UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

x ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

FOR THE FISCAL ENDED DECEMBER 31, 2012

OR

o TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the Transition Period from _____ to _____

Commission File Number 001-33650

NEOSTEM, INC.
(Exact name of registrant as specified in its charter)

DELAWARE	22-2343568
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
420 LEXINGTON AVE, SUITE 350 NEW YORK, NEW YORK	10170
(Address of principal executive offices)	(zip code)

Registrant's telephone number, including area code: 212-584-4180

Securities Registered Pursuant to Section 12(b) of the Act:

Title of Each Class	Name of Each Exchange On Which Registered
Common Stock, par value $0.001 per share	NYSE MKT

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes o No x

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes o No x

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No o

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No o

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this Chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definition of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer o	Accelerated filer o
Non-accelerated filer o (Do not check if a smaller reporting company)	Smaller reporting company x

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).
Yes o No x

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant as of June 30, 2012 (the last business day of the most recently completed second fiscal quarter) was approximately $66.1 million, computed by reference to the closing sales price of $0.49 for the common stock on the NYSE MKT reported for such date. Shares held by executive officers, directors and persons known to the registrant actually owning directly or indirectly more than 10% of the outstanding common stock have been excluded from the preceding number because such persons may be deemed to be affiliates of the registrant. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

On March 8, 2013, 168,412,155 shares of the registrant's common stock, par value $0.001 per share, were outstanding.

All references in this Annual Report on Form 10-K to "we," "us," the "Company" and "NeoStem" mean NeoStem, Inc., including subsidiaries and predecessors, except where it is clear that the term refers only to NeoStem, Inc. This Annual Report on Form 10-K contains forward-looking statements, which involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including those set forth under "Cautionary Note Regarding Forward-Looking Statements" and under "Risk Factors" and elsewhere in this Annual Report on Form 10-K.

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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K includes “forward-looking” statements within the meaning of the Private Securities Litigation Reform Act of 1995, as well as historical information. Such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause our actual results, performance or achievements, or industry results, to be materially different from anticipated results, performance or achievements expressed or implied by such forward-looking statements. When used in this Annual Report on Form 10-K, statements that are not statements of current or historical fact may be deemed to be forward-looking statements. Without limiting the foregoing, the words “plan,” “intend,” “may,” “will,” “expect,” “believe,” “could,” “anticipate,” “estimate,” or “continue” or similar expressions or other variations or comparable terminology are intended to identify such forward-looking statements, although some forward-looking statements are expressed differently. Additionally, statements regarding the future of the regenerative medicine industry and the role of stem cells and cellular therapy in that future, our ability to successfully develop and grow our business, including with regard to our research and development and clinical evaluation efforts and future marketing and sales in respect of AMR-001 and other cell therapies, the marketing and performance of our contract development and manufacturing business and our adult stem cell collection, processing and storage business are forward looking statements. Our future operating results are dependent upon many factors and our further development is highly dependent on future medical and research developments and market acceptance, which is outside our control.

Forward-looking statements, including with respect to the successful execution of the Company's strategy, may not be realized due to a variety of factors and we cannot guarantee their accuracy or that our expectations about future events will prove to be correct. Such factors include, without limitation, (i) our ability to manage our business despite operating losses and cash outflows; (ii) our ability to obtain sufficient capital or strategic business arrangements to fund our operations and expansion plans, including meeting our financial obligations under various licensing and other strategic arrangements, the funding of our clinical trials for AMR-001, and the commercialization of the relevant technology; (iii) our ability to build the management and human resources and infrastructure necessary to support the growth of our business; (iv) our ability to integrate our acquired businesses successfully and grow such acquired businesses as anticipated, including expanding our PCT business into Europe; (v) whether a large global market is established for our cellular-based products and services and our ability to capture a share of this market; (vi) competitive factors and developments beyond our control; (vii) scientific and medical developments beyond our control; (viii) our ability to obtain appropriate governmental licenses, accreditations or certifications or comply with healthcare laws and regulations or any other adverse effect or limitations caused by government regulation of our business; (ix) whether any of our current or future patent applications result in issued patents, the scope of those patents and our ability to obtain and maintain other rights to technology required or desirable for the conduct of our business; (x) whether any potential strategic benefits of various licensing transactions will be realized and whether any potential benefits from the acquisition of these licensed technologies will be realized; (xi) the results of our development activities, including our current Phase 2 clinical trial of AMR-001; (xii) our ability to complete our Phase 2 clinical trial of AMR-001(or initiate future trials) in accordance with our estimated timeline due to delays associated with enrolling patients due to the novelty of the treatment, the size of the patient population and the need of patients to meet the inclusion criteria of the trial or otherwise; and (xiii) the other factors discussed in “Risk Factors” and elsewhere in this Annual Report on Form 10-K and in the Company's other periodic filings with the Securities and Exchange Commission (the “SEC”) which are available for review at *www.sec.gov* under “Search for Company Filings.”

All forward-looking statements attributable to us are expressly qualified in their entirety by these and other factors. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof. Except as required by law, the Company undertakes no obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise.

PART I

ITEM 1. BUSINESS.

OVERVIEW

NeoStem, Inc. (“we,” “NeoStem” or the “Company”) is a leader in the emerging cellular therapy industry. Cellular therapy addresses the process by which new cells are introduced into a tissue to prevent or treat disease, or regenerate damaged or aged tissue, and comprises a separate therapeutic technology platform in addition to the current three pillars of healthcare: pharmaceuticals, biologics and medical devices. Modern cell-based therapies have progressed from the first recorded human to human blood transfusion 200 years ago through to the advanced cellular therapies of today including bone marrow and organ transplantation, tissue banking and reproductive *in vitro* fertilization and future therapies being investigated to treat cancer, cardiologic, neurologic, ophthalmic and orthopedic diseases among others. We anticipate that cellular therapies will have a large role in the fight against chronic disease and in lessening the economic burden that these diseases pose to modern society.

Our business model includes the development of novel proprietary cell therapy products as well as operating a contract development and manufacturing organization (“CDMO”) providing services to others in the regenerative medicine industry. The combination of a therapeutic development business and revenue-generating service provider business provides the Company with unique capabilities for cost effective in-house product development and immediate revenue and cash flow generation.

Progenitor Cell Therapy, LLC, our wholly owned subsidiary (“PCT”), is a leading CDMO in the cellular therapy industry. Since its inception in 1997, PCT has provided pre-clinical and clinical current Good Manufacturing Practice (“cGMP”) development and manufacturing services to over 100 clients advancing regenerative medicine product candidates through rigorous quality standards all the way through to human testing. PCT has two cGMP, state-of-the art cell therapy research, development, and manufacturing facilities in New Jersey and California, serving the cell therapy community with integrated and regulatory compliant distribution capabilities. Its core competencies in the cellular therapy industry include manufacturing of cell therapy-based products, product and process development, cell and tissue processing, regulatory support, storage, distribution and delivery and consulting services.

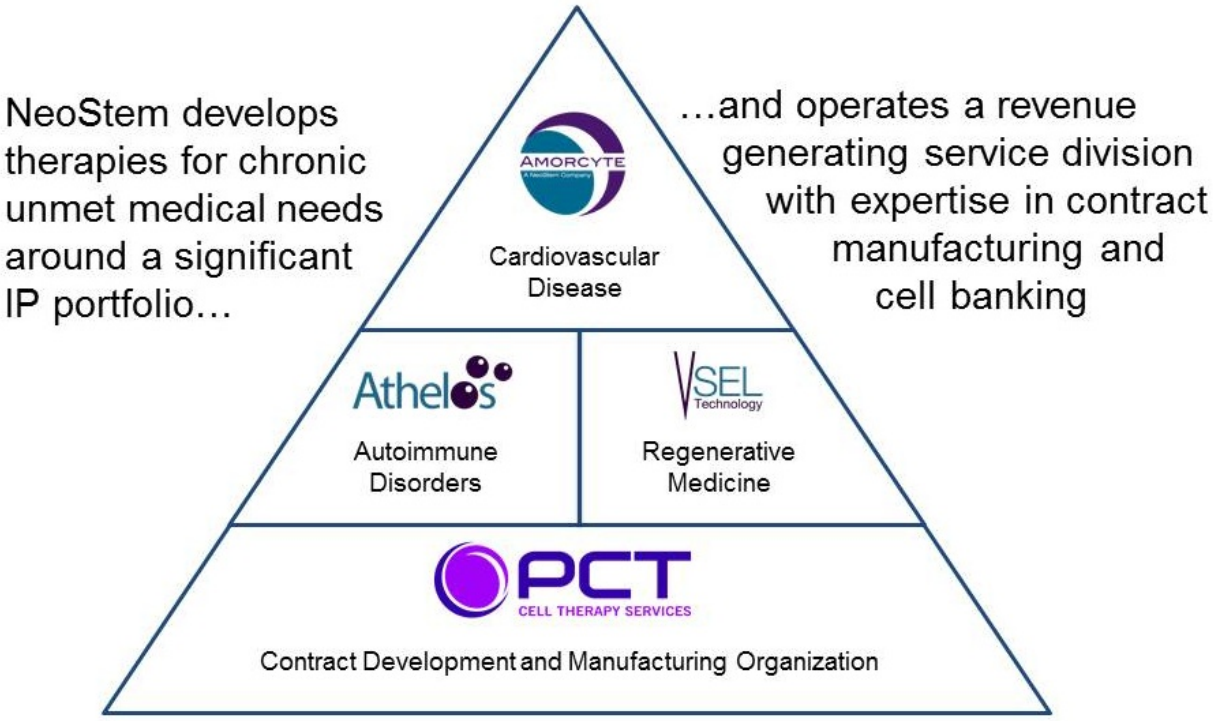
Our wholly-owned subsidiary, Amorcyte, LLC (“Amorcyte”), which we acquired in October 2011, is developing our own cell therapy, AMR-001, for the treatment of cardiovascular disease. AMR-001 represents our most clinically advanced therapeutic product candidate and enrollment for our Phase 2 PreSERVE clinical trial to investigate AMR-001's safety and efficacy in preserving heart function after a heart attack in a particular type of post Acute Myocardial Infarction (“AMI”) patients commenced in 2012. We expect to complete enrollment for this study in 2013 with the first data readout available six to eight months thereafter.
If approved by the U.S. Food and Drug Administration ("FDA") and/or other worldwide regulatory agencies, AMR-001 would address a significant unmet medical need in the treatment of AMI, potentially improving the quality and longevity of life for those afflicted, and position the Company to capture a meaningful share of the worldwide AMI market.

Through our majority-owned subsidiary, Athelos Corporation (“Athelos”), we are collaborating with Becton-Dickinson in early stage clinical development of a therapy utilizing T-cells, collaborating for autoimmune and inflammatory conditions, including but not limited to, graft vs. host disease, type 1 diabetes, steroid resistant asthma, lupus, multiple sclerosis and solid organ transplant rejection. We plan to investigate the clinical feasibility of nTreg-based therapeutics to prevent and/or treat type 1 diabetes, graft vs. host disease, steroid resistant asthma, lupus, multiple sclerosis and solid organ transplant rejection and expect to file an Investigational New Drug Application ("IND") with the FDA in 2013 and commence human clinical studies in one of these disease conditions thereafter.

Our pre-clinical assets include our VSEL ™ (Very Small Embryonic Like) Technology platform for which we expect to file an IND with the FDA in late 2013 or early 2014 to initiate an National Institutes of Health ("NIH") funded human clinical studies treating periodontitis with VSELs™. We are also working on a Department of Defense funded study of VSELs™ and mesenchymal stem cells for the treatment of chronic wounds.

NeoStem's origins are in adult stem cell collection and storage and we believe that as new therapeutics are developed utilizing one's own stored cells (autologous), the market penetration rate for the collection and storage business may rise sharply from its current low single digits percentage level allowing our developing a network to scale rapidly if the demand grows.

We believe that NeoStem is ideally positioned to be an integrated leader in the cell therapy industry. We have significant basic research and development capabilities, manufacturing facilities on both the east and west coast of the United States, the support of regulatory and logistical expertise and a talented and experienced clinical team. We believe this expertise will allow us to achieve our mission of becoming the premier cell therapy company.


