Verastem, Inc.
Form 424B4
January 27, 2012

Use these links to rapidly review the document
TABLE OF CONTENTS
INDEX TO FINANCIAL STATEMENTS

Table of Contents

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Registration No. 333-177677
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PROSPECTUS January 26, 2012

5,500,000 shares

Common Stock

This is the initial public offering of our common stock. No public market currently exists for our common stock. We are offering all of the shares of common stock offered by this prospectus.

Our common stock has been approved for listing on The NASDAQ Global Market under the symbol "VSTM."

Investing in our common stock involves a high degree of risk. Before buying any shares, you should carefully read the discussion of material risks of investing in our common stock in "Risk factors" beginning on page 11.

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

	Per share	Total
Public offering price	$ 10.00	$ 55,000,000
Underwriting discounts and commissions	$ 0.70	$ 3,850,000
Proceeds to Verastem, before expenses	$ 9.30	$ 51,150,000

Certain of our existing stockholders and their affiliated entities have indicated an interest in purchasing an aggregate of up to approximately $14.8 million in shares of our common stock in this offering at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, these stockholders may determine to purchase fewer shares than they indicate an interest in purchasing or not to purchase any shares in this offering. In addition, the underwriters could determine to sell fewer shares to these stockholders than the stockholders indicate an interest in purchasing or not to sell any shares to these stockholders.

The underwriters may also purchase up to an additional 825,000 shares of our common stock at the public offering price, less the underwriting discounts and commissions payable by us, to cover over-allotments, if any, within 30 days from the date of this prospectus. If the underwriters exercise this option in full, the total underwriting discounts and commissions will be $4,427,500 and our total proceeds, after underwriting discounts and commissions but before expenses, will be $58,822,500.

The underwriters are offering the common stock as set forth under "Underwriting." Delivery of the shares will be made on or about February 1, 2012.

UBS Investment Bank **Leerink Swann**

Lazard Capital Markets

Oppenheimer & Co.

Rodman & Renshaw, LLC

Table of Contents

We have not authorized anyone to provide any information other than that contained in this prospectus or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where such offers and sales are permitted. The information in this prospectus or any free writing prospectus is accurate only as of its date, regardless of its time of delivery or of any sale of shares of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date.

TABLE OF CONTENTS

Table of Contents

Prospectus summary

This summary highlights information contained elsewhere in this prospectus. This summary does not contain all of the information you should consider before investing in our common stock. You should read this entire prospectus carefully, especially the "Risk factors" section and our financial statements and the related notes appearing at the end of this prospectus, before making an investment decision.

OUR BUSINESS

We are a biopharmaceutical company focused on discovering and developing proprietary small molecule drugs targeting cancer stem cells along with proprietary companion diagnostics. A cancer stem cell is a particularly aggressive type of tumor cell, resistant to conventional cancer therapy, that we believe is an underlying cause of tumor recurrence and metastasis. We also believe that the presence of cancer stem cells in tumors may be a key reason for the ultimate failure of many existing chemotherapeutics and other cancer therapies to achieve a durable clinical response. Building on discoveries by our scientific co-founders, Robert Weinberg, Ph.D., Eric Lander, Ph.D., and Piyush Gupta, Ph.D., published in the peer reviewed scientific journal *Cell*, we use our proprietary technology to create a stable population of cancer stem cells to screen for and identify small molecule compounds that target cancer stem cells. We believe that our technology and approach provide an opportunity to develop a next generation of oncology therapeutics addressing the large unmet medical need of patients with many types of cancers.

THE PROBLEM

Cancer is one of the world's most serious health problems and the second most common cause of death in the United States after heart disease. Current treatments for cancer include surgery, radiation therapy, chemotherapy, hormone therapy and targeted therapy. According to estimates by the National Institutes of Health, in the United States in 2010, the direct medical costs of cancer of all types exceeded $100 billion. IMS Health estimates that in the United States in 2010, approximately $22 billion was spent on drugs to treat cancer, representing the largest class of drug spending in the United States. Despite years of intensive research and clinical use, current treatments often fail to cure cancer. Cancer patients who relapse often develop metastatic disease. Metastatic disease is the cause of more than 90% of cancer deaths.

