoclonal antibody and drug-based technologies. Our rights to these patents and patent applications are derived in part from worldwide licenses from Bristol-Myers Squibb, Arizona State University and PDL BioPharma, among others. In addition, we have licensed our U.S. and foreign patents and patent applications to third parties.

Changes in either the patent laws or in interpretations of patent laws in the United States and other countries may diminish the value of our intellectual property. In particular, the U.S. Patent and Trademark Office recently issued revised regulations affecting prosecution before that office, and various pieces of legislation, including the Patent Reform Act of 2007, have been introduced or discussed in the U.S. Senate and Congress in the past few years. If implemented, these new regulations or legislation could, among other things, restrict our ability to prosecute applications in the U.S. Patent and Trademark Office, limit the number of patent claims in applications that we have previously filed or intend to file, and may lower the threshold required for competitors to challenge our patents in the U.S. Patent and Trademark Office after they have been granted.

The standards that the U.S. Patent and Trademark Office and foreign patent offices use to grant patents are not always applied predictably or uniformly and can change. Consequently, our pending patent applications may not be allowed and, if allowed, may not contain the type and extent of patent claims that will be adequate to conduct our business as planned. Additionally, any issued patents we currently own or obtain in the future may not contain claims that will permit us to stop competitors from using similar technology. Similarly, the standards that courts use to interpret patents are not always applied predictably or uniformly and may evolve, particularly as new technologies develop. As a result, the protection, if any, given by our patents if we attempt to enforce them or if they are challenged in court is uncertain.

We rely on trade secrets and other proprietary information where we believe patent protection is not appropriate or obtainable. However, trade secrets and other proprietary information are difficult to protect. We have taken measures to protect our unpatented trade secrets and know-how, including the use of confidentiality

Table of Contents

and assignment of inventions agreements with our employees, consultants and certain contractors. It is possible, however, that these persons may breach the agreements or that our competitors may independently develop or otherwise discover our trade secrets or other proprietary information.

Our research collaborators may publish data and information to which we have rights. If we cannot maintain the confidentiality of our technology and other confidential information in connection with our collaborations, then our ability to receive patent protection or protect our proprietary information may be impaired.

We may incur substantial costs and lose important rights as a result of litigation or other proceedings relating to patent and other intellectual property rights.

We may face potential patent infringement suits by companies that own or control patents for products similar to our product candidates or suits alleging infringement of such companies' other intellectual property. Because patent applications can take many years to publish, there may be currently pending applications of which we are unaware that may later result in issued patents that affect the commercial development of our product candidates. In addition, we are monitoring the progress of multiple pending patent applications of other companies that, if granted, may require us to license or challenge their validity upon commercialization of our products.

The defense and enforcement of intellectual property rights in a court of law, U.S. Patent and Trademark Office interference proceedings and related legal and administrative proceedings in the United States and elsewhere involve complex legal and factual questions. These proceedings are costly and time-consuming. If we become involved in any litigation, interference or other administrative proceedings, we will incur substantial expense and it will divert the efforts of our technical and management personnel. An adverse determination may subject us to significant liabilities or require us to seek licenses that may not be available from third parties on commercially reasonable terms, if at all. We may be restricted or prevented from developing and commercializing our product candidates in the event of an adverse determination in a judicial or administrative proceeding, or if we fail to obtain necessary licenses.

If we lose our key personnel or are unable to attract and retain additional qualified personnel, our future growth and ability to compete would suffer.

We are highly dependent on the efforts and abilities of the principal members of our senior management. Additionally, we have scientific personnel with significant and unique expertise in monoclonal antibodies and related technologies. The loss of the services of any one of the principal members of our managerial or scientific staff may prevent us from achieving our business objectives.

In addition, the competition for qualified personnel in the biotechnology field is intense, and our future success depends upon our ability to attract, retain and motivate highly skilled scientific, technical and managerial employees. In order to commercialize our products successfully, we will be required to expand our workforce, particularly in the areas of manufacturing, clinical trials management, regulatory affairs, business development and sales and marketing. These activities will require the addition of new personnel, including management, and the development of additional expertise by existing management personnel. We face intense competition for qualified individuals from numerous pharmaceutical and biotechnology companies, as well as academic and other research institutions. To the extent we are not able to attract and retain these individuals on favorable terms, our business may be harmed.

We face intense competition and rapid technological change, which may result in others discovering, developing or commercializing competing products before or more successfully than we do.

The biotechnology and pharmaceutical industries are highly competitive and subject to significant and rapid technological change. We are aware of many pharmaceutical and biotechnology companies that are actively engaged in research and development in areas related to antibody therapy. Some of these competitors have successfully commercialized antibody products or are developing or testing product candidates that do or may in the future compete directly with our product candidates. For example, we believe that companies including

Table of Contents

Genentech, Amgen, ImmunoGen, Biogen IDEC, Celgene, Medarex, Novartis, Pharmion and Wyeth are developing and/or marketing products or technologies that may compete with ours. Other potential competitors include large, fully integrated pharmaceutical companies and more established biotechnology companies, which have significant resources and expertise in research and development, manufacturing, testing, obtaining regulatory approvals and marketing. Also, academic institutions, government agencies and other public and private research organizations conduct research, seek patent protection and establish collaborative arrangements for research, development, manufacturing and marketing. It is possible that these competitors will succeed in developing technologies that are more effective than our product candidates or that would render our technology obsolete or noncompetitive. Our competitors may, among other things:

develop safer or more effective products;

implement more effective approaches to sales and marketing;

develop less costly products;

obtain quicker regulatory approval;

have access to more manufacturing capacity;

form more advantageous strategic alliances; or

establish superior proprietary positions.

In addition, if we receive regulatory approvals, we may compete with well-established, FDA-approved therapies that have generated substantial sales over a number of years. We anticipate that we will face increased competition in the future as new companies enter our market and scientific developments surrounding other cancer therapies continue to accelerate.

We have no experience in commercializing products on our own and, to the extent we do not develop this ability or contract with a third party to assist us, we may not be able to successfully sell our product candidates.

We do not have a sales and marketing force and may not be able to develop this capacity. If we are unable to establish sales and marketing capabilities, we will need to enter into sales and marketing agreements to market our products in the United States, except for SGN-40 for which Genentech will lead the sales and marketing efforts while we retain an ability to co-promote that product. For sales outside the United States, excluding SGN-40, we plan to enter into third-party arrangements. In these foreign markets, if we are unable to establish successful distribution relationships with pharmaceutical companies, we may fail to realize the full sales potential of some of our product candidates. Even if we are able to establish distribution agreements with pharmaceutical companies, we generally do not have control over the resources or degree of effort that any of these third-parties may devote to our collaborations, and if they fail to devote sufficient time and resources to our the marketing of our product candidates, or if their performance is substandard, it will adversely affect the sale of our product candidates.

Moreover, government health administrative authorities, private health insurers and other organizations are increasingly challenging both the need for and the price of new medical products and services. Consequently, uncertainty exists as to the reimbursement status of newly approved therapeutics and diagnostics. For these and other reasons, physicians, patients, third-party payors and the medical community may not accept and utilize any product candidates that we develop and even if they do, reimbursement may not be available for our products to enable us to maintain price levels sufficient to realize an appropriate return on our investment in research and product development. Similarly, even if we do receive reimbursement, the target market for our products may be small or the focus of intense competition and we may not realize an appropriate return on our investment in research and product development.

Table of Contents

We face product liability risks and may not be able to obtain adequate insurance to protect us against losses.

We currently have no products that have been approved for commercial sale. However, the current and future use of our product candidates by us and our corporate collaborators in clinical trials, and the sale of any approved products in the future, may expose us to liability claims. These claims might be made directly by consumers or healthcare providers or indirectly by pharmaceutical companies, our corporate collaborators or others selling such products. We may experience financial losses in the future due to product liability claims. We have obtained limited general commercial liability insurance coverage for our clinical trials. We intend to expand our insurance coverage to include the sale of commercial products if we obtain marketing approval for any of our product candidates. However, we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses. If a successful product liability claim or series of claims is brought against us for uninsured liabilities or in excess of insured liabilities, our assets may not be sufficient to cover such claims and our business operations could be impaired.

Our operations involve hazardous materials and are subject to environmental, health and safety controls and regulations.

We are subject to environmental, health and safety laws and regulations, including those governing the use of hazardous materials. The cost of compliance with environmental, health and safety regulations is substantial. Our business activities involve the controlled use of hazardous materials and we cannot eliminate the risk of accidental contamination or injury from these materials. In the event of an accident or environmental discharge, we may be held liable for any resulting damages, which may materially harm our business, financial condition and results of operations.