NeoStem develops therapies for chronic unmet medical needs around a significant IP portfolio…
…and operates a revenue generating service division with expertise in contract manufacturing and cell banking
AMORCYTE
Cardiovascular Disease
Athelos
Autoimmune Disorders
VSEL Technology
Regenerative Medicine
PCT
CELL THERAPY SERVICES
Contract Development and Manufacturing Organization

We are a Delaware corporation with our principal executive offices located at 420 Lexington Avenue, Suite 350, New York, New York 10170. Our telephone number is (212) 584-4180 and our corporate website address is www.neostem.com. We include our website address in this Annual Report on Form 10-K only as an inactive textual reference and do not intend it to be an active link to our website. The information on our website is not incorporated by reference in this Annual Report on Form 10-K.

Our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and all amendments to those reports, as well as other documents we file with the U.S. Securities and Exchange Commission ("SEC"), are available free of charge through the Investor Insights section of our web site as soon as reasonably practicable after such material is electronically filed with or furnished to the SEC. The public can obtain documents that we file with the SEC at *www.sec.gov*.

This report includes trademarks, service marks and trade names owned by us or other companies. All trademarks, service marks and trade names included in this report are the property of their respective owners.

OVERVIEW OF THE CELL THERAPY FIELD

Regenerative medicine is defined as the process of replacing or regenerating human cells, tissues or organs to restore normal function. Within this field are four general categories of therapeutic technology platforms: cell therapy; tissue engineering; tools, devices and diagnostics; and aesthetic medicine. NeoStem's business model is focused in the area of cell therapy, which we define as the introduction of cells (adult or embryonic, donor or patient, stem or differentiated) into the body to prevent and treat disease.

All living complex organisms start as a single cell that replicates, differentiates (matures) and perpetuates in an adult through its lifetime. Cell therapy is the process by which new cells are introduced into a tissue to prevent and treat disease and, regenerate damaged or aged tissue. The most common type of cell therapy has been the replacement of mature, functioning cells such as through blood and platelet transfusions. Since the 1970s, first bone marrow and then blood and umbilical cord-derived stem cells have been used to restore bone marrow and blood and immune system cells damaged by chemotherapy and radiation used to treat many cancers. These types of cell therapies are standard of practice world-wide and are typically reimbursed by insurance.

Within the field of cell therapy, research and development of stem cells to treat a host of diseases and conditions has greatly expanded. Stem cells (in either embryonic and adult forms) are very primitive and undifferentiated cells that have the unique ability to transform into or otherwise affect many different cells, such as white blood cells, nerve cells or heart muscle cells. NeoStem's cell therapy development efforts are focused on the use of adult stem cells; these cells are found in the bone marrow, in peripheral blood, umbilical cord blood and other body organs. For more than 40 years, physicians have been using adult stem cells to treat various blood cancers, and only recently has the promise of using adult stem cells to treat a myriad of other diseases begun to be realized.

There are two general classes of cell therapies: the use of either autologous cells (meaning donor and recipient/patient are the same) or allogeneic cells (donor and recipient are different people). The use of autologous cells to create vaccines directed against tumor cells in the body has been demonstrated to be effective and safe in clinical trials. For example, Dendreon Corporation's Provenge therapy for prostate cancer received FDA approval in early 2010. Our AMR-001 program is focused on autologous therapy as we believe the integration to the host and long-term benefits of this therapy can best be achieved with an autologous product.

Various adult stem cell therapies are in clinical development for an array of human diseases, including autoimmune, oncology, neurological and orthopedic, among others. In addition, we, as well as others, are developing cell therapies for cardiovascular disease. While no assurances can be given regarding future medical developments, we believe that the field of cell therapy holds the promise to better the human experience and minimize or ameliorate the pain and suffering from many common diseases and/or from the process of aging.

At PCT, we currently are working with a wide range of clients in the regenerative medicine industry. As such, PCT provides a unique and fundamental base platform of experience with a multitude of cell types in development today. Our CDMO offerings are strategically aligned to participate in all of these aspects of the evolving cell therapy industry, as described above. Our goal is to continue to leverage the experience of PCT as a recognized leader of cell therapy manufacturing and development services in this industry.

Market Analysis

According to the MDB Capital Group's January 2011 report entitled “The Regenerative Medicine Report: Part II,” cell-based therapies utilizing stem cells represented a market of approximately $50 billion at the time of the report, with an expected growth rate of 15% compounded annually, projected to reach an estimated $88 billion by 2014. With approved cell therapy products currently being sold in the Unites States and abroad and an increasing number of Phase 2 and Phase 3 trials with cell therapies underway, we believe the “promise” of cell therapy will become clearer over the next several years.

Cell therapies, if approved, may have the effect of cutting health care costs as they may facilitate functional restoration of damaged tissues and not just abatement or moderation of symptoms. Safe and efficacious cell therapies for chronic diseases could capture an increasing portion of future healthcare spending in the United States, driven both by favorable demographics and the meaningful pharmacoeconomic benefit. Within the cardiovascular space, for example, the forecasted economic burden on society is expected to rise substantially. Adverse consequences associated with severe myocardial infarctions (MI) and the progression to congestive heart failure (even with current state-of-the-art medical care) represent major unmet medical needs. These adverse consequences associated with MI typically result in an estimated average annual cost to society of $50,000 per patient per year for five years of life, post-MI, and in those patients who do progress to congestive heart failure the numbers become substantially higher. According to the American Heart Association, by 2030, it is projected that 40.5% of Americans - 116 million people - will have some form of cardiovascular disease. Between 2010 and 2030, total direct medical costs of cardiovascular disease are projected to triple, from $273 billion to $818 billion. Real indirect costs - due to lost productivity - for all forms of cardiovascular disease are estimated to increase from $172 billion in 2010 to $276 billion in 2030, an increase of more than 60 percent. The combined costs are expected to exceed $1 trillion by 2030. Cell therapy offers the promise of alleviating much of the burdens of these chronic diseases in a cost-effective way.

CELL THERAPY PRODUCT DEVELOPMENT

AMR-001

We are pursuing the development of AMR-001, a chemotactic hematopoietic stem cell product comprised of autologous bone marrow derived CD34+/CXCR4+ cells selected to treat damaged heart muscle following AMI. AMR-001 is being evaluated to determine safety and the effect of intracoronary infusion of AMR-001 on myocardial perfusion (amount of blood in the heart) at six months post randomization in subjects post acute ST elevation myocardial infarction (“STEMI”), a particular type of AMI. AMR is also being evaluated to determine its effect on preservation of left ventricular function and risk of major adverse cardiac events following AMI, and impact on patient reported outcomes, among other endpoints. Multiple peer reviewed publications from a range of laboratories and investigators indicate that AMR-001 should increase microvascular blood flow in the myocardium (heart muscle) via angiogenesis (development and formation of new blood vessels), thereby reversing post-heart attack induced restriction of blood supply and rescuing tissue from eventual cell death. This would result in prevention of myocardial infarct expansion and thus block ventricular remodeling - the driver of long-term risk in AMI patients. At the time of a heart attack, doctors rush to open up the coronary artery, usually using a stent. Within the first 5 to 11 days following the heart attack is the optimal time to administer AMR-001 via that same artery. With angiogenesis initiated in the peri-infarct zone (that is, the living tissue on the periphery of the dead tissue), the myocardium surrounding the site of the heart attack is preserved.

In December 2010, Amorcyte (which we acquired in October 2011) reported results of a Phase 1 study of AMR-001 treating 31 patients with damaged heart muscle following AMI. In January 2012, we commenced a Phase 2 study of AMR-001 for the same indication which we are presently enrolling as a160-person multicenter, randomized, double-blind, placebo-controlled clinical trial evaluating the safety and efficacy of infusing AMR-001 into an infarct-related artery. Based on experiences in drug development, the literature and our Phase 1 results, AMR-001 shows promise to be efficacious and safe for treating patients who suffer a ST Elevation Myocardial Infarction ("STEMI"), particularly when using a pure, potent and adequately dosed CD34 cell population.

We believe that the AMR-001 platform may be applicable to other conditions resulting from underlying ischemia. In that regard, we expect to file an IND in 2013 for the use of AMR-001 in arresting the progression of congestive heart failure and treating the associated comorbidities of that disease. We are exploring the possibility of filing an IND in 2014 for the treatment of traumatic brain injury.

Preclinical Development

Pre-clinical animal models of induced AMI have demonstrated that CD34+/CXCR4+ expressing cells migrate naturally to oxygen-deprived locations. More specifically, these cells home to the viable tissue surrounding the infarcted (dead) myocardium, known as the peri-infarct zone. Moreover, CD34+/CXCR4+ expressing cells have been shown to be capable of inducing the development and formation of new blood vessels over time and preventing late heart cell death due to chronic ischemia. These cells have been shown to prevent cell death through alternative pathways. Other studies demonstrated that CD34+/CXCR4+ cells that take up residence in the peri-infarct zone are likely the cell type that affects angiogenesis, relieves ischemia and prevents apoptosis (cell death). Collectively, these results provided the rationale for the clinical exploration of CD34+/CXCR4+ expressing cells to reduce the incidence and severity of MACE (Major Adverse Cardiac Events) after an extensive AMI.

Clinical Development Efforts

The completed Phase 1 study of AMR-001 in 31 patients with damaged heart muscle following AMI showed a statistically significant dose-related improvement in myocardial perfusion. Patients who received 10 million cells (n=5) or 15 million cells (n=4) showed statistically significant improvement in resting perfusion rates at six months as compared to patients who received 5 million cells (n=6) or the control groups (n=15), as measured by Single-photon emission computerized tomography (SPECT). The study data also showed a dose-related trend towards improvement in ejection fraction (the percentage of blood pumped out of the ventricles with each heart beat), end systolic volume (the blood volume remaining in a ventricle at the end of contraction and the beginning of filling, which can be used clinically as a measurement of the adequacy of cardiac emptying), and reduction in infarct (death of tissue caused by shutting off the blood supply) size.

AMR-001 works by increasing microvascular blood flow in the heart muscle via the development and formation of new blood vessels, thereby reversing the restriction of blood supply caused by a heart attack and rescuing tissue from eventual cell death. The treatment process works as follows:

- Ÿ A patient's own bone marrow is harvested and a sterile pharmaceutical composition enriched for CD34+/CXCR4+ cells is prepared using our patented technology.
- Ÿ The isolated cells are then infused via catheter into the infarct-related artery 6 to 11 days following an AMI, which we believe is the optimal time frame for cellular intervention, after the pro-inflammatory “hot phase” and prior to permanent scar formation, while the heart tissue is actively attracting CD34+/CXCR4+ cells.
- Ÿ The infused cells migrate to the at-risk tissue along a hypoxia-induced Stromal-Derived Factor-1 gradient to a signal emitted from the infarct as described above, inducing angiogenesis and a resultant functional benefit.

In January 2012, we enrolled the first patient in our PreSERVE Phase 2 trial, a multicenter, randomized, double-blind, placebo-controlled U.S. clinical trial to evaluate the efficacy and safety of a single intra-coronary infusion of at least 10 million cells of AMR-001, post STEMI, in subjects with ejection fractions of 48% or less as measured by cardiac magnetic resonance imaging ("CMR"). We expect to complete enrollment for this study in 2013 with the first data readout available six to eight months thereafter. As of March 8, 2013, of the 160 patients in the trial 87 have been enrolled. If the number of evaluable patients in the trial is less than projected, we have authorization from the FDA to enroll up to 180 patients.

The objective of the Phase 2 study is to determine the safety and the efficacy of AMR-001 in improving cardiac function and outcomes of patients after STEMI, a type of AMI. The primary endpoint of the study is improvement in myocardial cardiac perfusion using the resting total severity score (“RTSS”), measured by gated Single Photon Emission Computed Tomography (“SPECT”) myocardial perfusion imaging (“MPI”) at six months post randomization, with secondary endpoints evaluating the impact of AMR-001 on cardiac function and adverse events post-STEMI myocardial infarction as defined by reduction in cumulative MACE at 6, 12, 18, 24 and 36 months; premature death; recurrent heart attack; congestive heart failure; significant arrhythmias; and acute coronary syndrome. Additional secondary endpoints of the study are to determine preservation of cardiac function with CMR (Cardiac Magnetic Resonance) to measure LVEF (Left Ventricular Ejection Fraction), LVESV (Left Ventricular End Systolic Volume), LVEDV (Left Ventricular End Diastolic Volume), regional myocardial strain, infarct/peri-infarct regional wall motion abnormalities, and infarct size and Quality of Life measures questionnaires such as Kansas City Cardiomyopathy Questionnaire (“KCCQ”) & Seattle Angina Questionnaire (“SAQ”). We have received positive six and twelve month data Safety Monitoring Board ("DSMB") safety evaluations for our Phase 2 PreSERVE clinical trial.