We believe that cancer stem cells, or CSCs, which are also sometimes referred to as tumor-initiating cancer cells, are responsible for the initiation, metastasis and recurrence of many cancers and may be a key reason for the ultimate failure of many current therapies to achieve a durable clinical response. CSCs have the ability to:

- move freely and proliferate without attachment to other cells or surfaces;
- initiate a tumor;
- self-renew;
- produce other cancer cell types; and
- resist many current cancer treatments.

CSCs have been identified in many types of cancer, including breast, pancreatic, colon, brain, lung and leukemia. As illustrated in the figure below, while current treatments may succeed at initially decreasing tumor burden, they may leave behind a population of CSCs that can regenerate tumors.

Table of Contents

OUR SOLUTION

Our solution is to discover and develop a next generation of oncology therapeutics targeting CSCs along with companion diagnostics. We believe that by developing therapeutics that target CSCs we can address the problem of cancer recurrence and metastasis so as to deliver a durable clinical response.

Our scientific co-founders at the Whitehead Institute for Biomedical Research, an affiliate of the Massachusetts Institute of Technology, or MIT, and the Broad Institute, an affiliate of MIT and Harvard University, made discoveries that link the epithelial-to-mesenchymal transition, or EMT, to the emergence of CSCs. This transition involves the transformation of one type of cancer cell into a more aggressive and drug resistant type of cancer cell. Our solution utilizes proprietary technology based on these discoveries along with rapid and automated assays, referred to as high-throughput screening, to identify drugs targeting CSCs and develop companion diagnostics. To achieve a durable clinical response, we believe that it may be necessary to kill both CSCs and other types of cancer cells in a tumor, as illustrated in the figure below, either with a combination of current cancer treatments and CSC-targeted drugs or a single therapeutic found to target both cancer cell populations.

Our proprietary technology

A persistent problem in the discovery of drugs targeting CSCs is the difficulty of isolating large numbers of CSCs. Without such large numbers, the discovery of drugs targeting CSCs using high-throughput screening is extremely difficult. Moreover, when CSCs are isolated, they typically do not remain stable in culture. Instead, over a short period of time, CSCs convert into other types of cancer cells. To address this problem, our scientific co-founders developed proprietary technology based on the EMT process to create a stable population of CSCs that are suitable for use in high-throughput screening of small molecule compounds. We license this proprietary technology from the Whitehead Institute.

Table of Contents

To identify compounds that are selective for CSCs, we grow cancer non-stem cells in the laboratory and then induce the EMT process to create a stable population of CSCs. As illustrated in the figure below, we then screen compounds to assess their ability to kill the CSCs. Because these CSCs are stable in culture, the screening process can be conducted using high-throughput technology on a large number and wide variety of small molecule compound libraries. These compound libraries include new chemical entities, approved drugs and compounds that are in preclinical and clinical development. We then profile the compounds that are identified as targeting CSCs using additional assays to identify suitable clinical candidates.

OUR PRODUCT CANDIDATES AND COMPANION DIAGNOSTICS

Using our proprietary technology, we have identified a pipeline of small molecule compounds with the potential to target CSCs. Our most advanced product candidates are VS-507, VS-4718 and VS-5095. We are currently evaluating VS-507, VS-4718 and VS-5095 in preclinical studies as potential therapies for breast and other cancers. We believe that these compounds may be especially beneficial as therapeutics in aggressive cancers with a high percentage of CSCs, such as triple negative breast cancer, or TNBC. TNBC is a type of breast cancer in which a high percentage of CSCs has been identified and that has a poorer prognosis and lower overall survival rate than other types of breast cancer. We also are currently evaluating additional proprietary product candidates in preclinical studies for their use in breast and other cancers.

Our scientific co-founders identified VS-507 as a drug candidate for killing breast cancer stem cells and published their research in *Cell* in 2009. This study included an analysis of the effect of VS-507 on TNBC cell lines. We believe that the targeted action of VS-507 on CSCs is effected through the inhibition of a network of proteins, known as the Wnt/beta-catenin cell signaling pathway, which Dr. Weinberg described in 2011 in *Cell* as critical for the development and maintenance of CSCs. Additional third-party published research has reported that VS-507's activity may be mediated through the blockade of the Wnt/beta-catenin cell signaling pathway. In mouse models of breast cancer, VS-507 treatment decreased biophysical or biochemical markers, referred to as biomarkers, of CSCs. In contrast, treatment in the same model with a standard chemotherapeutic agent, paclitaxel, increased biomarkers of CSCs. Assuming successful completion of preclinical studies, we expect to file an investigational new drug application, or IND, with the U.S. Food and Drug Administration, or FDA, in late 2012 to initiate a Phase 1 clinical trial of VS-507.