We may engage in future acquisitions that increase our capital requirements, dilute our stockholders, cause us to incur debt or assume contingent liabilities and subject us to other risks.

We actively evaluate various strategic transactions on an ongoing basis, including licensing or acquiring complementary products, technologies or businesses. Any potential acquisitions may entail numerous risks, including increased operating expenses and cash requirements, assimilation of operations and products, retention of key employees, diversion of our management's attention and uncertainties in our ability to maintain key business relationships of the acquired entities. In addition, if we undertake acquisitions, we may issue dilutive securities, assume or incur debt obligations, incur large one-time expenses and acquire intangible assets that could result in significant future amortization expense. Moreover, we may not be able to locate suitable acquisition opportunities and this inability could impair our ability to grow or obtain access to technology or products that may be important to the development of our business.

Legislative actions, potential new accounting pronouncements and higher insurance costs are likely to impact our future financial position or results of operations.

Future changes in financial accounting standards may cause adverse, unexpected revenue fluctuations and affect our financial position or results of operations. New pronouncements and varying interpretations of pronouncements have occurred with frequency in the past and may occur again in the future and as a result we may be required to make changes in our accounting policies, for example the recent requirement to expense stock options. Compliance with new regulations regarding corporate governance and public disclosure may result in additional expenses. As a result, we intend to invest all reasonably necessary resources to comply with evolving standards, and this investment may result in increased general and administrative expenses and a diversion of management time and attention from science and business activities to compliance activities. For example, we have incurred and expect to continue to incur substantial costs and expend significant resources to comply with the regulations promulgated under Section 404 of the Sarbanes-Oxley Act of 2002.

Risks Related to Our Stock and this Offering

Our stock price may be volatile and our shares may suffer a decline in value.

The market prices for securities of biotechnology companies have in the past been, and are likely to continue in the future to be, very volatile. During the fourth quarter of 2007, our stock price fluctuated between \$9.70 and \$13.44 per share. As a result of fluctuations in the price of our common stock, you may be unable to

Table of Contents

sell your shares at or above the price you paid for them. The market price of our common stock may be subject to substantial volatility in response to many risk factors listed in this section, and others beyond our control, including:

announcements regarding the results of discovery efforts and preclinical and clinical activities by us or our competitors;

termination of or changes in our existing corporate partnerships or licensing arrangements, especially our SGN-40 collaboration with Genentech;

establishment of new corporate partnering or licensing arrangements by us or our competitors;

our ability to raise capital;

developments or disputes concerning our proprietary rights;

issuance of new or changed analysts' reports and recommendations regarding us or our competitors;

share price and volume fluctuations attributable to inconsistent trading volume levels of our shares;

changes in government regulations; and

economic or other external factors.

Our existing stockholders have significant control of our management and affairs.

Our executive officers and directors and holders of greater than five percent of our outstanding voting stock, together with entities that may be deemed affiliates of, or related to, such persons or entities, beneficially owned approximately 51 percent of our voting power as of December 31, 2007. As a result, these stockholders, acting together, may be able to control our management and affairs and matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions, such as mergers, consolidations or the sale of substantially all of our assets. Consequently, this concentration of ownership may have the effect of delaying, deferring or preventing a change in control, including a merger, consolidation, takeover or other business combination involving us or discourage a potential acquirer from making a tender offer or otherwise attempting to obtain control, which might affect the market price of our common stock.

Anti-takeover provisions could make it more difficult for a third party to acquire us.

Our Board of Directors has the authority to issue up to 3,360,000 shares of preferred stock and to determine the price, rights, preferences, privileges and restrictions, including voting rights, of those shares without any further vote or action by the stockholders. The rights of the holders of common stock may be subject to, and may be adversely affected by, the rights of the holders of any preferred stock that may be issued in the future. The issuance of preferred stock may have the effect of delaying, deferring or preventing a change of control of Seattle Genetics without further action by the stockholders and may adversely affect the voting and other rights of the holders of common stock. Further, certain provisions of our charter documents, including provisions eliminating the ability of stockholders to take action by written consent and limiting the ability of stockholders to raise matters at a meeting of stockholders without giving advance notice, may have the effect of delaying or preventing changes in control or management of Seattle Genetics, which could have an adverse effect on the market price of our stock. In addition, our charter documents provide for a classified board, which may make it more difficult for a third party to gain control of our Board of Directors. Similarly, state anti-takeover laws in Delaware and Washington related to corporate takeovers may prevent or delay a change of control of Seattle Genetics.

You will experience immediate dilution in the book value per share of the common stock you purchase.

Since the price per share of our common stock being offered is substantially higher than the book value per share of our common stock, you will suffer substantial dilution in the net tangible book value of the common stock you purchase in this offering. Based on the public offering price of \$11.89 per share, if you purchase shares of common stock in this offering, you will suffer immediate and substantial dilution of \$9.60 per share in the net tangible book value of the common stock. See the section entitled **Dilution** below for a more detailed discussion of the dilution you will incur if you purchase common stock in this offering.

S-24

Table of Contents

Forward-Looking Statements

This prospectus supplement, the accompanying prospectus and the documents incorporated by reference in these documents include forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities-Exchange Act of 1934, as amended. We have based these forward-looking statements on our current expectations and projections about future events. Our actual results could differ materially from those discussed in, or implied by, these forward-looking statements. Any statement that is not a statement of historical fact should be considered a forward-looking statement. We often use words or phrases of expectation or uncertainty like believe, anticipate, plan, expect, intent, project, future, may, will, could, would and similar forward-looking statements. Forward-looking statements involve risks and uncertainties. Our actual results could differ significantly from the results discussed in these forward-looking statements, which include, but are not necessarily limited to, those relating to:

our financial resources and future use of cash;

future product research and development activities, including preclinical studies, clinical trials and

collaborations;

regulatory review and potential approval of our product candidates; and

competition.

Many factors could cause or contribute to these differences, including the factors described above under the caption Risk Factors. We caution you not place undue reliance on our forward-looking statements, which speak only as of the date on which they are made. We undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise. You should carefully read this entire prospectus supplement, the accompanying prospectus and the documents incorporated by reference in these documents, particularly the section entitled Risk Factors, before you make an investment decision.

Table of Contents

Use of Proceeds

Based on an assumed offering price of \$11.89 per share, we estimate that the net proceeds from this offering will be approximately \$111.8 million, or \$128.6 million if the underwriters' over-allotment option is exercised in full, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

A \$1.00 increase or decrease in the public offering price per share would increase or decrease the expected net proceeds by approximately \$9.4 million. We may also increase or decrease the number of shares we are offering. An increase or decrease of 1,000,000 shares in the number of shares offered by us would increase or decrease the expected net proceeds from this offering by approximately \$11.2 million. We do not expect that a change in the offering price or the number of shares by these amounts would have a material effect on our uses of the proceeds from this offering.

We intend to use the net proceeds from this offering to fund our research and development efforts, including clinical trials for our proprietary candidates, and for general corporate purposes, including working capital. We may also use a portion of the net proceeds to acquire or invest in complementary businesses, technologies, product candidates or other intellectual property, although we have no present commitments or agreements to do so. We expect that our net cash used in operating activities in 2008 will range from \$55 million to \$65 million. This statement reflects our current views about future events and is subject to significant risks and uncertainties, including those discussed below, those described more fully in other reports filed by us with the SEC and those described in the section entitled "Risk Factors" in this prospectus supplement. Because this statement reflects our current expectations concerning future events, our actual results could differ materially. The factors that could cause actual results to differ from our expectations include, but are not limited to, the timing of our manufacturing campaigns, accrual of patients to clinical trials, collaborative activities, the cost of filing and enforcing our patent claims and other intellectual property rights, competing technological and market developments and the progress of our collaborators.

The amounts and timing of these expenditures will depend on a number of factors, such as the timing and progress of our research and development efforts, technological advances and the competitive environment for our product candidates. As of the date of this prospectus supplement, we cannot specify with certainty all of the particular uses for the net proceeds to us from this offering. Accordingly, we will retain broad discretion over the use of these proceeds. Pending application of the net proceeds as described above, we intend to temporarily invest the proceeds in short and long-term interest bearing instruments.