Market Opportunity and Competition

In the United States, there are more than 160,000 patients per year who suffer a STEMI, the most dangerous type of heart attack, resulting from a sudden blockage of one of the arteries that supplies nutrient-rich blood to the heart muscle. Treatment of these patients post-heart attack represents a significant financial burden for many managed care programs. We expect that th

is burden will increase as the “baby boomer” population ages and the annual number of STEMI likely increases. AMR-001, if approved, could provide a significant pharmacoeconomic benefit by preventing downstream cardiac adverse events.

The field of cardiovascular cell therapy development is competitive. There are a number of companies that are developing stem cell based therapies for cardiovascular diseases, including, but not limited to, Baxter International Inc., MesoBlast Limited, Athersys, Inc., Aastrom Biosciences, Inc., Cytomedix, Inc., Pluristem Therapeutics Inc. and Cytori Therapeutics, Inc. These companies are utilizing a number of different therapeutic approaches in their development efforts. Specifically, there are both autologous and allogeneic based competitive therapies that derive cells principally from four sources: fat derived cells, peripheral blood, cord blood, and bone marrow derived cells. Of these, the allogeneic sources (that is, where donor and recipient are different persons) face a series of technical limitations that we believe can minimize their clinical value, including the potential need for immunosuppressants, toxicity concerns and durability issues. AMR-001, an autologous cell therapy, has demonstrated positive Phase 1 data, a cGMP process for manufacturing and a broad portfolio of patents and patent applications including dosing related technology. As such, we believe AMR-001 is in a strong competitive position.

Manufacturing

PCT provides all of the cell processing services needed in connection with our PreSERVE Phase 2 trial of AMR-001 and it is expected that PCT also will provide such services for any future studies, if applicable. Our use of PCT for cell processing services related to AMR-001 and other NeoStem product candidates means that a portion of PCT's capacity (currently approximately 20%) is not available for potential revenue generating activities with unaffiliated third parties. While PCT does not currently have sufficient manufacturing capacity to produce large scale commercial manufacturing of AMR-001 if approved, it is pursuing multiple options for commercial manufacturing capabilities in the U.S. and Europe. We expect to have these capabilities in place by the end of 2013.

Intellectual Property

We have five issued patents (three in the U.S., 1 in Japan, 1 in South Africa) and one U.S. patent application that has received a Notice of Allowance covering AMR-001, the claims of which are currently scheduled to expire between 2026 and 2028, and we have more than 30 patent applications pending worldwide. Specifically, there are three primary U.S. patents, and one Allowed U.S. patent application that has received Notice of Allowance covering compositions and methods using AMR-001 to treat injuries caused by vascular insufficiency:

- U.S. Patent No. 7,794,705 covering a chemotactic stem cell product enriched for CD34+ cells that treats injury from AMI;
- U.S. Patent No. 8,088,370 covering the use of AMR-001 in the repair of injury caused by vascular insufficiency, including all forms of cardiac insufficiency, such as congestive heart failure, chronic myocardial ischemia and, we believe, vascular insufficiency induced ischemic conditions beyond the cardiac setting;
- U.S. Patent No. 8,343,485 offering expanded breadth in AMR's composition and treatment methods in the vascular insufficiency setting; and
- U.S. patent application no. 13/285,606 covering a method of treating a progressive myocardial injury caused by an ischemic condition and utilizing a multi-dosing regimen.

T-Cell Therapy

Athelos, in collaboration with Becton-Dickinson, is seeking to develop therapies using a person's immune cells as a therapeutic product to treat disorders of the immune system. Many immune-mediated diseases are a result of an imbalance in the immune system when inflammatory cells go unchecked. Therapy using regulatory T cells (Treg) represents a novel approach to restoring immune balance by enhancing Treg cell number and function to inhibit pathogenic immune responses.

Through exclusive world-wide licenses to approximately 20 issued U.S. patents, Athelos has secured the rights to a broad patent estate within the Treg field, covering natural Tregs (nTregs), induced Tregs (iTregs) and methods of treating or preventing certain conditions and/or diseases by use of Tregs. Both types of Tregs have been shown in pre-clinical studies to be important in modulating autoimmune and inflammatory diseases. Natural Tregs have been evaluated by others in early phase human clinical trials and shown to be safe with suggestions of clinical benefit in graft-versus-host disease. Both nTregs and iTregs have demonstrated the ability to treat conditions like diabetes, inflammatory bowel disease and organ transplant tolerance in animal models of disease. To complement our development efforts, we have established consulting relationships with thought leaders in the field of Treg therapy for immune disorders, including David Horwitz, MD, Chief of the Division of Rheumatology and Immunology at the University of Southern California Keck School of Medicine, and Bruce Blazar, MD, Chief of Blood and Marrow Transplantation and Director of Center of Translational Medicine, Masonic Cancer Center, University of Minnesota.

This ongoing development program is establishing methods to isolate and expand human nTregs for large scale manufacturing to enable early clinical trials. We are exploring potential relationships with key leaders and academic investigators with sufficient preclinical data to support an IND application in as many as two potential clinical indications. We plan to investigate the clinical feasibility of nTreg-based therapeutics to prevent and/or treat type 1 diabetes, graft vs. host disease, steroid resistant asthma, lupus, multiple sclerosis and solid organ transplant rejection and expect to file an IND with the FDA in 2013 to commence human clinical studies in one of these disease conditions.

In 2013, we also will be focusing our efforts to evaluate and characterize several potential methods for the in vitro generation of human iTregs and show proof-of-concept of a therapeutic cellular product in an appropriate animal model of disease.

VSEL™ Technology

Mariusz Ratajczak, M.D., Ph.D., head of the Stem Cell Biology Program at the James Graham Brown Cancer Center at the University of Louisville, discovered that mammalian bone marrow contains a heterogeneous population of stem cells that has properties similar to those of embryonic stem cells. These cells, first described in mice, are referred to as very small embryonic-like stem cells, "VSELs™" or "VSEL™ stem cells"). We are engaged in research and development of new therapies based on VSEL™ Technology and pursuant to our VSEL™ Technology license agreement with the University of Louisville, we have the exclusive, world-wide rights, to technology and know-how relating to very small embryonic-like stem cells. These patent applications, filed in the U.S. and abroad, relate to VSEL™ stem cell methods of isolation and treatment of disease.

Pre-clinical animal models have demonstrated that highly enriched human VSELs™, when injected in the vitreal or subretinal space can migrate and integrate into areas of damage and have the ability to differentiate and express markers of retinal stem cells, neuronal cells, and photoreceptors and thus, through further studies, may demonstrate VSELs™ potential to treat ocular diseases such as macular degeneration, retinitis pigmentosa, and other retinal degenerative diseases that have no effective treatment options today. Preliminary data suggests that VSEL™ potency may be hundreds of times greater than mesenchymal stem cells ("MSC"). We believe this represents great promise for healing severe complex wounds in people.

The use of human VSELs™ for regenerative medicine presents the possibility of capturing the key advantages associated with embryonic stem cells without the ethical or moral dilemmas associated with the use of fetal cells, or the potential negative biological effects associated with embryonic stem cells, such as their propensity to form tumors. In addition, VSELs™ offer the advantage of using autologous stem cells (i.e., the patient's own cells) for therapy, as opposed to having to rely on donor cells that are susceptible to immune rejection. Our research has identified cells in human blood and bone marrow that have many of the key properties described for murine VSELs™. This research includes evidence of primitivism, pluripotency and tri-lineage differentiation. These observations provide the groundwork for the development of VSEL™ therapies to regenerate or repair damaged or diseased tissues in human subjects.

In 2012, the development of VSEL™ Technology remained an area of major focus for us as we worked toward the goal of creating autologous VSEL™ therapies prepared under cGMP for commercial use. This past year also marked a new level of achievement for VSEL™ Technology as we received a two year grant totaling approximately $1.2 million for “Repair of Bone Defects with Human Autologous Pluripotent Very Small Embryonic-Like Stem Cells (VSEL)” from the National Institute of Dental and Craniofacial Research (NIDCR), a division of the National Institutes of Health (NIH). This peer-reviewed grant is to support the first NIH approved clinical study of VSELs™ in humans.

We intend to pursue and commercialize a therapeutic VSEL™ product in selected clinical applications and markets based on unmet medical need, target patient population size, regulatory strategy, and overall commercial market. Through the grant funding listed below, together with NeoStem's own funding, we are exploring VSEL™ stem cell treatments for periodontitis, healing complex skin and soft tissue wounds, corneal regeneration and repair, age-related macular degeneration, nerve regeneration and acute radiation syndrome in a parallel but staggered timeline. We anticipate that a single clinical manufacturing process will be developed for these indications, collectively, and that the major pacing item will be the generation of preclinical data to support an IND application for a Phase 1 clinical trial. We expect to file an IND to commence human clinical studies treating periodontitis in late 2013 or early 2014.

The following table summarizes our grant funded development efforts:

Area of Focus	*Funding Source*	*Grant Amount*	*Dates of Project*	*Objective*
Wound healing	U.S. Department of Defense	$700,000	6/1/2010-12/31/2014	In collaboration with Roger Williams Medical Center (an affiliate of Boston University), an evaluation of topically applied bone marrow derived adult mesenchymal stem cells for rapid wound healing.
Osteoporosis	U.S. Department of Defense	$1,780,500	9/30/2011-12/31/2014	In collaboration with the University of Michigan, the development of autologous pluripotent VSEL™ stem cells to reverse bone loss associated with osteoporosis.
Acute Radiation Syndrome	National Institutes of Health - National Institute of Allergy and Infectious Disease	$600,000	3/11/2012-3/11/2014	In collaboration with the University of Louisville, the development of human autologous pluripotent VSEL™ stem cells as a countermeasure to acute radiation syndrome.
Bone Formation	National Institutes of Health - National Institute of Dental and Craniofacial Research	$1,221,000	9/11/2012-8/31/2014	In collaboration with the University of Michigan, an evaluation of human autologous pluripotent VSEL™ stem cells in bone formation following tooth extraction for periodontitis.
Nerve Regeneration	U.S. Department of Defense - Telemedicine & Advanced Technology Research Center	$50,000	2012-2013	Evaluation of VSEL™ stem cells in regenerating the sciatic nerve.

To further drive our stem cell initiatives, we will continue to target key governmental agencies, congressional committees and not-for-profit organizations to contribute funds for our research and development programs. These grant awards, together with our other submitted grant applications, to the extent funded, would not only further our research efforts already underway, but potentially could launch new inquiries and further diversify our base of research partners in other areas. We expect to submit grant applications during 2013 for up to $6,000,000 in additional funding for our programs.

Vatican Initiatives

In May 2010, the Vatican's Pontifical Council for Culture and NeoStem announced what has been characterized as the Vatican's first-ever contract of collaboration with an outside commercial venture to advance adult stem cell research. The initiative partners, NeoStem and *The Stem for Life Foundation* (the public charity it helped form), together with the Pontifical Council and its charitable organization, *STOQ International*, seek to expand research and raise awareness of adult stem cell therapies. The partnership entails work on collaborative activities with the goal of advancing scientific research on adult stem cells and exploring their clinical application in the field of regenerative medicine, as well as the cultural impact of such research.

In addition, NeoStem and the Pontifical Council spearheaded an education campaign to generate awareness of the cultural relevance of such a fundamental shift in medical treatment options, particularly with regard to the impact on theological and ethical issues. Specifically, NeoStem and the Pontifical Council are pursuing the development of educational programs, publications and academic courses with an interdisciplinary approach for theological and philosophical faculties, including those of bioethics, around the world. These initiatives aim at providing information, teaching and research regarding important issues of human health and of the present and future of medical progress in relation to adult stem cell research and with respect to the great value of human life. Through this collaboration, NeoStem and the Pontifical Council for Culture aspire to reach religious and academic leaders working in the Pontifical and Catholic Institutions, as well as to extend their work and results to institutions beyond the Catholic environment. In April 2013, the book, *The Healing Cell: How the Greatest Revolution in History is Changing Your Life*, will be released to the public.