We identified the CSC-targeted activity of VS-4718 and VS-5095 using our proprietary technology. In preclinical testing, these compounds were found to be potent and selective inhibitors of Focal Adhesion Kinase, or FAK, a protein which is involved in cell adhesion and motility. FAK expression is greater in many tumor types compared to normal tissue, particularly in cancers that have a high invasive and metastatic capability. In preclinical mouse models, both VS-4718 and VS-5095 demonstrated good oral bioavailability and pharmacokinetic and pharmacodynamic properties and reduced both primary tumor growth and metastatic burden. We expect to file an IND with the FDA in early 2013 to initiate a Phase 1 clinical trial of one of VS-4718 or VS-5095.

An important element of our business strategy is the development and use of proprietary, companion diagnostics in connection with the development of our therapeutic drug candidates. CSCs are often characterized by a distinctive set of biomarkers, which we believe may be a key to identifying patients

Table of Contents

with tumors that are likely to respond to therapies targeting CSCs. We plan to use diagnostics, based on these biomarkers, as part of a personalized medicine approach to identify patients with aggressive tumors that have a high percentage of CSCs. We also believe that these diagnostics may be used to monitor patients' progress on therapy and aid physicians' ongoing treatment decisions. In addition, we expect that our use of proprietary diagnostics may accelerate the clinical development process for our drug candidates by enabling smaller, targeted trials and providing early, objective signals of drug activity.

OUR STRATEGY

Our goal is to build a leading biopharmaceutical company focused on the discovery, development and, ultimately, commercialization of novel drugs and companion diagnostics targeting CSCs. Key elements of our strategy to achieve this goal are:

- continue to screen and identify small molecules that target CSCs;
- in-license rights to additional compounds to expand our pipeline of candidates that target CSCs;
- rapidly advance our drug candidates into clinical development;
- develop diagnostics for therapeutic products targeting CSCs;
- collaborate selectively to augment and accelerate development and commercialization; and
- maintain scientific leadership in the CSC field.

OUR MANAGEMENT TEAM AND SCIENTIFIC CO-FOUNDERS AND ADVISORS

Our management team includes our President and Chief Executive Officer, Chairman and co-founder Christoph Westphal, M.D., Ph.D., our Chief Operating Officer, Robert Forrester, and our Vice President, Head of Research, Jonathan Pachter, Ph.D.

- Dr. Westphal has been involved in founding a number of biotechnology companies as chief executive officer, including Sirtris Pharmaceuticals, Inc., which was acquired by GlaxoSmithKline plc in 2008, as well as Alnylam Pharmaceuticals, Inc. and Momenta Pharmaceuticals, Inc. Dr. Westphal also co-founded Alnara Pharmaceuticals, Inc., which was acquired by Eli Lilly and Co. in 2010.
- Mr. Forrester has held executive level positions at both private and public life science companies, including Forma Therapeutics, Inc., CombinatoRx, Inc., now Zalicus Inc., and Coley Pharmaceutical Group, Inc., which was acquired by Pfizer Inc. in 2007.
- Dr. Pachter has over 20 years of experience in leading the discovery of small molecule and monoclonal antibody therapeutics for the treatment of cancer, most recently as the Senior Director of Cancer Biology at OSI Pharmaceuticals Inc., which was acquired by Astellas Pharma Inc. in 2010.