Table of Contents**Capitalization**

The following table sets forth our consolidated cash, cash equivalents and short and long-term investments, and capitalization as of September 30, 2007:

on an actual basis; and

on an as adjusted basis after giving effect to our sale of 10,000,000 shares of common stock in this offering at an assumed public offering price of \$11.89 per share and after deducting estimated underwriting discounts and commissions and estimated offering expenses.

You should read this table along with Management's Discussion and Analysis of Financial Condition and Results of Operations and our historical consolidated financial statements and related notes and the other financial information included and incorporated by reference in this prospectus supplement and the accompanying prospectus.

Each \$1.00 increase or decrease in the offering price per share would increase or decrease the as adjusted figure shown below for cash, cash equivalents and short and long-term investments, additional paid-in-capital, total stockholders' equity and total capitalization by approximately \$9.4 million, after deducting estimated underwriting discounts and commissions. We may also increase or decrease the number of shares we are offering. An increase or decrease of 1,000,000 shares in the number of shares offered by us would increase or decrease the as adjusted figure below for cash, cash equivalents and short and long-term investments, additional paid-in-capital, total stockholders' equity and total capitalization by approximately \$11.2 million, after deducting estimated underwriting discounts and commissions.

| | As of September 30, 2007 | |
|---|----------------------------------|------------------------|
| | Actual | As adjusted |
| | (unaudited) | |
| | (in thousands, except | |
| | share and per share data) | |
| Cash, cash equivalents and short and long-term investments | \$ 124,228 | \$ 235,991 |
| Long-term debt | \$ | \$ |
| Stockholders' equity: | | |
| Preferred stock, par value \$0.001 per share; 5,000,000 shares authorized; no shares issued and outstanding, actual and as adjusted | | |
| Common stock, par value \$0.001 per share; 100,000,000 shares authorized; 67,206,418 shares issued and outstanding, actual; 77,206,418 shares issued and outstanding, as adjusted | 67 | 77 |
| Additional paid-in-capital | 278,131 | 389,884 |
| Accumulated other comprehensive gain | 51 | 51 |
| Accumulated deficit | (213,580) | (213,580) |
| Total stockholders' equity | 64,669 | 176,432 |
| Total capitalization | \$ 64,669 | \$ 176,432 |

The outstanding shares of our common stock outstanding excludes as of September 30, 2007:

7,611,130 shares of common stock issuable upon exercise of outstanding stock options at a weighted average exercise price of \$6.92 per share;

1,177,115 shares of common stock reserved for issuance under our 2000 Directors' Stock Option Plan and our 1998 Stock Option Plan;

588,275 shares of common stock reserved for issuance under our 2000 employee stock purchase plan; and

1,925,000 shares of our common stock subject to warrants outstanding at an exercise price of \$6.25 per share.

S-27

Table of Contents**Dilution**

If you invest in our common stock, your interest will be diluted to the extent of the difference between the public offering price per share you pay in this offering and the net tangible book value per share of our common stock immediately after this offering. As of September 30, 2007, our unaudited net tangible book value was \$64.7 million, or approximately \$0.96 per share. Net tangible book value is total assets minus the sum of liabilities and intangible assets. Net tangible book value per share is net tangible book value divided by the total number of shares of common stock outstanding.

Net tangible book value dilution per share to new investors represents the difference between the amount per share paid by purchasers of shares of common stock in this offering and the net tangible book value per share of our common stock immediately after completion of this offering. After giving effect to the sale of 10,000,000 shares of our common stock in this offering at an assumed public offering price of \$11.89 per share and after deducting the underwriting discounts and commissions and our estimated offering expenses, our adjusted net tangible book value as of September 30, 2007 would have been approximately \$176.4 million, or \$2.29 per share. The difference represents an immediate increase in net tangible book value of \$1.33 per share to existing stockholders and an immediate and substantial dilution in net tangible book value of \$9.60 per share to purchasers of common stock in this offering, as illustrated in the following table:

| | | |
|--|--|----------------|
| Assumed public offering price per share | | \$ 11.89 |
| Net tangible book value per share as of September 30, 2007 | | \$ 0.96 |
| Increase per share attributable to new investors | | 1.33 |
| As adjusted net tangible book value per share after the offering | | 2.29 |
| Dilution per share to new investors | | \$ 9.60 |

Each \$1.00 increase or decrease in the offering price per share would increase or decrease the as adjusted net tangible book value by \$9.4 million and the dilution to investors in the offering by \$0.88 per share, assuming that the number of shares offered in this offering, as set forth on the cover page of this prospectus supplement, remains the same. A 1,000,000 share increase or decrease in the number of shares offered would increase or decrease the as adjusted net tangible book value by \$11.2 million and the dilution to investors in the offering by \$0.12 per share, assuming that the offering price per share as set forth on the cover page of this prospectus supplement, remains the same. The as adjusted information discussed above is illustrative only. Our net tangible book value following the completion of the offering is subject to adjustment based on the actual offering price of our common stock and other terms of this offering determined at pricing.

If the underwriters exercise the over-allotment option granted by us in full, the as adjusted net tangible book value as of September 30, 2007, will increase to approximately \$2.46 per share, representing an increase to existing stockholders of approximately \$1.50 per share, and there will be an immediate dilution of approximately \$9.43 per share to new investors.

The information in the foregoing table does not take into account further dilution to new investors that could occur upon exercise of outstanding options having a per share exercise price less than the per share offering price to the public in this offering. As of September 30, 2007, there were 67,206,418 shares of common stock outstanding, which does not include:

7,611,130 shares of common stock issuable upon exercise of outstanding stock options at a weighted average exercise price of \$6.92 per share;

1,177,115 shares of common stock reserved for issuance under our 2000 Directors' Stock Option Plan and our 1998 Stock Option Plan;

588,275 shares of common stock reserved for issuance under our 2000 employee stock purchase plan; and

Edgar Filing: SEATTLE GENETICS INC /WA - Form 424B5

1,925,000 shares of our common stock subject to warrants outstanding at an exercise price of \$6.25 per share.

S-28

Table of Contents**Price Range of Our Common Stock**

Our common stock is traded on The Nasdaq Global Market under the symbol SGEN. As of January 10, 2008, there were 67,524,339 shares of our common stock outstanding, which were held by approximately 124 common stockholders of record. On January 10, 2008, the closing price of our common stock as reported by The Nasdaq Global Market was \$11.89 per share.

Our common stock has been quoted on The Nasdaq Global Market under the symbol SGEN since our initial public offering on March 6, 2001. The following table sets forth, for the periods indicated, the reported high and low sales prices per share of our common stock as reported by The Nasdaq Global Market:

| | High | Low |
|----------------|-------------|------------|
| 2005 | | |
| First Quarter | \$ 6.60 | \$ 4.59 |
| Second Quarter | 5.95 | 3.52 |
| Third Quarter | 6.52 | 4.86 |
| Fourth Quarter | 5.79 | 4.50 |
| 2006 | | |
| First Quarter | \$ 5.80 | \$ 4.55 |
| Second Quarter | 5.20 | 3.85 |
| Third Quarter | 4.94 | 3.80 |
| Fourth Quarter | 6.35 | 4.66 |
| 2007 | | |
| First Quarter | \$ 9.52 | \$ 5.14 |
| Second Quarter | 11.43 | 8.04 |
| Third Quarter | 12.12 | 8.53 |
| Fourth Quarter | 13.44 | 9.70 |

Dividend Policy

We have never declared or paid cash dividends on our capital stock. We currently intend to retain our future earnings, if any, for use in our business and therefore do not anticipate paying cash dividends in the foreseeable future. Payment of future dividends, if any, will be at the discretion of our board of directors after taking into account various factors, including our financial condition, operating results, current and anticipated cash needs and plans for expansion.

Table of Contents

Material United States Federal Income and Estate Tax Considerations for Non-United States Holders

The following summary describes the material United States federal income and estate tax consequences of the acquisition, ownership and disposition of common stock acquired in this offering by a non-United States holder (as defined below). This discussion does not address all aspects of United States federal income or estate taxation relating thereto, nor does it address any gift tax consequences or any tax consequences arising under any state, local or foreign tax laws, or any other U.S. federal tax laws. This summary is based on the Internal Revenue Code of 1986, as amended (the Code), United States Treasury Regulations, judicial decisions, and published rulings and administrative pronouncements of the Internal Revenue Service, or IRS, all as in effect as of the date hereof, and all of which are subject to change, possibly with retroactive effect. No ruling has been or will be sought from the IRS with respect to the matters discussed below, and there can be no assurance that the IRS will not take a contrary position regarding the tax consequences of the acquisition, ownership or disposition of our common stock, or that any such contrary position would not be sustained by a court.