In April 2013, NeoStem, the Foundation, the Pontifical Council and STOQ will host *The Second International Vatican Adult Stem Cell Conference: Regenerative Medicine - A Fundamental Shift in Science & Culture*, from within the Vatican and following the first conference held by the parties in November 2011. With renowned journalists serving as moderators, the conference will feature leading adult stem cell scientists and clinicians, thought leaders of faith, ethics and culture, business leaders as well as Ministers of Health, Ambassadors to the Holy See and regulatory officials from around the world. During the event, adult stem cell scientists and clinicians will present an array of ongoing medical advancements occurring throughout the world including regrowing damaged and diseased organs; regenerating damaged tissue caused by heart attacks; regrowing new skin for burn victims; rebalancing our own immune systems; pushing back a rising tide of chronic disease; advancements in pediatric

cancers; preventing organ rejection and addressing a range of other conditions and trauma, such as stroke, Parkinson's disease and traumatic brain injuries via adult stem cell therapies.

CONTRACT DEVELOPMENT AND MANUFACTURING OPERATIONS

Progenitor Cell Therapy, LLC (“PCT”), our wholly-owned subsidiary, is an internationally recognized contract development and manufacturing organization (CDMO) focused on providing exceptional service, quality and value to its clients, which include an expanding range of development stage through Fortune 500 biotechnology, pharmaceutical and medical product companies, as well as leading academic research institutions. PCT's business strategy is to provide contract research, development and manufacturing services, enabling our clients to cost effectively outsource their pre-clinical, clinical and commercial manufacturing and cell storage operations. PCT's expert, customer centric and standardized services include, but are not limited to current Good Manufacturing Practices/Good Laboratory Practices ("cGMP/GLP") manufacturing, product, process and assay development, Good Tissue Practices ("GTP") cell and tissue processing, cell and tissue sourcing and banking, distribution and delivery and consulting and regulatory services. PCT operates two state-of-the-art, accredited and certified U.S. facilities, one in Allendale, New Jersey and the other in Mountain View, California and is looking to expand its service activities into Europe during 2013.

NeoStem also is a PCT client, which enables us to cost-effectively and efficiently develop our own cell therapy products and translate our own research and development efforts, capabilities and proprietary technologies, into stable, reproducible, well-characterized cell products tailored for specific therapeutic applications, including AMR-001.

Management Experience

The management team of PCT has extensive experience in domestic and internationally regulated contract research, development and manufacturing across a broad range of science, technologies, and processes operations. Team members are recognized and credentialed experts in all aspects of clinical and product development, characterization, manufacturing, delivery, and use, and have extensive experience designing, validating, and operating cGMP/GLP cell therapy manufacturing facilities.

Informed by this experience, PCT's strategy historically has included the periodic formation of companies intended to develop specific therapeutic products and leverage its capabilities to bring its own cell therapy product portfolio to market. In this regard, PCT management founded a cardiac cell therapy company (our subsidiary Amorcyte), an immunotherapy company (our 80% owned subsidiary Athelos) and a cGMP cord blood company (our subsidiary NeoStem Family Storage, LLC).

Service Offerings

The PCT business model is focused on helping our clients advance their respective product candidates from conception through to commercialization by reducing manufacturing risks, shortening the time to regulatory approval, and reducing the overall costs of a clinical development program. With its established facilities and infrastructure, PCT can offer our clients expertise at all stages of the product development lifecycle and cost-effective development and manufacturing services at the highest quality without the need for significant capital investment.

Since its inception in 1999, PCT has served over 100 clients and is experienced with more than 20 different cell based therapeutics including neuronal and skin based cells for brain and spinal cord repair, myoblast, mesenchymal cells and bone marrow derived cells for heart disease, tumor, dendritic cells and monocytes for cancer treatment, cord blood, peripheral blood, bone marrow CD34+ selected cells for transplantation and islet cells for diabetes. PCT has performed over 30,000 cell therapy procedures in its cell therapy manufacturing facilities, processed and stored over 18,000 cell therapy products (including approximately 7,000 umbilical cord blood, 10,000 blood and marrow derived stem cells and 1,000 dendritic cells) and arranged the logistics and transportation for over 14,000 cell therapy products for clinical use by over 5,000 patients nationwide. Importantly, PCT manufactured over 85% of Dendreon's approved Provenge® product during its Phase 3 clinical testing, and over 60% of all Dendreon cell therapeutics in clinical testing from 1999 through 2007.

PCT's current business development efforts target cell and tissue therapeutic product companies, academic stem cell and other cell therapy clinical trials, device companies serving the regenerative medicine sector, pharmaceutical companies with an interest in a cell or tissue therapeutic or research product, and any other potential client with needs in the manufacturing and development of a cell or tissue-based product. More specifically, we focus our PCT service offerings in the following five areas:

- Manufacturing: Manufacturing cell therapy-based products includes a number of challenges, including the need for substantial capital and resource investment, limited unit sizes and process scalability, short processing turnaround times and stringent and evolving regulatory requirements. PCT's facilities, infrastructure and extensive experience provide a turn-key solution to clients to meet these challenges. In order to bolster our unique expertise and further reduce cost of goods sold for products, PCT continually seeks innovation drivers, including new opportunities for automation in its manufacturing operations.

- Product and Process Development: PCT works with clients to develop, optimize, implement and validate various aspects of cell therapy product and process development.

- Cell and Tissue Processing: PCT offers a full range of cost-effective cell collection and processing services that meet cGTP standards.

- Storage, Distribution and Delivery: PCT offers cryogenic storage facilities for both short- and long-term storage of tissues, primary cells and cell therapy products. In addition, PCT leverages its established logistics and distribution network to ensure a timely, secure and cost-effective point-to-point chain of control and custody.

- Consulting and Regulatory Support*:* PCT offers its clients a full-range of scientific, technical and regulatory support along the entire spectrum of cell therapy development.

Over the next several years, management anticipates that the number of companies in the cell therapy field will continue to increase and the relative distribution of stage of development of the therapeutics will begin to skew more heavily towards Phase 2 and Phase 3 trials. As this industry emerges, PCT is well positioned to capture a meaningful share of this larger, more profitable market. To prepare for the advancement of this industry, PCT is pursuing multiple options for commercial manufacturing capacity, both in the U.S. and Europe, and expects to have these capabilities in place by the end of 2013.

Additionally, PCT will continue to look for opportunities to secure from our clients equity participation, rights to back-end royalties and exclusive commercial manufacturing agreements, in additional to cash fees.

Facilities

With over 55,000 square feet of built out development and manufacturing space in its Allendale, NJ, and Mountain View, CA facilities, PCT is a cGMP-compliant cell therapy CDMO with facilities on both the East and the West Coast of the United States. These facilities include 3,300 square feet of controlled environment rooms (CERs) or clean rooms that are unidirectional-flow, negative-pressure, International Organization for Standardization ("ISO ") designation 7/ Class 10,000 classified, with ISO designation 8/ Class 100,000 gown-in/gown-out rooms, and material pass-throughs. Each CER has controlled access, live facility and equipment monitoring with automated alarm call-out, dedicated HVAC systems, and is on an uninterruptible power supply (UPS) connection, maintained by an external generator. Each facility also contains cell and tissue cryogenic storage rooms, with controlled access, live facility and equipment monitoring with automated alarm call-out, and UPS connection, to ensure highest level of quality control and risk mitigation for product storage.

PCT's facilities are AABB (American Association of Blood Banks)- and FACT (Foundation for the Accreditation of Cellular Therapy)-accredited, hold all requisite licensures, are registered with the FDA as human cells, tissues, and cellular and tissue-based products (HCT/Ps) facilities, and maintain cGMP compliant quality systems. The Allendale facility has been designed to be compliant with FDA and European Medicines Agency (EMA) standards for the manufacture of human cells for therapeutic use.

Transportation Network and Logistics

PCT understands that a successful transportation network for cell therapy will require a completely secure point-to-point chain of control and custody; cGMP standard operating procedures in all phases of transit; a highly specialized and trained air and ground courier network; quality assurance at each transfer point; and real-time package tracking. We strive to maintain high standards in transportation and handling of client cell products. Shipments of products are tracked as PCT and its clients develop confidence in the abilities of PCT's transportation partners. PCT is laying the groundwork for such a network as part of its business development process. PCT works with validated specialty air carrier(s) that follow specific protocols for shipping medical products, including whole blood and blood products, tissue for transplantation, and diagnostic specimens and also handles cryopreserved specimens and biologics.

Competition

Our CDMO business faces competition from other third party contract manufacturers, as well as more general competition from companies and academic and research institutions that may choose to self-manufacture rather than utilize a contract manufacturer. The two largest third party CDMO competitors focused in the field of cell therapy are Lonza Group Ltd. and WuXi AppTec. Both of these companies are large, well-established manufacturers with financial, technical, research and development and sales and marketing resources that are significantly greater than those of PCT. In addition, both Lonza and WuXi have international CDMO capabilities that we do not currently possess though are pursuing. We also face competition from a number of other CDMOs that are somewhat smaller in size and with fewer resources than PCT.

More generally, we face competition inherent in any third party manufacturer's business: namely, that potential customers may instead choose to invest in their own facilities and infrastructure, affording them greater control over their products and the promise of long-term cost savings compared to a third party CDMO. To be successful, we will need to convince potential customers that PCT's services are both higher-quality and more cost-effective than could be achieved through internal manufacturing and that our experience and expertise is unique in the industry. Our ability to achieve this and to successfully compete against other CDMOs will depend, in large part, on our success in developing superior automation technologies that improve both the quality and profitability associated with cell therapy manufacturing.

Cord Blood and Stem Cell Processing and Storage

We provide services to treat patients with cell and tissue therapies, including the processing for blood and bone marrow stem cell transplants which are used following radiation and/or chemotherapy for certain cancers-particularly leukemia, lymphoma and myeloma. We also provide services to individuals for the private collection, processing and storage of umbilical cord blood units and adult stem cells. This enables healthy individuals to donate and store their stem cells for personal therapeutic use in the future, as and when needed. Our facilities on both the east and west coast are cGMP compliant, the highest FDA standard, which we believe gives us a competitive advantage in the industry.

We believe that the perceived value of stem cell donation and storage will increase as additional indications for stem cell-based therapies are developed. Individuals may begin to view the ability to donate and store autologous adult stem cells for future personal therapeutic use as a valuable part of a “bio-insurance” program. The benefits of pre-donation include having a known supply of autologous stem cells rather than an uncertain supply of compatible allogeneic stem cells; collecting and storing the cells while healthy, since autologous stem cells may be compromised once a patient becomes sick; and storing the patients cells when available, since the quantity and quality of stem cells generally diminish with age.

However, currently there is no significant global market for the use of autologous stem cells and hence no significant market yet exists for their processing or their collection and storage, nor is there any guarantee that such markets will develop in the near future, or at all. While we believe that the medical community is generally supportive of cord blood or adult stem cell collection systems, the medical institutions currently do not specifically recommend storage of stem cells from the cord blood or adult stem cells. Patients can donate their cord blood to the public cord blood collection system without charge. If medical research discovers new and more effective medical procedures that make allogeneic cord blood transplants safer and more effective, the clinical advantage of storing umbilical cord blood for the child's own future therapeutic use may significantly decline. As such, we are not putting resources into marketing the services but are developing a network to enable us to capitalize on this market if the demand emerges.

GOVERNMENT REGULATION

The health care industry is one of the most highly regulated industries in the United States and abroad. Various governmental regulatory authorities, as well as private accreditation organizations, oversee and monitor the activities of individuals and businesses engaged in the development, manufacture and delivery of health care products and services. The following is a general description of certain current laws and regulations that are relevant to our business.

HCT/P Regulations

Manufacturing facilities that produce cellular therapies are subject to extensive regulation by the FDA. In particular, FDA regulations set forth requirements pertaining to establishments that manufacture human cells, tissues, and cellular and tissue-based products (“HCT/Ps”). Title 21, Code of Federal Regulations, Part 1271 provides for a unified registration and listing system, donor-eligibility, current Good Tissue Practices (“cGTP”), and other requirements that are intended to prevent the introduction, transmission, and spread of communicable diseases by HCT/Ps. More specifically, key elements of Part 1271 include:

- Registration and listing requirements for establishments that manufacture HCT/Ps;
- Requirements for determining donor eligibility, including donor screening and testing;
- cGTP requirements, which include requirements pertaining to the manufacturer's quality program, personnel, procedures, manufacturing facilities, environmental controls, equipment, supplies and reagents, recovery, processing and process controls, labeling, storage, record-keeping, tracking, complaint files, receipt, pre-distribution shipment, distribution, and donor eligibility determinations, donor screening, and donor testing;
- Adverse reaction reporting;
- Labeling of HCT/Ps; and
- FDA inspection, retention, recall, destruction, and cessation of manufacturing operations.