Our management team is supported by our scientific advisory board comprised of leading academic and industry scientists. Our scientific advisory board consists of:

Scientific advisory board

Robert Weinberg, Ph.D. *Scientific co-founder*	Founding Member of the Whitehead Institute for Biomedical

	Research, Professor of Biology at the Massachusetts Institute of Technology and recipient of the 1997 National Medal of Science
Eric Lander, Ph.D. *Scientific co-founder*	Founding Director of the Broad Institute, Professor of Biology at the Massachusetts Institute of Technology and Professor of Systems Biology at Harvard Medical School

Table of Contents

Scientific advisory board

Piyush Gupta, Ph.D. *Scientific co-founder*	Member of the Whitehead Institute for Biomedical Research and Assistant Professor of Biology at the Massachusetts Institute of Technology
Julian Adams, Ph.D.	President of Research and Development of Infinity Pharmaceuticals, Inc., former Senior Vice President of Drug Discovery and Development of Millennium Pharmaceuticals, Inc. and co-inventor and co-developer of Velcade
José Baselga, M.D., Ph.D.	Chief of Hematology and Oncology at Massachusetts General Hospital, Associate Director of the Massachusetts General Hospital Cancer Center and Professor of Medicine at Harvard Medical School
George Daley, M.D., Ph.D.	Professor of Hematology and Oncology and Director of the Stem Cell Transplantation Program at Children's Hospital and Professor of Biological Chemistry and Molecular Pharmacology at Harvard Medical School
Peter Elliott, Ph.D.	Former Senior Vice President and Head of Research and Development of Sirtris Pharmaceuticals, Inc., former Vice President of Pharmacology and Drug Development of Millennium Pharmaceuticals, Inc. and co-developer of Velcade
Daniel Haber, M.D., Ph.D.	Director of the Massachusetts General Hospital Cancer Center and Professor of Medicine at Harvard Medical School
Joseph (Yossi) Schlessinger, Ph.D.	Chairman and Professor in the Department of Pharmacology at Yale School of Medicine
Phillip A. Sharp, Ph.D.	Institute Professor at the David H. Koch Institute for Integrative Cancer Research at the Massachusetts Institute of Technology and recipient of the 1993 Nobel Prize in Medicine and Physiology
Roger Tung, Ph.D.	President and Chief Executive Officer of Concert Pharmaceuticals, Inc., former Vice President of Drug Discovery of Vertex Pharmaceuticals, Inc. and co-inventor of Lexiva and Agenerase
Christopher Walsh, Ph.D.	Hamilton Kuhn Professor in the Department of Biological Chemistry and Molecular Pharmacology at Harvard Medical School
Eric Winer, M.D.	Director of the Breast Oncology Center at the Dana Farber Cancer Institute and Professor of Medicine at Harvard Medical School

RISKS ASSOCIATED WITH OUR BUSINESS

Our business is subject to a number of risks of which you should be aware before making an investment decision. These risks are discussed more fully in the "Risk factors" section of this prospectus immediately following this prospectus summary. These risks include the following:

> We have incurred significant losses since our inception and will need substantial additional funding. To date, we have not generated any revenues. We expect to incur losses for the

Table of Contents

foreseeable future and may never achieve profitability. Our net loss was $7.7 million for the nine months ended September 30, 2011 and $784,000 for the period from August 4, 2010 (inception) to December 31, 2010. As of September 30, 2011, we had a deficit accumulated during the development stage of $8.5 million.

> We have a short operating history. All of our product candidates are still in preclinical development, and we have not received marketing approval from the FDA or any other regulatory authority for any product candidate.

> Our approach to the discovery and development of product candidates that target CSCs is unproven. Our focus on using our proprietary EMT technology to screen for and identify product candidates targeting CSCs may not result in the discovery and development of commercially viable drugs to treat cancer. Research on CSCs is an emerging field and, consequently, there is ongoing debate regarding the existence of CSCs, whether the appropriate nomenclature to refer to these cells is cancer stem cells, tumor-initiating cells or another term and the importance of these cells as an underlying cause of tumor recurrence and metastasis. We do not believe that any drugs that target CSCs have been successfully developed to date for the treatment of cancer.

> We may be unable to acquire or in-license from third parties any compounds or product candidates that we identify using our proprietary EMT technology or otherwise.

> Clinical trials of our product candidates may not be successful. If we are unable to obtain required marketing approvals for, commercialize, obtain and maintain patent protection for or gain sufficient market acceptance by physicians, patients and healthcare payors of our product candidates, or experience significant delays in doing so, our business will be materially harmed and our ability to generate revenue will be materially impaired.