This discussion is limited to non-United States holders who purchase our common stock issued pursuant to this offering and who hold our common stock as a capital asset within the meaning of Section 1221 of the Code (generally property held for investment purposes). This discussion does not address all of the U.S. federal income and estate tax consequences that may be relevant to non-United States holders in light of their particular circumstances or that may be relevant to holders subject to special treatment under the Code, such as financial institutions, insurance companies, tax-exempt organizations, broker-dealers and traders in securities, certain former United States citizens or residents, controlled foreign corporations, passive foreign investment companies, tax-qualified retirement plans, persons subject to the alternative minimum tax, corporations that accumulate earnings to avoid United States federal income tax, persons that hold our common stock as part of a straddle, hedge, conversion transaction, synthetic security or integrated investment, partnerships and other pass-through entities, and investors in such pass-through entities.

THE FOLLOWING DISCUSSION IS FOR GENERAL INFORMATION ONLY AND IS NOT TAX ADVICE. NON-UNITED STATES HOLDERS ARE URGED TO CONSULT THEIR OWN TAX ADVISORS TO DETERMINE THE PARTICULAR UNITED STATES FEDERAL, STATE, LOCAL AND NON-UNITED STATES INCOME AND OTHER TAX CONSEQUENCES TO THEM OF ACQUIRING, HOLDING AND DISPOSING OF SHARES OF OUR COMMON STOCK.

Except as otherwise described in the discussion of federal estate tax below, a non-United States holder is a beneficial holder of our common stock that is not a United States holder. A United States holder means a beneficial holder of our common stock that is for United States federal income tax purposes (i) an individual who is a citizen or resident of the United States, (ii) a corporation or other entity treated as a corporation created or organized in or under the laws of the United States, any state thereof or the District of Columbia, (iii) an estate the income of which is subject to United States federal income taxation regardless of its source or (iv) a trust if it (x) is subject to the primary supervision of a court within the United States and one or more United States persons have the authority to control all substantial decisions of the trust or (y) has a valid election in effect under applicable United States Treasury regulations to be treated as a United States person. If a partnership (including any entity or arrangement treated as a partnership for United States federal income tax purposes) acquires our common stock, the tax treatment of a partner therein will generally depend upon the status of the partner and the activities of the partnership. Persons who are partners of partnerships (including any entities or arrangements treated as a partnership for tax purposes) holding our common stock are urged to consult their tax advisors.

Distributions On Our Common Stock

If we make cash or other property distributions on our common stock, such distributions will constitute dividends for United States federal income tax purposes to the extent paid out of our current or accumulated earnings and profits, as determined under United States federal income tax principles. Any amounts distributed

Table of Contents

but not treated as dividends for United States federal income tax purposes first will constitute returns of capital and will reduce a holder's tax basis in our common stock, but not below zero, and then will be treated as gain from the sale or exchange of our common stock. Dividends paid to a non-United States holder of our common stock generally will be subject to United States federal withholding tax at a 30% rate, or such lower rate as may be specified by an applicable income tax treaty. To obtain a reduced rate of withholding under an income tax treaty, a non-United States holder must provide us or our paying agent with a properly executed IRS Form W-8BEN certifying the non-United States holder's entitlement to benefits under that treaty before any such payment is made. The Code and Treasury Regulations provide special rules to determine whether, for purposes of determining the applicability of an income tax treaty, dividends paid to a non-United States holder that is an entity should be treated as paid to the entity or to those holding interests in that entity. If a non-United States holder holds our common stock through a financial institution or other agent acting on the holder's behalf, the holder will be required to provide appropriate documentation to such agent. Dividends paid to a non-United States holder that are effectively connected with the holder's conduct of a trade or business within the United States are not subject to United States federal withholding tax. Instead, the effectively connected dividends will be subject to regular United States federal income tax, generally in the same manner as if the non-United States holder were a United States citizen or resident alien or a domestic corporation, as the case may be. If a non-United States holder is eligible for the benefits of an income tax treaty, however, effectively connected income generally will be subject to United States federal income tax only if it is also attributable to a permanent establishment maintained by the holder in the United States. A corporate non-United States holder receiving effectively connected dividends may also be subject to an additional branch profits tax, which is imposed, under certain circumstances, at a rate of 30% (or such lower rate resulting from an applicable income tax treaty) of the corporate non-United States holder's effectively connected earnings and profits, subject to certain adjustments. In order to claim exemption from United States federal withholding tax because the income is effectively connected with the conduct of a trade or business in the United States, or to claim the benefits of an income tax treaty, a non-United States holder must provide a properly executed IRS Form W-8ECI, for effectively connected income, or IRS Form W-8BEN, for treaty benefits. A non-United States holder that is eligible for a reduced rate of United States federal withholding tax pursuant to an income tax treaty may obtain a refund of any excess amounts currently withheld by filing an appropriate claim for refund with the IRS.

Gain On Disposition Of Our Common Stock

A non-United States holder generally will not be subject to United States federal income tax on gain realized upon a sale or other disposition of our common stock unless one of the following applies:

if the gain is effectively connected with a trade or business of such holder in the United States or, if an income tax treaty applies, the gain is attributable to a permanent establishment of the non-United States holder in the United States, the holder will be required to pay United States federal income tax on the net gain derived from the sale at generally applicable United States federal income tax rates, and corporate non-United States holders may be subject to the branch profits tax at a 30% rate or such lower rate resulting from an applicable income tax treaty;

if an individual non-United States holder is present in the United States for 183 or more days during the taxable year of the disposition and certain other conditions are met, such holder generally will be required to pay a flat 30% tax (or a reduced rate under an applicable income tax treaty) on the gain derived from the sale, which tax may be offset by United States source capital losses in the same taxable year (even though the holder is not considered a resident of the United States);

if we are or have been a United States real property holding corporation within the meaning of Code Section 897(c)(2) at any time within the shorter of the five-year period preceding such disposition or such non-United States holder's holding period for our common stock, Section 897 may apply to treat any gain recognized upon a sale or other disposition of our common stock as effectively connected with a trade or business in the United States, taxable in the manner described above. We believe that we are not, and do not anticipate becoming, a United States real property holding corporation, although there can be no assurance that conclusion is correct or might not

Table of Contents

change in the future based on changed circumstances. Even if we are, or become, a United States real property holding corporation, as long as our stock is regularly traded on an established securities market, gain realized by a non-United States holder on a disposition of our common stock will only be subject to United States federal income tax under Code Section 897 if the non-United States holder owns directly, indirectly and constructively, more than five percent of our common stock at any time within the shorter of (a) the five-year period preceding the disposition or (b) the holder's holding period.

Information Reporting Requirements And Backup Withholding

We must report annually to the IRS and to each non-United States holder the amount of any distributions on our common stock paid to such holder, the name and address of the holder, and the amount, if any, of United States federal tax withheld. Pursuant to income tax treaties or certain other agreements, the IRS may make its reports available to tax authorities in the holder's country of residence.

Distributions on or proceeds from the disposition of our common stock made to a non-United States holder may be subject to backup withholding (currently at a rate of 28%) unless the non-United States holder establishes an exemption, for example, by properly certifying its non-United States status on a properly executed IRS Form W-8BEN or other appropriate Form W-8.

Information reporting and backup withholding will apply to the proceeds of a disposition of our common stock effected by or through a United States office of a broker unless the disposing non-United States holder certifies as to its non-United States status, such as by providing a valid IRS Form W-8BEN, or otherwise establishes an exemption. Generally, United States information reporting and backup withholding will not apply to a payment of disposition proceeds to a non-United States holder where the transaction is effected outside the United States through a non-United States office of a non-United States broker. Information reporting, but not backup withholding, will apply to a payment of disposition proceeds to a non-United States holder through a non-United States office of a United States broker or a broker with substantial United States ownership or operations if the broker does not have documentary evidence that the beneficial owner is a non-United States holder and an exemption is not otherwise established.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against a non-United States holder's United States federal income tax liability, provided the required information is timely furnished to the IRS.

Federal Estate Tax

An individual who at the time of death is not a citizen or resident of the United States and who is treated as the owner of, or has made certain lifetime transfers of, an interest in our common stock will be required to include the value thereof in his gross estate for United States federal estate tax purposes, and may be subject to United States federal estate tax unless an applicable estate tax treaty provides otherwise. The test for whether an individual is a resident of the United States for federal estate tax purposes differs from the test used for United States federal income tax purposes. Some individuals, therefore, may be non-United States holders for United States federal income tax purposes, but not for United States federal estate tax purposes, and vice versa.