PCT currently collects, processes, stores and manufactures HCT/Ps, including the manufacture of cellular therapy products. NeoStem Family Storage also collects, processes, and stores HCT/Ps. Therefore, both PCT and NeoStem Family Storage must comply with cGTP and with the current Good Manufacturing Practices ("cGMP") requirements that apply to biological products. Cell and tissue based products may also be subject to the same approval standards, including demonstration of safety and efficacy, as other biologic and drug products if they meet certain criteria such as if the cells or tissues are more than minimally manipulated or if they are intended for a non-homologous use. Management believes that requirements pertaining to premarket approval, do not currently apply to PCT because PCT is not currently investigating, marketing or selling cellular therapy products. If either PCT or NeoStem Family Storage changes its business operations in the future, the FDA requirements that apply to PCT or NeoStem Family Storage may also change.

State Regulation of Cell Therapy

Certain state and local governments regulate cell-processing facilities by requiring them to obtain other specific licenses. As required under applicable state law, PCT's New Jersey and California facilities are licensed, respectively, as a blood bank in New Jersey and as a drug manufacturing facility in California. PCT also maintains licenses with respect to states that require licensure of out-of-state facilities that process cell, tissue and/or blood samples of residents of such states (e.g., New York and Maryland). PCT has the relevant state licenses needed for processing and is AABB (American Association of Blood Banks) accredited for this purpose. Management believes that it is in material compliance with currently applicable federal, state, and local laboratory licensure requirements, and intends to continue to comply with new licensing requirements that may become applicable in the future.

Certain states may also have enacted laws and regulations, or may be considering laws and regulations, regarding the use and marketing of stem cells or cell therapy products, such as those derived from human embryos. While these laws and regulations should not directly affect PCT's business, they could affect the business of some of PCT's clients and therefore the amount of business PCT receives from these clients.

Federal Regulation of Clinical Laboratories

The Clinical Laboratory Improvement Amendments (“CLIA”) extends federal oversight to clinical laboratories that examine or conduct testing on materials derived from the human body for the purpose of providing information for the diagnosis, prevention, or treatment of disease or for the assessment of the health of human beings. CLIA requirements apply to those laboratories that handle biological matter. CLIA requires that these laboratories be certified by the government, satisfy governmental quality and personnel standards, undergo proficiency testing, be subject to biennial inspections, and remit fees. The sanctions for failure to comply with CLIA include suspension, revocation, or limitation of a laboratory's CLIA certificate necessary to conduct business, fines, or criminal penalties. Additionally, CLIA certification may sometimes be needed when an entity, such as PCT or NeoStem Family Storage, desire to obtain accreditation, certification, or license from non-government entities for cord blood collection, storage, and processing. PCT has obtained CLIA certification for its facilities in New Jersey. We have been advised that, currently, CLIA certification is not required for our PCT facilities in California. However, to the extent that any of the activities of PCT or NeoStem Family Storage (for example, with regard to processing or testing blood and blood products) require CLIA certification, PCT intends to obtain and maintain such certification and/or licensure.

Stem Cell Therapeutic and Research Act of 2005

The Stem Cell Therapeutic and Research Act of 2005 established a national donor bank of cord blood and created a national network for matching cord blood to patients. The National Marrow Donor Program (NMDP) carries out this legislation, which entails acting as the nation's Cord Blood Coordinating Center and actively recruiting parents for cord blood donations. The NMDP also administers the National Cord Blood Inventory (NCBI), which has a goal of collecting 150,000 cord blood units that could be used to treat patients all over the United States. Importantly, the legislation also authorized federal funding to support the legislation's goals for collecting cord blood units.

Pharmaceutical and Biologic Products

Government authorities in the United States, at the federal, state and local level, and in other countries, extensively regulate, among other things, the research, development, testing, manufacture, including any manufacturing changes, packaging, storage, recordkeeping, labeling, advertising promotion, distribution, marketing, import and export of biological products such as AMR-001. The process of obtaining required regulatory approvals and the subsequent compliance with appropriate statutes and regulations require the expenditure of substantial time and money, and there is no guarantee that we will successfully complete the steps needed to obtain regulatory approval of AMR-001 or any future product candidates. In addition, these regulations may change and our product candidates may be subject to new legislation or regulations.

In the United States, pharmaceutical and biologic products, including cellular therapies, are subject to extensive pre- and post-market regulation by the U.S. FDA. The Federal Food, Drug, and Cosmetic Act ("FD&C Act"), and other federal and state statutes and regulations, govern, among other things, the research, development, testing, manufacture, storage, recordkeeping, approval of a New Drug Application, or ("NDA"), labeling, promotion and marketing, distribution, post-approval monitoring and reporting, sampling, and import and export of pharmaceutical products. Biological products are approved for marketing under provisions of the Public Health Service Act, or PHS Act. However, because most biological products also meet the definition of "drugs" under the FD&C Act, they are also subject to regulation under FD&C Act provisions. The PHS Act requires the submission of a biologics license application ("BLA"), rather than an NDA, for market authorization. However, the application process and requirements for approval of BLAs are very similar to those for NDAs, and biologics are associated with similar approval risks and costs as drugs.

Failure to comply with applicable U.S. requirements may subject a company to a variety of administrative or judicial sanctions, such as FDA refusal to approve pending NDAs or BLAs, untitled or warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, civil penalties, and criminal prosecution.

Pharmaceutical product development in the U.S. typically involves preclinical laboratory and animal tests, the submission to the FDA of a notice of claimed investigational exemption or an investigational new drug application ("IND"), which must become effective before clinical testing can commence, and adequate and well-controlled clinical trials to establish the safety and effectiveness of the drug or biologic for each indication for which FDA approval is sought. Satisfaction of FDA pre-market approval requirements typically takes many years and the actual time required may vary substantially based upon the type, complexity and novelty of the product or disease.

Preclinical tests include laboratory evaluation of product chemistry, formulation and toxicity, as well as animal trials to assess the characteristics and potential safety and efficacy of the product. The conduct of the preclinical tests must comply with federal regulations and requirements including good laboratory practices. The results of preclinical testing are submitted to the FDA as part of an IND along with other information including information about product chemistry, manufacturing and controls and a proposed clinical trial protocol. Long term preclinical tests, such as animal tests of reproductive toxicity and carcinogenicity, may continue after the IND is submitted.

Submission of an IND may not result in FDA authorization to commence a clinical trial if FDA raises concerns or questions about the conduct of the clinical trial, including concerns that human research subjects will be exposed to unreasonable health risks. A separate submission to an existing IND must also be made for each successive clinical trial conducted during product development.

Clinical trials involve the administration of the investigational new drug to healthy volunteers or patients under the supervision of a qualified investigator. Clinical trials must be conducted in compliance with federal regulations; good clinical practice, or GCP, as set forth in FDA regulations and guidance, which is meant to protect the rights and health of patients and to define the roles of clinical trial sponsors, administrators, and monitors; as well as under protocols detailing the objectives of the trial, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. Each protocol involving testing on U.S. patients and subsequent protocol amendments must be submitted to the FDA as part of the IND. Sponsors of clinical trials of FDA regulated products, including drugs and biologics, are required to register and disclose certain clinical trial information. Information related to the product, patient population, phase of investigation, study sites and investigators, and other aspects of the clinical trial is then made public as part of the registration. Sponsors are also obligated to discuss the results of their clinical trials after completion. Competitors may use this publicly available information to gain knowledge regarding the progress of development programs

The FDA may order the temporary or permanent discontinuation of a clinical trial at any time, or impose other sanctions, if it believes that the clinical trial is not being conducted in accordance with FDA requirements, or presents an unacceptable risk to the clinical trial patients. The study protocol and informed consent information for patients in clinical trials must also be submitted to an institutional review board, or IRB, for approval. An IRB may also require the clinical trial at the site to be halted, either temporarily or permanently, for failure to comply with the IRB's requirements, or may impose other conditions.

Clinical trials to support NDAs or BLAs for marketing approval are typically conducted in four sequential phases, but the phases may overlap.

- *Phase 1*: Studies are initially conducted in a limited population to test the product candidate for safety, dose tolerance, absorption, metabolism, distribution and excretion in healthy humans or, on occasion, in patients, such as cancer patients when the drug or biologic is too toxic to be ethically given to healthy individuals.
- *Phase 2*: Studies are generally conducted in a limited patient population to identify possible adverse effects and safety risks, to determine the efficacy of the product for specific targeted indications and to determine dose tolerance and optimal dosage. Multiple Phase 2 clinical trials may be conducted by the sponsor to obtain information prior to beginning larger and more expensive Phase 3 clinical trials.
- *Phase 3*: These are commonly referred to as pivotal studies. When Phase 2 evaluations demonstrate that a dose range of the product is effective and has an acceptable safety profile, Phase 3 clinical trials are undertaken in large patient populations to further evaluate dosage, to provide substantial evidence of clinical efficacy and to further test for safety in an expanded and diverse patient population at multiple, geographically-dispersed clinical trial sites. In most cases FDA requires two adequate and well controlled Phase 3 clinical trials to demonstrate the efficacy of the drug. A single Phase 3 trial with other confirmatory evidence may be sufficient in rare instances where the study is a large multicenter trial demonstrating internal consistency and a statistically very persuasive finding of a clinically meaningful effect on mortality, irreversible morbidity or prevention of a disease with a potentially serious outcome and confirmation of the result in a second trial would be practically or ethically impossible.
- *Phase 4*: In some cases, FDA may condition approval of an NDA or BLA for a product candidate on the sponsor's agreement to conduct additional clinical trials after NDA or BLA approval. In other cases, a Sponsor may voluntarily carry out additional trials post approval to gain more information about the drug or biologic. Such post approval trials are typically referred to as Phase 4 studies.

After completion of the required clinical testing, an NDA or BLA is prepared and submitted to the FDA. FDA approval of the NDA or BLA is required before marketing of the product may begin in the U.S. The NDA or BLA must include the results of all preclinical, clinical, and other testing and a compilation of data relating to the product's pharmacology, chemistry, manufacture, and controls. The cost of preparing and submitting an NDA or BLA is substantial. Under federal law, the submission of most NDAs or BLAs is additionally subject to a substantial application user fee, currently exceeding $1,958,000, and the manufacturer and/or sponsor under an approved new drug application are also subject to annual product and establishment user fees, currently exceeding $98,000 per product and $526,000 per establishment. These fees are typically increased annually.

The FDA has 60 days from its receipt of an NDA or BLA to determine whether the application will be accepted for filing based on the agency's threshold determination that it is sufficiently complete to permit substantive review. Once the submission is accepted for filing, the FDA begins an in-depth review. The FDA has agreed to certain performance goals in the review of NDAs and BLAs. Most such applications for standard review drug or biologic products are reviewed within ten to twelve months; most applications for priority review drugs or biologics are reviewed in six to eight months. FDA can extend these reviews by three months. Priority review can be applied to drugs or biologics that the FDA determines offer major advances in treatment, or provide a treatment where no adequate therapy exists. For biologics, priority review is further limited only for products intended to treat a serious or life-threatening disease relative to the currently approved products.

The review process for both standard and priority review may be extended by the FDA for three additional months to consider certain late-submitted information, or information intended to clarify information already provided in the submission. The FDA may also refer applications for novel drug or biologic products, or drug or biologic products which present difficult questions of safety or efficacy, to an advisory committee, typically a panel that includes clinicians and other experts, for review, evaluation, and a recommendation as to whether the application should be approved. The FDA is not bound by the recommendation of an advisory committee, but it generally follows such recommendations.

Before approving an NDA or BLA, the FDA will typically inspect one or more clinical sites to assure compliance with GCP. Additionally, the FDA will inspect the facility or the facilities at which the drug is manufactured. The FDA will not approve the product unless compliance with cGMP - a quality system regulating manufacturing - is satisfactory and the NDA or BLA contains data that provide substantial evidence that the drug or biologic is safe and effective in the indication studied.

After the FDA evaluates the NDA and the manufacturing facilities, it issues an approval letter or a complete response letter. A complete response letter generally outlines the deficiencies in the submission and may require substantial additional testing or information in order for the FDA to reconsider the application. If and when those deficiencies have been addressed to the FDA's satisfaction in a resubmission of the NDA, the FDA will issue an approval letter. The FDA has committed to reviewing such resubmissions in 2 or 6 months depending on the type of information included.

Additional Controls

The PHS Act also provides authority to the FDA to immediately suspend licenses in situations where there exists a danger to public health, to prepare or procure products in the event of shortages and critical public health needs, and to authorize the creation and enforcement of regulations to prevent the introduction or spread of communicable diseases in the U.S. and between states.