> If we are unable to successfully develop companion diagnostics for our therapeutic product candidates, or experience significant delays in doing so, we may not realize the full commercial potential of our therapeutics.

> We may depend on collaborations with third parties for the development and commercialization of our product candidates. If those collaborations are not successful, we may not be able to capitalize on the market potential of these product candidates.

OUR CORPORATE INFORMATION

We were incorporated under the laws of the State of Delaware in August 2010. Our principal executive offices are located at 215 First Street, Suite 440, Cambridge, Massachusetts 02142 and our telephone number is (617) 252-9300. Our website address is www.verastem.com. The information contained on, or that can be accessed through, our website is not a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

In this prospectus, unless otherwise stated or the context otherwise requires, references to "Verastem," "we," "us," "our" and similar references refer to Verastem, Inc. The Verastem name and logo are our trademarks. The other trademarks, trade names and service marks appearing in this prospectus are the property of their respective owners.

Table of Contents

The offering

Common stock offered by us	5,500,000 shares
Common stock to be outstanding after this offering	20,234,116 shares
Over-allotment option	The underwriters have an option for a period of 30 days to purchase up to 825,000 additional shares of our common stock to cover over-allotments.
Use of proceeds	We intend to use the net proceeds from this offering for preclinical and clinical development of our lead product candidates, discovery, research and preclinical studies of our other product candidates, additional compounds and companion diagnostics and other general corporate purposes.
Risk factors	You should read the "Risk factors" section starting on page 11 of this prospectus for a discussion of factors to consider carefully before deciding to invest in shares of our common stock.
NASDAQ Global Market symbol	VSTM

The number of shares of our common stock to be outstanding after this offering is based on 2,993,322 actual shares of our common stock outstanding as of December 31, 2011, including 1,434,734 shares of unvested restricted stock subject to repurchase by us, and 11,740,794 additional shares of our common stock issuable upon the automatic conversion of all outstanding shares of our preferred stock upon the closing of this offering.

The number of shares of our common stock to be outstanding after this offering excludes:

- 405,141 shares of our common stock issuable upon the exercise of stock options outstanding as of December 31, 2011 at a weighted-average exercise price of $0.75 per share;
- 30,101 additional shares of our common stock available for future issuance as of December 31, 2011 under our 2010 equity incentive plan;
- 600,000 shares of our common stock issuable pursuant to restricted stock units granted, effective upon the closing of this offering, under our 2012 incentive plan;
- 2,828,571 additional shares of our common stock that will be available for future issuance, as of the closing of this offering, under our 2012 incentive plan; and
- 142,857 shares of our common stock issuable upon exercise of a warrant, with an exercise price equal to the average closing price of our common stock during the five days preceding the date of issuance, that we have agreed to issue to Poniard Pharmaceuticals, Inc. upon achievement of a milestone pursuant to a license agreement.

Table of Contents

Unless otherwise indicated, all information in this prospectus assumes:

- no exercise of the outstanding options or the warrant described above and no issuance of shares under the restricted stock units described above;
- no exercise by the underwriters of their option to purchase up to 825,000 additional shares of our common stock to cover over-allotments;
- the automatic conversion of all outstanding shares of our preferred stock into an aggregate of 11,740,794 shares of our common stock upon the closing of this offering; and
- the restatement of our amended and restated certificate of incorporation and the amendment and restatement of our bylaws upon the closing of this offering.

In addition, unless otherwise indicated, all information in this prospectus gives effect to the one-for-3.5 reverse stock split of our common stock that was effected on January 10, 2012.

Certain of our existing stockholders, including our principal stockholders Advanced Technology Ventures VIII, L.P., Bessemer Venture Partners, CHP III, L.P., Longwood Fund, LP, and MPM Bioventures V, LP, and their affiliated entities, have indicated an interest in purchasing an aggregate of up to approximately $14.8 million in shares of our common stock in this offering at the initial public offering price. Based on the initial public offering price of $10.00 per share, these stockholders would purchase an aggregate of up to approximately 1,478,500 of the 5,500,000 shares in this offering based on these indications of interest. However, because indications of interest are not binding agreements or commitments to purchase, these stockholders may determine to purchase fewer shares than they indicate an interest in purchasing or not to purchase any shares in this offering. In addition, the underwriters could determine to sell fewer shares to these stockholders than the stockholders indicate an interest in purchasing or not to sell any shares to these stockholders.