THE PRECEDING DISCUSSION OF UNITED STATES FEDERAL INCOME AND ESTATE TAX CONSIDERATIONS IS FOR GENERAL INFORMATION ONLY. IT IS NOT TAX ADVICE. EACH PROSPECTIVE INVESTOR SHOULD CONSULT ITS OWN TAX ADVISOR REGARDING THE TAX CONSEQUENCES OF PURCHASING, HOLDING AND DISPOSING OF OUR COMMON STOCK.

Table of Contents**Underwriting**

We are offering the shares of common stock described in this prospectus supplement through a number of underwriters. J.P. Morgan Securities Inc. and UBS Securities LLC are acting as joint book running managers of the offering and as representatives of the underwriters. We have entered into an underwriting agreement with the underwriters. Subject to the terms and conditions of the underwriting agreement, we have agreed to sell to the underwriters, and each underwriter has severally agreed to purchase, at the public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus supplement, the number of shares of common stock listed next to its name in the following table:

| Name | Number of Shares |
|---------------------------------|-------------------|
| J.P. Morgan Securities Inc. | |
| UBS Securities LLC | |
| RBC Capital Markets Corporation | |
| Needham & Company, LLC | |
| William Blair & Company, LLC | |
| Total | 10,000,000 |

The underwriters are committed to purchase all the common shares offered by us if they purchase any shares. The underwriting agreement also provides that if an underwriter defaults, the purchase commitments of non-defaulting underwriters may also be increased or the offering may be terminated.

The underwriters propose to offer the shares of common stock directly to the public at the public offering price set forth on the cover page of this prospectus supplement and to certain dealers at that price less a concession not in excess of \$ _____ per share. Any such dealers may resell shares to certain other brokers or dealers at a discount of up to \$ _____ per share from the public offering price. After the public offering of the shares, the offering price and other selling terms may be changed by the underwriters.

The underwriters have an option to buy up to 1,500,000 additional shares of common stock from us to cover sales of shares by the underwriters which exceed the number of shares specified in the table above. The underwriters have 30 days from the date of this prospectus supplement to exercise this over-allotment option. If any shares are purchased with this over-allotment option, the underwriters will purchase shares in approximately the same proportion as shown in the table above. If any additional shares of common stock are purchased, the underwriters will offer the additional shares on the same terms as those on which the shares are being offered.

The underwriting fee is equal to the public offering price per share of common stock less the amount paid by the underwriters to us per share of common stock. The underwriting fee is \$ _____ per share. The following table shows the per share and total underwriting discounts and commissions we will pay to the underwriters assuming both no exercise and full exercise of the underwriters' option to purchase additional shares.

| Per Share | No Exercise | Full Exercise |
|------------------------|-------------|---------------|
| Total to be paid by us | \$ _____ | \$ _____ |

We estimate that the total expenses of this offering, including registration, filing and listing fees, printing fees and legal and accounting expenses, but excluding the underwriting discounts and commissions, will be approximately \$300,000.

We, our directors and executive officers, and certain of our significant shareholders have entered into lock-up agreements with the underwriters prior to the commencement of this offering pursuant to which we and each of these persons or entities, with limited exceptions, for a period of 90 days after the date of this prospectus, may not, without the prior written consent of J.P. Morgan Securities Inc. and UBS Securities LLC, (1) offer, pledge, announce the intention to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any shares of our common stock (including, without limitation, common stock which may be deemed to be beneficially owned by such directors, executive officers, managers and members in accordance with the rules and regulations of the SEC and securities which may be issued upon exercise of a stock

Table of Contents

option or warrant) or (2) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of the common stock, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of common stock or such other securities, in cash or otherwise. Notwithstanding the foregoing, if (1) during the last 17 days of the 90-day restricted period, we issue an earnings release or material news or a material event relating to our company occurs; or (2) prior to the expiration of the 90-day restricted period, we announce that we will release earnings results during the 16-day period beginning on the last day of the 90-day period, the restrictions described above shall continue to apply until the expiration of the 18-day period beginning on the issuance of the earnings release or the occurrence of the material news or material event.

These restrictions do not apply to (a) bona fide gifts, (b) transfers by will or intestate succession to a member of the immediate family of our stockholders, or to a trust for the benefit of such immediate family member or (c) dispositions to any trust, partnership, limited liability company or other entity for the direct or indirect benefit of the undersigned and/or the immediate family of the undersigned; provided that, in the case of any such transfer or disposition, (i) each donee or transferee agrees to be bound by the terms of the lock-up agreement for the remainder of the restricted period and (ii) no filing by any recipient with the SEC shall be required or shall be made voluntarily in connection with such transfer or distribution, other than a filing on Form 3, 5, 13G or 13D.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act of 1933, as amended.

Our common stock is listed on The Nasdaq Global Market under the symbol `SGEN`.

In connection with this offering, the underwriters may engage in stabilizing transactions, which involves making bids for, purchasing and selling shares of common stock in the open market for the purpose of preventing or retarding a decline in the market price of the common stock while this offering is in progress. These stabilizing transactions may include making short sales of the common stock, which involves the sale by the underwriters of a greater number of shares of common stock than they are required to purchase in this offering, and purchasing shares of common stock on the open market to cover positions created by short sales. Short sales may be covered shorts, which are short positions in an amount not greater than the underwriters' over-allotment option referred to above, or may be naked shorts, which are short positions in excess of that amount. The underwriters may close out any covered short position either by exercising their over-allotment option, in whole or in part, or by purchasing shares in the open market. In making this determination, the underwriters will consider, among other things, the price of shares available for purchase in the open market compared to the price at which the underwriters may purchase shares through the over-allotment option. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of the common stock in the open market that could adversely affect investors who purchase in this offering. To the extent that the underwriters create a naked short position, they will purchase shares in the open market to cover the position.

The underwriters have advised us that, pursuant to Regulation M of the Securities Act of 1933, as amended, they may also engage in other activities that stabilize, maintain or otherwise affect the price of the common stock, including the imposition of penalty bids. This means that if the representatives of the underwriters purchase common stock in the open market in stabilizing transactions or to cover short sales, the representatives can require the underwriters that sold those shares as part of this offering to repay the underwriting discount received by them.

These activities may have the effect of raising or maintaining the market price of the common stock or preventing or retarding a decline in the market price of the common stock, and, as a result, the price of the common stock may be higher than the price that otherwise might exist in the open market. If the underwriters commence these activities, they may discontinue them at any time. The underwriters may carry out these transactions on The Nasdaq Global Market, in the over-the-counter market or otherwise.

Table of Contents

In addition, in connection with this offering certain of the underwriters (and selling group members) may engage in passive market making transactions in our common stock on The Nasdaq Global Market prior to the pricing and completion of this offering. Passive market making consists of displaying bids on The Nasdaq Global Market no higher than the bid prices of independent market makers and making purchases at prices no higher than these independent bids and effected in response to order flow. Net purchases by a passive market maker on each day are generally limited to a specified percentage of the passive market maker's average daily trading volume in the common stock during a specified period and must be discontinued when such limit is reached. Passive market making may cause the price of our common stock to be higher than the price that otherwise would exist in the open market in the absence of these transactions. If passive market making is commenced, it may be discontinued at any time.

A prospectus in electronic format may be made available on the web sites maintained by one or more underwriters, or selling group members, if any, participating in the offering. The underwriters may agree to allocate a number of shares to underwriters and selling group members for sale to their online brokerage account holders. Internet distributions will be allocated by the representatives to underwriters and selling group members that may make Internet distributions on the same basis as other allocations.

Each underwriter has represented that (i) it has only communicated or caused to be communicated and will only communicate or cause to be communicated any invitation or inducement to engage in investment activity (within the meaning of Section 21 of the FSMA) received by it in connection with the issue or sale of any common stock in circumstances in which Section 21(1) of the FSMA does not apply to us and (ii) it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the shares in, from or otherwise involving the United Kingdom.