Biosimilars

The Patient Protection and Affordable Care Act, or Affordable Care Act, signed into law on March 23, 2010, included a subtitle called the Biologics Price Competition and Innovation Act of 2009, or BPCI Act, which created an abbreviated approval pathway for biological products shown to be highly similar to, or interchangeable with, an FDA-licensed reference biological product. This is conceptually similar to the established process for drug approval in that it attempts to minimize duplicative testing. Biosimilarity, which requires that there be no differences in conditions of use, route of administration, dosage form, and strength and there be no clinically meaningful differences between the biological product and the reference product in terms of safety, purity, and potency, must be shown through analytical studies, animal studies, and at least one clinical study, absent a waiver by the Secretary. Interchangeability requires that a product must demonstrate that it can be expected to produce the same clinical results as the reference product and, for products administered multiple times, the biologic and the reference biologic may be switched after one has been previously administered without increasing safety risks or risks of diminished efficacy relative to exclusive use of the reference biologic. No biosimilar or interchangeable products have been approved under the BPCIA to date. Complexities associated with the larger and often more complex structures of biological products, as well as the process by which such products are manufactured, pose significant hurdles to implementation that are still being worked out by the FDA.

A reference biologic is granted twelve years of exclusivity from the time of first licensure of the reference product, and no application for a biosimilar can be submitted for four years from the date of licensure of the reference product. The first biologic product submitted under the abbreviated approval pathway that is determined to be interchangeable with the reference product has exclusivity against other biologics submitting under the abbreviated approval pathway for the same condition for the lesser of (i) one year after first commercial marketing of the first interchangeable biosimilar, (ii) eighteen months after after the first interchangeable biosimilar is approved if there is no legal challenge, (iii) 18 months after the resolution in the first interchangeable applicant's favor of a lawsuit challenging the reference biologics' patents, or (iv) 42 months after the first interchangeable biosimilar's application has been approved if a lawsuit is ongoing within the 42 month period.

Post-Approval Regulation

Once an NDA or BLA is approved, a product will be subject to certain post-approval requirements. For instance, FDA closely regulates the post-approval marketing and promotion of drugs, including standards and regulations for direct-to-consumer advertising, off-label promotion, industry-sponsored scientific and educational activities and promotional activities involving the internet. As a condition of NDA or BLA approval, the FDA may require a risk evaluation and mitigation strategy, or REMS, to help ensure that the benefits of the product drug outweigh the potential risks. REMS can include medication guides, communication plans for healthcare professionals, and elements to assure safe use, or ETASU. The requirement for a REMS can materially affect the potential market and profitability of the product.

Drugs may be marketed only for the approved indications and in accordance with the provisions of the approved labeling. Changes to some of the conditions established in an approved application, including changes in indications, labeling, or manufacturing processes or facilities, require submission and FDA approval of a new NDA or BLA or NDA supplement or BLA supplement before the change can be implemented. An NDA or BLA supplement for a new indication typically requires clinical data similar to that in the original application, and the FDA uses the same procedures and actions in reviewing NDA supplements and BLA supplements as it does in reviewing NDAs or BLAs. The FDA has broad enforcement authority under the FDC Act, and failure to abide by these regulations can result in enforcement action, including the issuance of a Warning Letter directing entities to correct deviations from FDA standards, a requirement that future advertising and promotional materials be pre-cleared by the FDA, and federal civil and criminal investigations, prosecutions and penalties. State enforcement actions relating to promotional violations are also becoming more common.

Adverse experiences associated with the use of the drug must be reported to the FDA and could result in the imposition of market restrictions through labeling changes or in product removal. Product approvals may be withdrawn if compliance with regulatory requirements is not maintained or if problems concerning safety or efficacy of the product occur following approval. The FDA may also require a labeling change if it becomes aware of new safety information that it believes should be included in the labeling of a drug.

Current Good Manufacturing Practices (cGMP) Standards

Additional FDA laws and regulations govern the quality control, manufacture, packaging, and labeling procedures of products regulated as a drug, biological product, or medical device, including cellular therapies comprised of HCT/Ps. These laws and regulations include requirements for cGMP. These requirements are designed to ensure that a facility's processes - and products resulting from those processes - meet defined safety requirements. The cGMP requirements, are federal regulations that govern the manufacture, processing, packaging and holding of drug and cell therapy products.

The objective of compliance with cGMP standards is to protect the public health and safety by ensuring that products (i) have the identity, strength, quality and purity that they purport or are represented to possess; (ii) meet their specifications; and (iii) are free of objectionable microorganisms and contamination.

A central focus of the cGMP requirements is to design and build quality into the manufacturing processes and the facilities in which products are produced and to ensure the consistency, product integrity, and reproducibility of results and product characteristics. This is done by implementing quality systems and processes including specifications and documentation.

In addition, drug manufacturers and certain of their subcontractors are required to register their establishments with FDA and certain state agencies. Registration with the FDA subjects entities to periodic unannounced inspections by the FDA, during which the agency inspects manufacturing facilities to assess compliance with cGMPs. Accordingly, manufacturers must continue to expend time, money, and effort in the areas of production and quality-control to maintain compliance with cGMPs. Failure to comply with applicable FDA requirements can result in regulatory inspections and associated observations, warning letters, other requirements of remedial action, and, in the case of failures that are more serious, suspension of manufacturing operations, seizure, injunctions, product recalls, fines, and other penalties. We believe that our facilities are in material compliance with applicable existing FDA requirements.

Additionally, FDA, other regulatory agencies, or the United States Congress may be considering, and may enact laws or regulations regarding the use and marketing of stem cells, cell therapy products, or products derived from human cells or tissue. These laws and regulations can affect us directly or the business of some of PCT's clients and therefore the amount of business PCT receives from these clients.

Pediatric Information

Under the Pediatric Research Equity Act, or PREA, NDAs or BLAs or supplements to NDAs or BLAs must contain data to assess the safety and effectiveness of the drug for the claimed indications in all relevant pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the drug is safe and effective. The FDA may grant full or partial waivers or deferrals for submission of data.

Other Health Care Regulations

Health Privacy Laws

The Administrative Simplification provisions of the Health Insurance Portability and Accountability Act of 1996 (“HIPAA”), as amended by the Health Information Technology for Economic and Clinical Health Act (“HITECH Act”), require health care plans, health care providers and health care clearinghouses, collectively defined under HIPAA as “Covered Entities,” to comply with standards for the use and disclosure of health information within such organizations and with third parties. These include standards for:

- Common health care transactions, such as claims information, plan eligibility, payment information and the use of electronic signatures;
- Unique identifiers for providers, employers, health plans and individuals; and
- Security and privacy of health information.

Although the obligations of HIPAA only apply directly to Covered Entities, any Covered Entity that uses third parties (referred to in HIPAA as “Business Associates”) to perform functions on its behalf involving the creation or use of certain patient health information is required to have a contract with the Business Associate that limits the use and disclosure of such information by the Business Associate.

HIPAA does not preempt, or override, state privacy laws that provide even more protection for individuals' health information. These laws' requirements could further complicate Amorcyte's ability to obtain necessary research data from its collaborators. In addition, certain state privacy and genetic testing laws may directly regulate our research activities, affecting the manner in which we use and disclose individuals' health information, potentially increasing the cost of doing business, and exposing us to liability claims. In addition, patients and research collaborators may have contractual rights that further limit our ability to use and disclose individually identifiable health information. Claims that we violated individuals' privacy rights or breached its contractual obligations, even if we are not found liable, could be expensive and time-consuming to defend and could result in adverse publicity that could harm the business.

While we believe that the current business operations of PCT or NeoStem Family Storage would not cause either of them to be considered a Covered Entity, there is a risk that due to conflicting interpretations of the regulations, NeoStem Family Storage may be a Covered Entity. If NeoStem Family Storage is a Covered Entity, there is a risk of liability that NeoStem Family Storage may not be complying fully with all HIPAA requirements. PCT has signed Business Associate Agreements where requested by PCT's customers who are Covered Entities, which would require compliance with certain privacy and security requirements relating to individually identifiable health information created or used in connection with such relationships. PCT is in substantial compliance with such Business Associate Agreements. However, given the law's complexity and the possibility that the regulations may change and may be subject to changing and even conflicting interpretation, PCT's ability to comply fully with all of the HIPAA requirements and requirements of its Business Associate Agreements is uncertain. Further, as a result of amendments the HITECH Act, PCT's and NeoStem Family Storage's compliance burden has increased and they will be subject to audit and enforcement by the federal government and, in some cases, by state authorities. Further, they are obligated to publicly disclose wrongful disclosures or losses of personal health information.

Fraud and Abuse Laws

In addition to FDA restrictions on marketing of pharmaceutical products, several other types of state and federal laws have been applied to restrict certain marketing practices in the pharmaceutical industry in recent years. These laws include anti-kickback statutes and false claims statutes. The federal healthcare program anti-kickback statute prohibits, among other things, knowingly and willfully offering, paying, soliciting or receiving remuneration to induce or in return for purchasing, leasing, ordering or arranging for the purchase, lease or order of any healthcare item or service reimbursable under Medicare, Medicaid or other federally financed healthcare programs. This statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on the one hand and prescribers, purchasers and formulary managers on the other. Violations of the anti-kickback statute are punishable by imprisonment, criminal prosecution, civil monetary penalties and exclusion from participation in federal healthcare programs. Although there are a number of statutory exemptions and regulatory safe harbors protecting certain common activities from prosecution or other regulatory sanctions, the exemptions and safe harbors are drawn narrowly, and practices that involve remuneration intended to induce prescribing, purchases or recommendations may be subject to scrutiny if they do not qualify for an exemption or safe harbor.

Federal false claims laws prohibit any person from knowingly presenting, or causing to be presented, a false claim for payment to the federal government, or knowingly making, or causing to be made, a false statement to have a false claim paid. Recently, several pharmaceutical and other healthcare companies have been prosecuted under these laws for allegedly inflating drug prices they report to pricing services, which in turn were used by the government to set Medicare and Medicaid reimbursement rates, and for allegedly providing free product to customers with the expectation that the customers would bill federal programs for the product. In addition, certain marketing practices, including off-label promotion, may also violate false claims laws. The majority of states also have statutes or regulations similar to the federal anti-kickback statute and false claims laws, which apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payor.

Affordable Care Act

In late March 2010, the Federal government enacted the comprehensive health care reform package, the Affordable Care Act. Among other provisions, the Affordable Care Act imposes individual and employer health insurance requirements, provides certain insurance subsidies (e.g., premiums and cost sharing), mandates extensive insurance market reforms, creates new health insurance access points (e.g., State-based health insurance exchanges), expands the Medicaid program, promotes research on comparative clinical effectiveness of different technologies and procedures, and makes a number of changes to how products and services will be reimbursed by the Medicare program. Amendments to the Federal False Claims Act under the Affordable Care

Act have made it easier for private parties to bring “qui tam” (whistleblower) lawsuits against companies, under which the whistleblower may be entitled to receive a percentage of any money paid to the government.

There are a number of provisions in the Affordable Care Act that may directly impact our customers and, therefore, indirectly affect us. For example, the Affordable Care Act expands the number of individuals that will be covered by either private or public health insurance, which may, in turn, increase the pool of potential purchasers for our customers' products to the extent they are reimbursable by private or public health insurance. The Affordable Care Act also requires health insurance issuers in the individual and small group markets to cover certain “essential health benefits,” which include prescription drugs and which may increase coverage for our customers' products. In addition, the Affordable Care Act reduces income and raises costs for our customers through, for instance, the imposition of drug price discounts for Medicare Part D enrollees in the “donut hole” and the imposition of an annual fee on prescription drug and biologic manufacturers. Such provisions may cause our customers to seek to restrain costs in other areas, including the services that we provide. The effective dates of the various provisions within the Affordable Care Act are staggered over the next several years, with some changes occurring immediately. Much of the interpretation of the Affordable Care Act will be subject to administrative rulemaking, the development of agency guidance, and court interpretation.