Table of Contents

Summary financial information

You should read the following summary financial data together with our financial statements and the related notes appearing at the end of this prospectus and the "Selected financial data" and "Management's discussion and analysis of financial condition and results of operations" sections of this prospectus. We have derived the statements of operations data for the period from August 4, 2010 (inception) to December 31, 2010 from our audited financial statements included in this prospectus. We have derived the statements of operations data for the nine months ended September 30, 2011 and the period from August 4, 2010 (inception) to September 30, 2011 and the balance sheet data as of September 30, 2011 from our unaudited financial statements included in this prospectus. The unaudited financial data include, in the opinion of our management, 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. Our historical results for any prior period are not necessarily indicative of results to be expected in any future period, and our results for any interim period are not necessarily indicative of results to be expected for a full fiscal year.

Statement of operations data:	**Period from August 4, 2010 (inception) to December 31, 2010**	**Nine months ended September 30, 2011**	**Period from August 4, 2010 (inception) to September 30, 2011**
	(in thousands, except per share data)		
Operating expenses:			
Research and development	$ 400	$ 5,483	$ 5,883
General and administrative	384	2,195	2,579
Total operating expenses	784	7,678	8,462
Operating loss	(784)	(7,678)	(8,462)
Net loss	$ (784)	$ (7,678)	$ (8,462)
Accretion of preferred stock	(2)	(18)	(20)
Net loss applicable to common stockholders	$ (786)	$ (7,696)	$ (8,482)
Net loss per share applicable to common stockholders basic and diluted	$ (0.91)	$ (6.27)	$ (7.70)
Weighted-average number of common shares used in net loss per share applicable to common stockholders basic and diluted	850	1,226	1,097
Pro forma net loss per share applicable to common stockholders basic and diluted	$ (0.60)	$ (1.33)	
Weighted-average number of common shares used in pro forma net loss per share applicable to common stockholders basic and diluted	1,325	5,850	

Pro forma basic and diluted net loss per common share is calculated assuming the automatic conversion of all outstanding shares of our preferred stock, excluding shares of our series C preferred stock that we issued and sold in November 2011.

Table of Contents

The pro forma balance sheet data set forth below gives effect to:

- our issuance and sale in November 2011 of an aggregate of 9,067,825 shares of our series C preferred stock at a price per share of $2.25 for an aggregate purchase price of $20.4 million; and
- the automatic conversion of all outstanding shares of our preferred stock, including shares of our series C preferred stock that we issued and sold in November 2011, into an aggregate of 11,740,794 shares of our common stock upon the closing of this offering.

The pro forma as adjusted balance sheet data set forth below give further effect to our issuance and sale of 5,500,000 shares of our common stock in this offering at the initial public offering price of $10.00 per share, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

	As of September 30, 2011		
Balance sheet data:	**Actual**	**Pro forma**	**Pro forma as adjusted**
		(in thousands)	
Cash and cash equivalents	$ 41,421	$ 61,824	$ 110,874
Working capital	39,419	59,822	108,872
Total assets	42,364	62,767	111,817
Redeemable convertible preferred stock	47,878		
Deficit accumulated during the development stage	(8,462)	(8,462)	(8,462)
Total stockholders' (deficit) equity	(7,639)	60,642	109,692

Table of Contents

Risk factors

Investing in our common stock involves a high degree of risk. Before investing in our common stock, you should consider carefully the risks described below, together with the other information contained in this prospectus, including our financial statements and the related notes appearing at the end of this prospectus. If any of the following risks occur, our business, financial condition, results of operations and future growth prospects could be materially and adversely affected. In these circumstances, the market price of our common stock could decline, and you may lose all or part of your investment.

RISKS RELATED TO OUR FINANCIAL POSITION AND NEED FOR ADDITIONAL CAPITAL

We have incurred significant losses since our inception. We expect to incur losses for the foreseeable future and may never achieve or maintain profitability.