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a Relevant Member State), each underwriter has represented and agreed that with effect from and including the date on which the European Union Prospectus Directive (the EU Prospectus Directive) is implemented in that Relevant Member State (the Relevant Implementation Date) it has not made and will not make an offer of common stock to the public in that Relevant Member State prior to the publication of a prospectus in relation to the shares which has been approved by the competent authority in that Relevant Member State or, where appropriate, approved in another Relevant Member State and notified to the competent authority in that Relevant Member State, all in accordance with the EU Prospectus Directive, except that it may, with effect from and including the Relevant Implementation Date, make an offer of shares to the public in that Relevant Member State at any time:

to legal entities which are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities;

to any legal entity which has two or more of (1) an average of at least 250 employees during the last financial year; (2) a total balance sheet of more than 43,000,000 and (3) an annual net turnover of more than 50,000,000, as shown in its last annual or consolidated accounts;

to fewer than 100 natural or legal persons (other than qualified investors as defined in the EU Prospectus Directive) subject to obtaining the prior consent of the book-running managers for any such offer; or

in any other circumstances which do not require the publication by the Issuer of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an offer of shares to the public in relation to any shares in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the shares to be offered so as to enable an investor to decide to purchase or subscribe the shares, as the same may be varied in that Member State by any measure implementing the EU Prospectus Directive in that Member State and the expression EU Prospectus Directive means Directive 2003/71/EC and includes any relevant implementing measure in each Relevant Member State.

Table of Contents

Additionally, certain of the underwriters and their affiliates have provided in the past to us and our affiliates and may provide from time to time in the future certain commercial banking, financial advisory, investment banking and other services for us and such affiliates in the ordinary course of their business, for which they have received and may continue to receive customary fees and commissions. In addition, from time to time, certain of the underwriters and their affiliates may effect transactions for their own account or the account of customers, and hold on behalf of themselves or their customers, long or short positions in our debt or equity securities or loans, and may do so in the future.

Certain entities affiliated with J.P. Morgan Securities Inc. hold approximately 7.8% of our common stock as of December 31, 2007, assuming the exercise of warrants owned by these entities.

S-36

Table of Contents

Legal Matters

Heller Ehrman LLP, Seattle, Washington will pass upon the validity of the common stock offered by this prospectus supplement for us. Members of Heller Ehrman own 7,496 shares of the Company's common stock. Sonya F. Erickson, a Shareholder of Heller Ehrman LLP, is the Assistant Secretary of the Company. Latham & Watkins LLP, Costa Mesa, California, is counsel for the underwriters in connection with this offering.

Experts

The financial statements and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Report on Internal Control over Financial Reporting) incorporated in this Prospectus Supplement by reference to the Annual Report on Form 10-K for the year ended December 31, 2006 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

Where You Can Find More Information

This prospectus supplement and the accompanying prospectus are part of the registration statement on Form S-3 we filed with the SEC under the Securities Act of 1933, as amended, and do not contain all the information set forth in the registration statement. Whenever a reference is made in this prospectus supplement or the accompanying prospectus to any of our contracts, agreements or other documents, the reference may not be complete and you should refer to the exhibits that are a part of the registration statement or the exhibits to the reports or other documents incorporated by reference in this prospectus supplement and the accompanying prospectus for a copy of such contract, agreement or other document. Because we are subject to the information and reporting requirements of the Securities Exchange Act of 1934, as amended, we file annual, quarterly and special reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's web site at <http://www.sec.gov>. You may also read and copy any document we file at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the Public Reference Room.

Information Incorporated by Reference

The SEC allows us to incorporate by reference information from other documents that we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus supplement and the accompanying prospectus. Information contained in this prospectus supplement and the accompanying prospectus and information that we file with the SEC in the future and incorporate by reference in this prospectus supplement and the accompanying prospectus will automatically update and supersede this information. We incorporate by reference the documents listed below and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, after the date of the prospectus supplement and before the sale of all the securities covered by this prospectus supplement:

The Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2006;

The Registrant's Quarterly Report on Form 10-Q for the quarters ended March 31, 2007; June 30, 2007 and September 30, 2007;

The Registrant's Current Reports on Form 8-K filed on January 8, 2007, January 24, 2007, June 1, 2007, June 14, 2007, (other than portions of reports furnished but not filed pursuant to Commission rules);

All other reports filed pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the Exchange Act), since the end of the fiscal year covered by the Annual Report referred to in the first bullet point above; and

Table of Contents

The description of the Registrant's Common Stock contained in the Registrant's Registration Statement on Form 8-A filed with the Commission on February 28, 2001 under the Exchange Act, as amended, including any amendments or reports filed for the purpose of updating such description.

You may request a copy of these filings, at no cost, by telephoning our Investor Relations department at (425) 527-4000 or writing us at:

Investor Relations

Seattle Genetics, Inc.

21823 30th Drive SE

Bothell, WA 98021

S-38

Table of Contents

PROSPECTUS

\$150,000,000

COMMON STOCK

Seattle Genetics, Inc. may offer shares of its common stock, \$0.001 par value per share, from time to time. We will specify in an accompanying prospectus supplement the terms of any offering. Our common stock is traded on the Nasdaq Global Market under the trading symbol SGEN. On November 8, 2007, the last reported sale price of our common stock on the Nasdaq Global Market was \$10.97 per share. The common stock offered by this prospectus will have an aggregate public offering price of up to \$150,000,000.

You should read this prospectus, any prospectus supplement and the documents incorporated by reference in this prospectus and any prospectus supplement carefully before you invest.

The common stock offered by this prospectus may be sold directly by us to investors, through agents designated from time to time or to or through underwriters or dealers. We will set forth the names of any underwriters or agents in an accompanying prospectus supplement. For additional information on the methods of sale, you should refer to the section entitled Plan of Distribution. The net proceeds we expect to receive from such sale will also be set forth in a prospectus supplement.

Investing in our common stock involves a high degree of risk. See the section entitled Risk Factors in our annual report for the year ended December 31, 2006 and our most recent quarterly report on Form 10-Q for the quarter ended June 30, 2007, both as filed with the Securities and Exchange Commission and the section entitled Risk Factors on page 4, as well as any amendment or update thereto reflected in subsequent filings with the Securities and Exchange Commission, including any prospectus supplement.

This prospectus may not be used to offer or sell any of our common stock unless accompanied by a prospectus supplement.

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

The date of this prospectus is December 11, 2007.

Table of Contents

TABLE OF CONTENTS

| | Page |
|--|-------------|
| <u>SEATTLE GENETICS, INC.</u> | 3 |
| <u>ABOUT THIS PROSPECTUS</u> | 3 |
| <u>RISK FACTORS</u> | 4 |
| <u>SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS</u> | 4 |
| <u>USE OF PROCEEDS</u> | 5 |
| <u>DESCRIPTION OF CAPITAL STOCK</u> | 5 |
| <u>PLAN OF DISTRIBUTION</u> | 8 |
| <u>LEGAL MATTERS</u> | 10 |
| <u>EXPERTS</u> | 10 |
| <u>WHERE YOU CAN FIND MORE INFORMATION</u> | 10 |
| <u>INFORMATION INCORPORATED BY REFERENCE</u> | 10 |

Table of Contents

SEATTLE GENETICS, INC.

We are a biotechnology company developing monoclonal antibody-based therapies for the treatment of cancer and autoimmune diseases. Our business strategy is focused on advancing our portfolio of product candidates in diseases with unmet medical need and significant market potential. We currently have four product candidates in ongoing clinical trials, SGN-40, SGN-33, SGN-35 and SGN-30. In addition, we have three other lead preclinical product candidates, SGN-70, SGN-75 and an anti-CD19 antibody-drug conjugate. Our pipeline of product candidates is based upon two technologies: genetically engineered monoclonal antibodies and monoclonal antibody-drug conjugates (ADCs). These technologies enable us to develop monoclonal antibodies that can kill target cells on their own as well as to increase the potency of monoclonal antibodies by linking them to a cell-killing payload to form an ADC.

In addition to our internal pipeline of product candidates, we have ADC collaborations with leading biotechnology and pharmaceutical companies, including Genentech, Bayer, CuraGen, Progenics, MedImmune and PDL BioPharma, as well as an ADC co-development agreement with Agensys. We also have internal research and in-licensing programs for novel antigens and new monoclonal antibodies to provide future opportunities for pipeline growth.

We were incorporated in Delaware on July 15, 1997. Our principal executive offices are located at 21823 30th Drive SE, Bothell, WA 98021. Our telephone number is (425) 527-4000. Our web site is www.seattlegenetics.com. Information contained on our web site does not constitute a part of this prospectus. Unless the context requires otherwise, in this prospectus the terms Seattle Genetics, we, us and our refer to Seattle Genetics, Inc. and the Seattle Genetics, Inc. logo and all other Seattle Genetics names are trademarks of Seattle Genetics, Inc. This prospectus also includes trademarks, trade names and service marks of other companies. Use by us of other parties' trademarks, trade names or service marks is not intended to and does not imply a relationship with, or endorsement or sponsorship of us by, these other parties and such names or marks are the property of their respective holders.