Other Applicable Laws

In addition to those described above, other federal and state laws and regulations that could directly or indirectly affect our ability to operate the business and/or financial performance include:

- state and local licensure, registration and regulation of laboratories, the processing and storage of human cells and tissue, and the development and manufacture of pharmaceuticals and biologics;
- other laws and regulations administered by the United States FDA, including the Federal Food, Drug, and Cosmetic Act and related laws and regulations and the Public Health Service Act and related laws and regulations;
- laws and regulations administered by the United States Department of Health and Human Services, including the Office for Human Research Protections;
- state laws and regulations governing human subject research;
- federal and state coverage and reimbursement laws and regulations, including laws and regulations administered by the Centers for Medicare & Medicaid Services and state Medicaid agencies;
- the federal Medicare and Medicaid Anti-Kickback Law and similar state laws and regulations;
- the federal physician self-referral prohibition commonly known as the Stark Law, and state equivalents of the Stark Law;
- Occupational Safety and Health Administration (“OSHA”) requirements;
- state and local laws and regulations dealing with the handling and disposal of medical waste; and
- the Intermediate Sanctions rules of the IRS providing for potential financial sanctions with respect to “Excess Benefit Transactions” with HUMC or other tax-exempt organizations.

Other Regulations

We are also subject to various local, state and federal laws and regulations relating to safe working conditions, laboratory and manufacturing practices, the experimental use of animals and the use and disposal of hazardous or potentially hazardous substances, including chemicals, micro-organisms and various radioactive compounds used in connection with our research and development activities. These laws include, but are not limited to, the Occupational Safety and Health Act, the Toxic Test Substances Control Act and the Resource Conservation and Recovery Act. Although we believe that our safety procedures for handling and disposing of these materials comply with the standards prescribed by state and federal regulations, there can be no assurances that accidental contamination or injury to employees and third parties from these materials will not occur. Our insurance program does not include environmental coverage.

Product Approval and Post-Approval Regulation Outside the United States

We intend to seek to market our products in numerous jurisdictions outside the U.S. Most of these jurisdictions have product approval and post-approval regulatory processes that are similar in principle to those in the U.S. In Europe, where most of our ex-U.S. efforts are focused, there are several tracks for marketing approval, depending on the type of product for which approval is sought. Under the centralized procedure, a company submits a single application to the EMA. The marketing application is similar to the NDA or BLA in the U.S. and is evaluated by the Committee for Medicinal Products for Human Use (CHMP), the expert scientific committee of the EMA. If the CHMP determines that the marketing application fulfills the requirements for quality, safety, and efficacy, it will submit a favorable opinion to the European Commission ("EC"). The CHMP opinion is not binding, but is typically adopted by the EC. A marketing application approved by the EC is valid in all member states. The centralized procedure is required for all biological products, orphan medicinal products, and new treatments for neurodegenerative disorders,

and it is available for certain other products, including those which constitute a significant therapeutic, scientific or technical innovation.

In addition to the centralized procedure, Europe also has: (1) a nationalized procedure, which requires a separate application to and approval determination by each country; (2) a decentralized procedure, whereby applicants submit identical applications to several countries and receive simultaneous approval; and (3) a mutual recognition procedure, where applicants submit an application to one country for review and other countries may accept or reject the initial decision. Regardless of the approval process employed, various parties share responsibilities for the monitoring, detection, and evaluation of adverse events post-approval, including national authorities, the EMA, the EC, and the marketing authorization holder. In some regions, it is possible to receive an "accelerated" review whereby the national regulatory authority will commit to truncated review timelines for products that meet specific medical needs.

To date, we have not initiated any discussions with the European Medicines Agency or any other foreign regulatory authorities with respect to seeking regulatory approval for AMR-001 in Europe or in any other country outside the United States.

EMPLOYEES

As of December 31, 2012, we had 97 full-time employees, including the employees of our subsidiaries. Most of our senior management and professional employees have had prior experience in pharmaceutical or biotechnology companies. None of our employees is covered by collective bargaining agreements. We believe that our relations with our employees are good.

ITEM 1A. RISK FACTORS.

Our business, financial condition, operating results and cash flows can be affected by a number of factors, including, but not limited to, those set forth below, any one of which could cause our actual results to vary materially from recent results or from our anticipated future results. The risks described below are not the only ones we face, but those we currently consider to be material. There may be other risks which we now consider immaterial, or which are unknown or unpredictable, with respect to our business, our competition, the regulatory environment or otherwise that could have a material adverse effect on our business.

RISKS RELATED TO OUR FINANCIAL CONDITION

We anticipate that we will need substantial additional financing in the future to continue our operations; if we are unable to raise additional capital, as and when needed, or on acceptable terms, we may be forced to delay, reduce or eliminate one or more of our product development programs, cell therapy initiatives or commercialization efforts and our business will harmed.

Our current operating plan will require significant levels of additional capital to fund, among other things, the continued development of our cell therapy product candidates and the operation, enhancement and expansion of our contract development and manufacturing operations to support our customers and our clinical development activities.

In 2012, our research and development expenses increased significantly as a result of the initiation of the AMR-001 Phase 2 clinical trial. This trial is expected to continue to enroll patients throughout 2013. Even beyond the conclusion of the current study, if successful. AMR-001 will require significant investment over a period of several years before it could be approved by FDA and commercialized by us, if ever. If the results of the current Phase 2 trial are positive, we will need to conduct additional clinical studies of the product, including larger and more expensive pivotal Phase 3 studies. To do so, we will need to raise additional money in the capital markets, enter into collaboration agreements with third parties or undertake some combination thereof. If we are unsuccessful in these efforts, we will likely need to otherwise delay or abandon the trials.

The amount and timing of our future capital requirements also will likely depend on many other factors, including:

- the scope, progress, results, costs, timing and outcomes of our other cell therapy research and development programs and product candidates;
- our ability to enter into any collaboration agreements with third parties for our other product candidates and the timing and terms of any such agreements;
- the timing of and the costs involved in obtaining regulatory approvals for our product candidates, a process which could be particularly lengthy or complex given the FDA's limited experience with marketing approval for cell therapy products; and
- the costs of maintaining, expanding and protecting our intellectual property portfolio, including potential litigation costs and liabilities.

To both fund our AMR-001 clinical studies and support our future operations, we would likely seek to raise capital through a variety of different public and/or private financings vehicles. This could include, but not be limited to, use of our equity line with Aspire Capital, as described below, potential warrant exercises, option exercises, issuances of other debt or equity securities in public or private financings, and/or sale of assets. If we raise capital through the sale of equity, or securities convertible into equity, it would result in dilution to our then existing stockholders. Servicing the interest and principal repayment obligations under debt facilities could divert funds that would otherwise be available to support research and development, clinical or commercialization activities. In certain cases, we also may seek funding through collaborative arrangements, that would likely require us to relinquish certain rights to our technology or product candidates and share in the future revenues associated with the partnered product.

Ultimately, we may be unable to raise capital or enter into collaborative relationships on terms that are acceptable to us, if at all. Our inability to obtain necessary capital or financing to fund our future operating needs could adversely affect our business, results of operations and financial condition.

We have incurred substantial losses and negative cash flow from operations in the past, and expect to continue to incur losses and negative cash flow for the foreseeable future.

We have a limited operating history, limited capital, and limited sources of revenue. Since our inception in 1980 through December 31, 2012, we have incurred aggregate net losses of approximately $197.4 million. Our net losses attributable to common stockholders for the years ended December 31, 2012 and December 31, 2011 were approximately $55.3 million and $47.8 million, respectively. As of December 31, 2012, our cash and cash equivalents were $13.7 million. The revenues generated in our cell

therapy services business have not been, and are not expected in the foreseeable future to be, sufficient to cover costs attributable to that business or to our operations as a whole, including our development activities associated with our product candidates. Ultimately, we may never generate sufficient revenue from our cell therapy services business for us to reach profitability, generate positive cash flow or sustain, on an ongoing basis, our current or projected levels of product development and other operations.

Our stock price has been, and will likely continue to be, highly volatile.

The market price of our common stock has been and in the future may continue to be highly volatile. For example, from January 1, 2012 through February 28, 2013 our common stock traded as low as $0.30 per share and as high as $0.90 per share; in 2011, our Common Stock traded as low as $0.43 per share and as high as $2.10 per share.

The market price for our common stock is highly dependent on, among other things, our clinical development efforts with respect to AMR-001, the profitability and growth of our cell therapy services business, the amount of our available cash and investments and our level of cash utilization. Future events could increase the volatility seen in our Common Stock and ultimately cause a significant decline in the price of our common stock and ultimately impact our ability to raise additional capital in the future. These events could including the following, among others:

- low levels of trading volume for our shares;
- capital-raising or other transactions that are, or may in the future be, dilutive to existing stockholders or that involve the issuance of debt securities;
- delays in our clinical trials, negative clinical trial results or adverse regulatory decisions relating to our product candidates;
- adverse fluctuations in our revenues or operating results or financial results that otherwise fall below the market's expectations;
- disappointing developments concerning our PCT clients or other potential business partners for our product candidates; and
- legal challenges, disputes and/or other adverse developments impacting our patents or other proprietary rights that protect our products.

In addition, broader external events, such as news concerning economic or market conditions in the general economy or within our industry, the activities of our competitors, changes (or the threat of changes) in U.S. or foreign government regulations impacting the life sciences industry or the movement of capital into or out of our industry, are likely to affect the price of our Common Stock. There can be no assurance that the market price of our Common Stock will not continue to fluctuate or decline significantly in the future.

In addition to potential dilution associated with future fundraising transactions, we currently have significant numbers of securities outstanding that are convertible into or exercisable for our Common Stock, which could result in significant additional dilution and downward pressure on our stock price.

As of December 31, 2012, there were 163,753,653 shares of our Common Stock outstanding. In addition, there were outstanding stock options and warrants representing the potential issuance of an additional 77,316,791 shares of our Common Stock. The issuance of these shares in the future would result in significant dilution to our current stockholders and could adversely affect the price of our Common Stock and the terms on which we could raise additional capital. In addition, the issuance and subsequent trading of shares could cause the supply of our Common Stock available for purchase in the market to exceed the purchase demand for our Common Stock. Such supply in excess of demand could cause the market price of our Common Stock to decline.

Sales of our Common Stock to Aspire Capital pursuant to our Purchase Agreement may cause substantial dilution to our existing stockholders and the sale of the shares of Common Stock acquired by Aspire Capital could cause the price of our Common Stock to decline.

The Company entered into a Purchase Agreement with Aspire Capital Fund, LLC in September 2011, as amended on August 23, 2012, pursuant to which Aspire Capital committed to the purchase of up to $20 million of shares of the Company’s Common Stock over the term of that Agreement, subject to certain terms and conditions, including a floor price as set forth in the Agreement.

In the fourth quarter of 2012, Aspire purchased 5,300,000 shares of the Company's common stock for an aggregate consideration of approximately $3.3 million. After Aspire Capital acquires shares under the Purchase Agreement, it may sell all or some of those shares. Sales to Aspire Capital by us pursuant to the Purchase Agreement may result in substantial dilution to the interests of other holders of our Common Stock. The sale of a substantial number of shares of our Common Stock to Aspire Capital, or anticipation of such sales, could make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that

we might otherwise wish to effect sales. However, we have the right to control the timing and amount of any sales of our shares to Aspire Capital and the Purchase Agreement may be terminated by us at any time at our discretion without any cost to us.

In the event we effect a reverse stock split, there can be no assurances that it would have the desired effects on our common stock.

At our 2012 Annual Meeting, our stockholders authorized our Board of Directors, if they deem it advisable, to amend our certificate of incorporation to effect a reverse stock split of our common stock at a ratio within the range of 1:2 to 1:10, as determined by our Board. While we would intend any reverse stock split that might be effected pursuant to this authorization to have a beneficial impact on our common stock and investor interest, there can be no assurances that any such reverse split would have the intended effects. It is not uncommon for the market price of a company's common stock to decline in the period following a reverse stock split. If the market price of our common stock were to decline following an implementation by us of a reverse stock split, the percentage decline may be greater than would occur in the absence of a reverse stock split.

Actual and beneficial ownership of large quantities of our Common Stock by our executive officers and directors may substantially reduce the influence of other stockholders.

As of December 31, 2012, our executive officers and directors owned, of record and beneficially, an aggregate of approximately 18.5% and 26.0%, respectively, of our outstanding Common Stock. As a result, such persons may have the ability to exercise enhanced control and influence over the approval process for actions that require stockholder approval, including the approval of mergers, sales of assets or other significant corporate transactions or other matters submitted for stockholder approval. Furthermore, at certain times the interests of our substantial stockholders may conflict with the interests of our other stockholders.

Failure to maintain effective internal control over financial reporting in accordance with Section 404 of the Sarbanes-Oxley Act could have a material adverse effect on our business and stock price.