Since inception, we have incurred significant operating losses. Our net loss was $7.7 million for the nine months ended September 30, 2011 and $784,000 for the period from August 4, 2010 (inception) to December 31, 2010. As of September 30, 2011, we had a deficit accumulated during the development stage of $8.5 million. To date, we have not generated any revenues and have financed our operations through private placements of our preferred stock. We have devoted substantially all of our efforts to research and development. We have not initiated clinical development of any product candidates and expect that it will be many years, if ever, before we have a product candidate ready for commercialization. We expect to continue to incur significant expenses and increasing operating losses for the foreseeable future. The net losses we incur may fluctuate significantly from quarter to quarter. We anticipate that our expenses will increase substantially if and as we:

- continue our research and preclinical development of our product candidates;
- seek to identify additional product candidates that target cancer stem cells, or CSCs;
- acquire or in-license other products and technologies;
- initiate clinical trials for our product candidates;
- seek marketing approvals for our product candidates that successfully complete clinical trials;
- ultimately establish a sales, marketing and distribution infrastructure to commercialize any products for which we may obtain marketing approval;
- maintain, expand and protect our intellectual property portfolio;
- hire additional clinical, quality control and scientific personnel; and
- add operational, financial and management information systems and personnel, including personnel to support our product development and planned future commercialization efforts.

To become and remain profitable, we must develop and eventually commercialize a product or products with significant market potential. This will require us to be successful in a range of challenging activities, including completing preclinical testing and clinical trials of our product candidates, obtaining marketing approval for these product candidates and manufacturing, marketing and selling those products for which we may obtain marketing approval. We may never succeed in these activities and, even if we do, may never generate revenues that are significant or large enough to achieve profitability. We are currently only in the preclinical testing stages for our most advanced product candidates and have not yet completed formulation development of any of our lead product candidates, VS-507, VS-4718 and VS-5095. If we do achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to become and remain

Table of Contents

profitable would decrease the value of the company and could impair our ability to raise capital, maintain our research and development efforts, expand our business or continue our operations. A decline in the value of our company could also cause you to lose all or part of your investment.

Our short operating history may make it difficult for you to evaluate the success of our business to date and to assess our future viability.

We are an early stage company. We commenced active operations in the second half of 2010. Our operations to date have been limited to organizing and staffing our company, business planning, raising capital, acquiring and developing our technology, identifying potential product candidates and undertaking preclinical studies of our most advanced product candidates. All of our product candidates are still in preclinical development. We have not yet demonstrated our ability to initiate or successfully complete any clinical trials, including large-scale, pivotal clinical trials, obtain marketing approvals, manufacture a commercial scale product, or arrange for a third party to do so on our behalf, or conduct sales and marketing activities necessary for successful product commercialization. It takes about ten to 15 years to develop one new medicine from the time it is discovered to when it is available for treating patients. Consequently, any predictions you make about our future success or viability may not be as accurate as they could be if we had a longer operating history.

In addition, as a new business, we may encounter unforeseen expenses, difficulties, complications, delays and other known and unknown factors. We will need to transition from a company with a research focus to a company capable of supporting commercial activities. We may not be successful in such a transition.

We will need substantial additional funding. If we are unable to raise capital when needed, we would be forced to delay, reduce or eliminate our product development programs or commercialization efforts.

We expect our expenses to increase in connection with our ongoing activities, particularly as we continue the research and development and later initiate clinical trials of, and seek marketing approval for, our product candidates. In addition, if we obtain marketing approval for any of our product candidates, we expect to incur significant commercialization expenses related to product sales, marketing, manufacturing and distribution. Furthermore, upon the closing of this offering, we expect to incur additional costs associated with operating as a public company. Accordingly, we will need to obtain substantial additional funding in connection with our continuing operations. If we are unable to raise capital when needed or on attractive terms, we would be forced to delay, reduce or eliminate our research and development programs or any future commercialization efforts.

We expect that the net proceeds from this offering, together with our existing cash and cash equivalents, will enable us to fund our operating expenses and capital expenditure requirements for at least the next 48 months. Our future capital requirements will depend on many factors, including:

- the scope, progress, results and costs of compound discovery, preclinical development, laboratory testing and clinical trials for our product candidates;
- the extent to which we acquire or in-license other products and technologies;
- the costs, timing and outcome of regulatory review of our product candidates;
- the costs of future commercialization activities, including product sales, marketing, manufacturing and distribution, for any of our product candidates for which we receive marketing approval;

Table of Contents

- revenue, if any, received from commercial sales of our product candidates, should any of our product candidates receive marketing approval;

- the costs of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending intellectual property-related claims; and

- our ability to establish collaborations on favorable terms, if at all.