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the SEC using a shelf registration process. Under this shelf registration process, we may sell common stock described in this prospectus in one or more offerings up to a total dollar amount of \$150,000,000. This prospectus provides you with a general description of the securities we may offer. Each time we offer securities, we will provide you with a prospectus supplement that will describe the specific amounts, prices and terms of the offered securities. The prospectus supplement may also add, update or change information contained in this prospectus. This prospectus, together with applicable prospectus supplements and the documents incorporated by reference in this prospectus and any prospectus supplement, includes all material information relating to this offering. Please read carefully both this prospectus and any prospectus supplement together with additional information described below under **Where You Can Find More Information** and **Information Incorporated by Reference**.

You should rely only on the information contained or incorporated by reference in this prospectus or a prospectus supplement. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus or any prospectus supplement, as well as information we have previously filed with the SEC and incorporated by reference, is accurate as of the date on the front of those documents only. Our business, financial condition, results of operations and prospects may have changed since those dates. **This prospectus may not be used to consummate a sale of our securities unless it is accompanied by a prospectus supplement.**

Table of Contents

RISK FACTORS

An investment in our securities involves a high degree of risk. You should consider carefully the section entitled "Risk Factors" contained in our most recent quarterly report on Form 10-Q filed with the SEC, which is incorporated herein by reference in its entirety, as well as other information in this prospectus and the prospectus supplement before purchasing any of our securities. Each of the factors set forth in that section or in this prospectus or any prospectus supplement could adversely affect our business, operating results and financial condition, and could adversely affect the value of an investment in our securities.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents that we have filed with the SEC that are included or incorporated or deemed to be incorporated by reference in this prospectus include "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. You can identify these statements by the fact that they do not relate strictly to historical or current facts. Such statements may include words such as "anticipate," "estimate," "expect," "project," "intend," "plan," "believe," "may," "might," "predict," "should" and other similar words and terms of similar meaning in connection with any discussion of future operating or financial performance. In particular, these statements include, among other things, statements relating to:

the development of our product candidates;

the establishment and development of collaborative partnerships;

our ability to identify new potential product candidates;

our ability to achieve commercial acceptance of our product candidates;

our ability to scale-up our manufacturing capabilities and facilities;

the use of proceeds from this offering;

our projected capital expenditures; and

our liquidity.

Any or all of our forward-looking statements in this prospectus and in the documents incorporated or deemed to be incorporated by reference in this prospectus may turn out to be wrong. They can be affected by inaccurate assumptions we might make or by known or unknown risks and uncertainties. Many factors mentioned in our discussion in this prospectus will be important in determining future results. Consequently, no forward-looking statement can be guaranteed. Actual future results may vary materially.

We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise. We advise you to consult the cautionary discussion of risks and uncertainties under "Risk Factors" contained in our most recent quarterly report on Form 10-Q and any section entitled "Risk Factors" in any prospectus supplement. These are factors that we think could cause our actual results to differ materially from expected results. Other factors besides those listed could also adversely affect us. This discussion is provided as permitted by the Private Securities Litigation Reform Act of 1995.

Table of Contents

USE OF PROCEEDS

Unless otherwise indicated in any accompanying prospectus supplement, we expect to use the net proceeds from the sale of the offered securities for clinical and preclinical development and manufacturing of existing product candidates, discovery and development of additional product opportunities, capital expenditures and working capital and other general corporate purposes. Although we currently have no plans to acquire any complementary businesses, our management has broad discretion as to the allocation of the net proceeds received in this offering and may use these proceeds for that purpose in the future. Pending use of the net proceeds, we intend to invest the net proceeds in interest-bearing, investment-grade securities.

DESCRIPTION OF CAPITAL STOCK

Our authorized capital stock consists of 100,000,000 shares of common stock, \$0.001 par value per share, and 5,000,000 shares of preferred stock, \$0.001 par value per share, of which 1,640,000 shares have been designated Series A convertible preferred stock. The following summary of the provisions of the common stock and preferred stock is not complete and may not contain all the information you should consider before investing in our common stock. You should read carefully our certificate of incorporation and bylaws.

Common Stock

As of November 8, 2007, there were 67,363,517 shares of common stock outstanding, held of record by approximately 123 stockholders. The holders of common stock are entitled to one vote per share on all matters to be voted on by the stockholders. Subject to the preferences of any outstanding shares of preferred stock, the holders of common stock are entitled to receive ratably any dividends our Board of Directors declares out of funds legally available for the payment of dividends. If we are liquidated, dissolved or wound up, the holders of common stock are entitled to share pro rata all assets remaining after payment of liabilities and liquidation preferences of any outstanding shares of preferred stock. Holders of common stock have no preemptive rights or rights to convert their common stock into any other securities. There are no redemption or sinking fund provisions applicable to the common stock. All outstanding shares of common stock are fully paid and nonassessable, and the shares of common stock to be issued under this prospectus will be fully paid and nonassessable.

Preferred Stock

Of the 5,000,000 shares of preferred stock authorized, we have designated 1,640,000 shares as Series A convertible preferred stock, all of which have been previously issued and converted to common stock. Pursuant to our certificate of incorporation, our Board of Directors has the authority, without further action by the stockholders, to issue the remaining 3,360,000 shares of preferred stock in one or more series. Our Board of Directors also has the authority to fix the designations, powers, preferences, privileges and relative, participating, optional or special rights and the qualifications, limitations or restrictions of any preferred stock issued, including dividend rights, conversion rights, voting rights, terms of redemption and liquidation preferences, any or all of which may be greater than the rights of the common stock. Our Board of Directors, without stockholder approval, may issue preferred stock with voting, conversion or other rights that are superior to the voting and other rights of the holders of common stock. The issuance of preferred stock may have the effect of delaying, deferring or preventing a change of control of Seattle Genetics without further action by the stockholders and may have the effect of delaying or preventing changes in management of Seattle Genetics. In addition, the issuance of preferred stock may decrease the market price of the common stock.

Warrants

We issued warrants to purchase 2,050,000 shares of common stock in connection with the issuance and sale of our Series A convertible preferred stock to the purchasers of the Series A convertible preferred stock in May

Table of Contents

2003, of which 1,925,000 remain outstanding. Each warrant is exercisable for a number of shares that represents 12.5% of the common stock into which the Series A convertible preferred stock purchased by each Series A investor was initially convertible. The per share exercise price of the common stock warrant is \$6.25. The warrants are exercisable in whole or in part at any time on or before December 31, 2011, and expire if not exercised prior to such time. The warrants provide for a cashless exercise by the warrant holder if available. The warrant exercise price and the number of shares subject to the warrants are subject to adjustment in certain events including: stock subdivisions, combinations, splits, stock dividends, capital reorganizations, or capital reclassifications of our common stock. The preceding summary is qualified in its entirety by reference to the terms and provisions of the form of Warrant attached as an exhibit to our current report on Form 8-K filed with the SEC on May 15, 2003.

Registration Rights

Pursuant to the Investor Rights Agreement entered into in connection with the issuance and sale of our Series A convertible preferred stock dated July 8, 2003, certain holders of our common stock are entitled to registration rights under the Securities Act with respect to their shares of common stock, as applicable, if we propose to register any of our common stock. Such holders are entitled to notice of the registration and to include shares of their common stock in the registration at our expense. In addition, such holders are entitled to require us to file a registration statement under the Securities Act at our expense. Furthermore, such holders may require us to file additional registration statements on Form S-3 at our expense. All of these registration rights are subject to conditions and limitations, including the right of the underwriters of an offering to limit the number of shares included in such registration and our right to decline to affect such a registration if the anticipated aggregate offering price in such registration is below a minimum amount.

Anti-takeover Effects of Provisions of Delaware Law, Washington Law and Our Charter Documents

Charter Documents

As noted above, our Board of Directors, without stockholder approval, has the authority under our certificate of incorporation to issue preferred stock with rights superior to the rights of the holders of common stock. As a result, the issuance of preferred stock may have the effect of delaying, deferring or preventing a change of control of Seattle Genetics without further action by the stockholders and may adversely affect the voting and other rights of the holders of common stock.

Our certificate of incorporation provides for our Board of Directors to be divided into three classes, with staggered three-year terms. As a result, only one class of directors will be elected at each annual meeting of stockholders, with the other classes continuing for the remainder of their respective three-year terms. Stockholders have no cumulative voting rights, and the stockholders representing a majority of the shares of common stock outstanding are able to elect the directors.

Our certificate of incorporation also requires that any action required or permitted to be taken by our stockholders must be effected at a duly called annual or special meeting of the stockholders and may not be effected by a consent in writing and that the stockholders may amend our bylaws or adopt new bylaws, only by the affirmative vote of 66 2/3rds percent of the outstanding voting securities. A special meeting of the stockholders may be called by our Chairman, our Chief Executive Officer, or a resolution adopted by a majority of the total number of authorized directors or stockholders owning 10% or more of our outstanding voting capital stock. These provisions may have the effect of delaying, deferring or preventing a change in control and may also delay or prevent changes in management of Seattle Genetics, which could have an adverse effect on the market price of our stock.

These and other provisions are intended to enhance the likelihood of continued stability in the composition of our Board of Directors and to discourage certain types of transactions that may involve an actual or threatened

Table of Contents

change of control. However, such provisions could have the effect of discouraging others from making tender offers for our shares and, as a consequence, such provisions also may inhibit fluctuations in the market price of our shares that could result from actual or rumored takeover attempts.

Section 203 of the Delaware General Corporation Law

We are subject to the provisions of Section 203 of the Delaware General Corporation Law. In general, the statute prohibits a publicly held Delaware corporation from engaging in a business combination with an interested stockholder for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner. For purposes of Section 203, a business combination includes a merger, asset sale or other transaction resulting in a financial benefit to the interested stockholder, and an interested stockholder is a person who, together with affiliates and associates, owns (or within three years prior, did own) 15% or more of the corporation's voting stock.

Chapter 23B.19 of the Washington Business Corporation Act

We are also subject to the provisions of Chapter 23B.19 of the Washington Business Corporation Act that imposes restrictions on certain transactions between a corporation and certain significant stockholders. The Washington Business Corporation Act generally prohibits a target corporation from engaging in certain significant business transactions with an acquiring person, which is defined as a person or group of persons that beneficially owns 10% or more of the voting securities of the target corporation, for a period of five years after such acquisition, unless the transaction or acquisition of shares is approved by a majority of the members of the target corporation's Board of Directors prior to the time of the acquisition or at or subsequent to the acquiring person's share acquisition time, such significant business transaction is approved by a majority of the members of the target corporation's Board of Directors and authorized at an annual or special meeting of shareholders by the affirmative vote of at least two-thirds of the outstanding voting shares, except for shares beneficially owned by or under the voting control of the acquiring person. Such prohibited transactions include, among other things,

a merger or consolidation with, disposition of assets to, or issuance or redemption of stock to or from, the acquiring person;

termination of 5% or more of the employees of the target corporation as a result of the acquiring person's acquisition of 10% or more of the shares; or

allowing the acquiring person to receive any disproportionate benefit as a stockholder.

After the five-year period, a significant business transaction may occur if it complies with fair price provisions specified in the statute. This provision may have the effect of delaying, deterring or preventing a change in control of Seattle Genetics.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Mellon Investor Services LLC. Its address is P.O. Box 3316, South Hackensack, NJ 07606 and its telephone number is (800) 522-6645.

Nasdaq Global Market Listing

Our common stock is quoted on the Nasdaq Global Market under the symbol **SGEN**.

Table of Contents

PLAN OF DISTRIBUTION

We may sell our common stock through underwriters or dealers, through agents, or directly to one or more purchasers. The prospectus supplement or supplements will describe the terms of the offering of the common stock, including:

the name or names of any underwriters, if any;

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

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

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

any initial public offering price;

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

any securities exchange or market on which our common stock may be listed.

Only underwriters named in the prospectus supplement are underwriters of the securities offered by the prospectus supplement.

If underwriters are used in the sale, they will acquire the common stock for their own account and may resell the common stock from time to time in one or more transactions at a fixed public offering price. The obligations of the underwriters to purchase the common stock will be subject to the conditions set forth in the applicable underwriting agreement. We may offer the common stock to the public through underwriting syndicates represented by managing underwriters or by underwriters without a syndicate. Subject to certain conditions, the underwriters will be obligated to purchase all the common stock offered by the prospectus supplement. Any public offering price and any discounts or concessions allowed or reallocated or paid to dealers may change from time to time. We may use underwriters with whom we have a material relationship. We will describe in the prospectus supplement, naming the underwriter, the nature of any such relationship. We may sell common stock directly or through agents we designate from time to time. We will name any agent involved in the offering and sale of common stock and we will describe any commissions we will pay the agent in the prospectus supplement. Unless the prospectus supplement states otherwise, our agent will act on a best-efforts basis for the period of its appointment.

We may authorize agents or underwriters to solicit offers by certain types of institutional investors to purchase common stock from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. We will describe the conditions to these contracts and the commissions we must pay for solicitation of these contracts in the prospectus supplement.

We may provide agents and underwriters with indemnification against civil liabilities related to this offering, including liabilities under the Securities Act, or contribution with respect to payments that the agents or underwriters may make with respect to such liabilities. Agents and underwriters may engage in transactions with, or perform services for, us in the ordinary course of business.

Any underwriter may engage in overallotment, stabilizing transactions, short covering transactions and penalty bids in accordance with Regulation M under the Exchange Act. Overallotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum. Short covering transactions involve purchases of the securities in the open market after the distribution is completed to cover short positions. Penalty

Table of Contents

bids permit the underwriters to reclaim a selling concession from a dealer when the common stock originally sold by the dealer is purchased in a covering transaction to cover short positions. Those activities may cause the price of the common stock to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of the activities at any time.

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

Table of Contents

LEGAL MATTERS

The validity of the common stock being offered hereby will be passed upon by Heller Ehrman LLP, Seattle, Washington.

EXPERTS

The financial statements and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Report on Internal Control over Financial Reporting) incorporated in this Prospectus by reference to the Annual Report on Form 10-K for the year ended December 31, 2006 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We are a reporting company and file annual, quarterly and current reports, proxy statements and other information with the SEC. This prospectus is part of a registration statement on Form S-3 filed by us with the SEC under the Securities Act of 1933, as amended. As permitted by the SEC, this prospectus does not contain all the information in the registration statement filed with the SEC. For a more complete understanding of this offering, you should refer to the complete registration statement on Form S-3 that may be obtained from the locations described below. You may read and copy the registration statement, as well as our reports, proxy statements and other information, at the SEC's public reference rooms at 100 F Street, N.E., Washington, D.C. 20549. You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the public reference rooms. Our SEC filings are also available at the SEC's web site at <http://www.sec.gov>.

Statements contained in this prospectus about the contents of any contract or other document are not necessarily complete. If we have filed any contract or other document as an exhibit to the registration statement or any other document incorporated by reference into the registration statement, you should read the exhibit for a more complete understanding of the document or matter involved. Each statement regarding a contract or other document is qualified in its entirety by reference to the actual document.

INFORMATION INCORPORATED BY REFERENCE

The SEC allows us to incorporate by reference the information we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus, and certain information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below and any additional documents filed by us with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended (other than reports or portions of reports furnished but not filed pursuant to SEC rules), until we complete our offering of the securities:

our annual report on Form 10-K for the year ended December 31, 2006 (other than those portions of the report furnished but not filed pursuant to SEC rules);

our quarterly reports on Form 10-Q for the quarterly periods ended March 31, 2007, June 30, 2007 and September 30, 2007;

our current reports on Form 8-K filed on January 8, 2007, January 24, 2007, February 6, 2007, April 24, 2007, June 1, 2007, June 14, 2007, July 25, 2007 and October 23, 2007 (other than reports or portions of reports furnished but not filed pursuant to SEC rules);

Table of Contents

the description of our common stock contained in our registration statement on Form 8-A as filed with the SEC on February 28, 2001, as amended.

Documents incorporated by reference, excluding exhibits except to the extent such exhibits are specifically incorporated by reference, are available from us without charge. You may obtain documents incorporated by reference by requesting them in writing from Seattle Genetics, Inc., 21823 30th Drive SE, Bothell, Washington 98021, Attention: Investor Relations Department, or by calling (425) 527-4000.

Table of Contents

10,000,000 Shares

COMMON STOCK

PRELIMINARY PROSPECTUS SUPPLEMENT

JPMorgan

UBS Investment Bank

RBC Capital Markets

Needham & Company, LLC
The date of this prospectus supplement is

William Blair & Company
, 2008