Identifying potential product candidates and conducting preclinical testing and clinical trials is a time-consuming, expensive and uncertain process that takes years to complete, and we may never generate the necessary data or results required to obtain marketing approval and achieve product sales. In addition, our product candidates, if approved, may not achieve commercial success. Our commercial revenues, if any, will be derived from sales of products that we do not expect to be commercially available for many years, if at all. Accordingly, we will need to continue to rely on additional financing to achieve our business objectives. Adequate additional financing may not be available to us on acceptable terms, or at all.

Raising additional capital may cause dilution to our stockholders, including purchasers of common stock in this offering, restrict our operations or require us to relinquish rights to our technologies or product candidates.

Until such time, if ever, as we can generate substantial product revenues, we expect to finance our cash needs through a combination of equity offerings, debt financings, collaborations, strategic alliances and licensing arrangements. We do not have any committed external source of funds. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a common stockholder. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends.

If we raise additional funds through collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs or product candidates or to grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

RISKS RELATED TO THE DISCOVERY, DEVELOPMENT AND COMMERCIALIZATION OF OUR PRODUCT CANDIDATES

Our approach to the discovery and development of product candidates that target CSCs is unproven, and we do not know whether we will be able to develop any products of commercial value.

Our scientific approach focuses on using proprietary technology to create a stable population of CSCs in the laboratory that we then use to screen for and identify product candidates targeting these CSCs. Research on CSCs is an emerging field and, consequently, there is ongoing debate regarding the existence of CSCs, whether the appropriate nomenclature to refer to these cells is cancer stem cells, tumor-initiating cells or another term and the importance of these cells as an underlying cause of tumor recurrence and metastasis.

Table of Contents

Risk factors

Although there is general consensus that some cancer cells have tumor-initiating capacity, there also is some debate in the scientific community regarding the defining characteristics of these cells, which we call CSCs, and the origin of these cells. Some believe that normal adult stem cells mutate and transform into CSCs. Others believe that all cancer cells have tumor-initiating capabilities, these capabilities cannot be attributed to a factor intrinsic to a particular cell and, therefore, a definitive CSC cannot be isolated or targeted. We believe that the discovery by our scientific co-founders of the link between the epithelial-to-mesenchymal transition, or EMT, and the emergence of cancer stem cells is one way a cancer cell can transition to a CSC, but this view is not universally accepted.

Even if our beliefs regarding the existence, characteristics and function of CSCs are correct, any drugs that we develop may not effectively target CSCs. We do not believe that any drugs that target CSCs have been successfully developed to date for the treatment of cancer. If we are able to develop a drug that targets CSCs in preclinical studies, we may nonetheless not succeed in demonstrating safety and efficacy of the drug in human clinical trials. Our focus on using our proprietary technology to screen for and identify product candidates targeting CSCs may not result in the discovery and development of commercially viable drugs to treat cancer.

We may not be successful in our efforts to identify or discover additional potential product candidates.

A key element of our strategy is to identify and test additional compounds that target CSCs in a variety of different types of cancer. A significant portion of the research that we are conducting involves new compounds, new uses of existing compounds and new and unproven drug discovery methods, including our proprietary technology. The drug discovery that we are conducting using our EMT technology may not be successful in identifying compounds that are useful in treating cancer. Our research programs may initially show promise in identifying potential product candidates, yet fail to yield product candidates for clinical development for a number of reasons, including:

- the research methodology used may not be successful in identifying potential product candidates; or
- potential product candidates may, on further study, be shown to have harmful side effects or other characteristics that indicate that they are unlikely to be products that will receive marketing approval and achieve market acceptance.

In particular, because our EMT technology induces the EMT process to create a stable population of CSCs, it is possible that these stable CSCs may not react in precisely the same manner as naturally occurring CSCs when treated with a particular product candidate. As a result, a product candidate that shows initial promise in targeting our stable population of CSCs may not have the same effect on tumors with naturally occurring CSCs.

Research programs to