During the course of testing our disclosure controls and procedures and internal control over financial reporting, we may identify and disclose material weaknesses or significant deficiencies in internal control over financial reporting that will have to be remedied. Implementing any appropriate changes to our internal control may require specific compliance training of our directors, officers and employees, entail substantial costs to modify our existing accounting systems, and take a significant period of time to complete. Such changes may not, however, be effective in maintaining the adequacy of our internal control over financial reporting, and any failure to maintain that adequacy or inability to produce accurate financial statements on a timely basis could result in our financial statements being unreliable, increase our operating costs and materially impair our ability to operate our business.

Failure to achieve and maintain effective internal control over financial reporting could result in a loss of investor confidence in our financial reports and could have a material adverse effect on our stock price. Additionally, failure to maintain effective internal control over our financial reporting could result in government investigation or sanctions by regulatory authorities.

RISKS RELATED TO OUR CELL THERAPY PRODUCT DEVELOPMENT EFFORTS

Our future success is dependent in part, on the timely and successful development and commercialization of AMR-001, and if we encounter delays or difficulties in the development of this product candidate, our business prospects would be significantly harmed.

We are, in part, dependent upon the successful development, approval and commercialization of AMR-001 for the treatment of cardiovascular disease. AMR-001 is in an early stage of development. Before we are able to seek regulatory approval, we must conduct extensive clinical trials to demonstrate AMR-001's safety and efficacy in humans. Clinical testing is expensive, difficult to design and implement, and can take many years to complete. Importantly, a failure of one or more clinical trials can occur at any stage of testing. We may experience numerous unforeseen events during, or as a result of, clinical trials that could delay or prevent our ability to complete our clinical studies, receive regulatory approval or commercialize AMR-001, including the following:

- Ÿ suspensions, delays or changes in the design, initiation, enrollment, implementation or completion of required clinical trials;
- Ÿ adverse changes in our financial position or significant and unexpected increases in the cost of our clinical development program;
- Ÿ changes or uncertainties in, or additions to, the regulatory approval process that require us to alter our current development strategy;
- Ÿ clinical trial results that are negative, inconclusive or even less than desired as to AMR-001's safety and/or efficacy, which could result in the need for additional clinical studies or the termination of the product's development; and
- Ÿ delays in the ability to manufacture the product in quantities or in a form that is suitable for any required clinical trials;
- Ÿ intellectual property constraints that prevent us from making, using, or commercializing AMR-001; and
- Ÿ the supply or quality of our product candidates or other materials necessary to conduct clinical trials of these product candidates may be insufficient or inadequate.

During our Phase 1 trial of AMR-001 for post AMI patients, serious adverse events occurred in subjects treated with AMR-001. To date, in our Phase 2 trial of AMR-001 for post AMI patients, serious adverse events occurred which may or may not have been in the group of subjects treated with AMR-001. There can be no assurance that similar or other additional events will not occur in the Phase 2 or any other future clinical trials of AMR-001, particularly in light of the impaired heart function of patients who will be the target subject population of AMR-001.

Even if we are able to successfully complete our clinical development program for AMR-001 and ultimately receive regulatory approval to market the product, we may, among other things:

- Ÿ obtain approval for indications that are not as broad as the indications we sought;
- Ÿ have the product removed from the market after obtaining marketing approval;
- Ÿ encounter issues with respect to the manufacturing of commercial supplies;
- Ÿ be subject to additional post-marketing testing requirements; and/or
- Ÿ be subject to restrictions on how the product is distributed or used.

We may experience delays in enrolling patients in our clinical trials, which could delay or prevent the receipt of necessary regulatory approvals.

We may not be able to complete the current PreSERVE Phase 2 clinical trial of AMR-001 as anticipated (or initiate any future trials) if we are unable to identify and enroll a sufficient number of eligible patients to participate in the clinical trials required by the FDA or other regulatory authorities. For example, we had originally expected to complete the PreSERVE Phase 2 trial of AMR-001 earlier in 2013, but now expect to complete enrollment for this study later in 2013. We also may be unable to engage a sufficient number of clinical trial sites to conduct our trials. The challenge of enrolling patients will become more difficult if we are required by the FDA or a similar regulatory agency outside the United States to conduct a trial on a larger population than we currently anticipate. In that event, we might be required to seek patients to participate in our trials from Europe or other foreign jurisdictions, which could raise regulatory uncertainties and increase clinical trial costs. Moreover, because PCT does not currently have manufacturing facilities operating outside of the United States, our ability to conduct trials outside of the U.S. may be constrained by our ability to transport trial materials to foreign destinations within the expiry period of such materials unless, and until we commence operation outside of the United States.

We may face challenges in enrolling patients to participate in our clinical trials due to the novelty of our cell-based therapies, the size of the patient populations and the eligibility criteria for enrollment in the trial. In addition, some patients may have concerns regarding cell therapy that may negatively affect their perception of therapies under development and their decision to enroll in the trials. Furthermore, patients suffering from diseases within target indications may enroll in competing clinical trials, which could negatively affect our ability to complete enrollment of our trials. Enrollment challenges in clinical trials often result in increased development costs for a product candidate, significant delays and potentially the abandonment of the clinical trial.

Our development of AMR-001 is subject to uncertainty because CD34+ cells are derived from human bone marrow, a source material that is inherently variable.

The number of CD34+/CXCR4+-cells and the composition of the CD34+ cell population from bone marrow vary from patient to patient. These cells are the basis of AMR-001. Such variability in the number and composition of these cells could adversely affect our ability to manufacture AMR-001 in a cost-effective manner and meet acceptable product release specifications

for use in a clinical trial or, if approved, for commercial sale. As a consequence, the development and regulatory approval process for AMR-001 (or any of our other CD34+ product candidates) could be delayed or may never be completed.

Any disruption to our access to the cell sorting system we are using in the Phase 2 clinical trial of AMR-001 could adversely affect the completion of the trial and any future regulatory submission.

The cell sorting system that we are using in our Phase 2 clinical trial of AMR-001 is owned by an unaffiliated third party. Any lack of continued availability of this system, for any reason, would have a material adverse effect on our ability to complete the Phase 2 or any subsequent clinical studies of AMR-001. Moreover, any data obtained in studies using the current system may not be usable in a regulatory submission unless we can establish comparability between the current cell sorting system and any future system. Although there are other available systems in the marketplace, we have not evaluated their cost, safety or effectiveness, or whether AMR-001 would be compatible with such systems.

The initiation of a pivotal Phase 3 clinical trial for AMR-001 will require the validation and establishment of manufacturing controls that may delay the product's current development timeline.

If the results of our Phase 2 clinical trial of AMR-001 are positive and support Phase 3 development, we expect to initiate and complete one or more pivotal Phase 3 clinical trials. To do so, we are required to have certain validated and established manufacturing controls with respect to the safety, purity and potency of AMR-001 when administered to patients. We may not be successful in our efforts to address any chemistry, manufacturing and controls, or CMC, issues raised by the FDA. If we cannot initiate, or if we are delayed in initiating, a pivotal Phase 3 clinical program of AMR-001 as a result of our failure to satisfy the FDA's CMC concerns or otherwise, the timing of our planned regulatory submission for commercialization of AMR-001 would be delayed, or we may be unable to seek regulatory approval to commercialize AMR-001 at all.

We presently lack sufficient manufacturing capabilities to produce AMR-001 at commercial scale quantities and do not have an alternate manufacturing supply, which could negatively impact our ability to meet any future demand for the product.

Currently, PCT exclusively provides the cell processing services necessary for clinical production of AMR-001 and also provides services and produces materials for clinical trials on behalf of unaffiliated third parties. To date, PCT has not produced any products at commercial scale quantities. We expect that we would need to significantly expand our manufacturing capabilities to meet potential demand for AMR-001, if approved, as well as any of our other product candidates that might attain regulatory approval. Such expansion would require additional regulatory approvals. Even if we increase our manufacturing capabilities, it is possible that we may still lack sufficient capacity to meet demand. Ultimately, if we are unable to supply AMR-001 to meet commercial demand, whether because of processing constraints or other disruptions, delays or difficulties that we experience, sales of the product and its long term commercial prospects could be significantly damaged.

We do not presently have any alternate supply for AMR-001. If our facility where AMR-001 is currently being manufactured or equipment were significantly damaged or destroyed, or if there were other disruptions, delays or difficulties affecting manufacturing capacity, the ongoing Phase 2 clinical study and future clinical studies and commercial production for AMR-001 would likely be significantly disrupted and delayed. It would be both time consuming and expensive to replace this capacity with third parties, particularly since any new facility would need to comply with the regulatory requirements.

Ultimately, if we are unable to supply AMR-001 to meet commercial demand, whether because of processing constraints or other disruptions, delays or difficulties that we experience, our production costs could dramatically increase and sales of the product and its long-term commercial prospects could be significantly damaged.

The commercial potential and profitability of AMR-001 is unknown and subject to significant risk and uncertainty.

Even if we successfully develop and obtain regulatory approval for AMR-001, the market may not understand or accept the product, which could adversely affect both the timing and level of future sales. Ultimately, the degree of market acceptance of AMR-001 (or any of our future product candidates) will depend on a number of factors, including:

- Ÿ the clinical effectiveness, safety and convenience of AMR-001, particularly in relation to alternative treatments;
- Ÿ our ability to distinguish AMR-001 from any ethical and political controversies associated with stem cell products derived from human embryonic or fetal tissue; and
- Ÿ the cost of the product, the reimbursement policies of government and third-party payors and our ability to obtain sufficient third-party coverage or reimbursement.

Even if we are successful in achieving unit sales of AMR-001 consistent with our expectations, it is not clear to what extent, if any, the product will be profitable. The costs of goods associated with production of AMR-001 may be significant. While we are working to improve the speed and efficiency and lower the cost of our manufacturing processes, there can be no assurance that we will be successful in these efforts. In addition, some changes in manufacturing processes or procedures generally require FDA or foreign regulatory authority review and approval prior to implementation. We may need to conduct additional preclinical studies and clinical trials to support approval of any such changes for AMR-001. Furthermore, this review process could be costly and time-consuming and could delay or prevent the commercialization of product candidates.

We have limited experience in the development and marketing of cell therapies and may be unsuccessful in our efforts to establish a profitable business.

Over the past two years, we shifted our business plan to focus on capturing a piece of the burgeoning field of cell therapy. Despite being in business for over ten years, we have limited experience in the areas of cell therapy product development and marketing, and in the related regulatory issues and processes. While the founders of PCT currently provide services in connection with our development activities, we cannot assure you that our management will successfully oversee our clinical development efforts and our plans to capture a piece of the cell therapy market.

Our cell therapy business is based on novel technologies that are inherently expensive, risky and may not be understood by or accepted in the marketplace, which could adversely affect our future value.

The clinical development, commercialization and marketing of cell and tissue-based therapies is at an early-stage, substantially research-oriented, and financially speculative. To date, very few companies have been successful in their efforts to develop and commercialize a stem cell product. In general, stem cell products may be susceptible to various risks, including undesirable and unintended side effects, unintended immune system responses, inadequate therapeutic efficacy, or other characteristics that may prevent or limit their approval or commercial use. Furthermore, the number of people who may use cell or tissue-based therapies is difficult to forecast with accuracy. Our future success is dependent on the establishment of a large global market for cell- and tissue-based therapies and our ability to capture a share of this market with our product candidates.

Our development efforts with AMR-001, our Treg therapies and VSEL™ technology are susceptible to the same risks of failure inherent in the development and commercialization of therapeutic products based on new technologies. The novel nature of cellular therapeutics creates significant challenges in the areas of product development and optimization, manufacturing, government regulation, third-party reimbursement and market acceptance. For example, the United States FDA has relatively limited experience regulating therapies based on cells, and there are few approved treatments utilizing cell therapy.

If we are unable or unsuccessful in our efforts to discover or license, develop, receive regulatory approval for and commercialize our product candidates, our long-term prospects will be negatively impacted.

Our product candidates require governmental approvals prior to commercialization. We face the substantial risks of failure inherent in developing cell-based therapies. Our product candidates must satisfy rigorous standards of safety and efficacy before the FDA or foreign regulatory authorities will approve them for commercial use. There can be no assurance that these standards will remain consistent over time, further complicating our ability to obtain marketing approvals for our product candidates. To satisfy these standards, we will need to conduct significant additional research, preclinical testing and clinical trials.

Preclinical testing and clinical development are long, expensive and highly uncertain processes; most product candidates are never approved for commercial use. Failure can occur at any stage of testing. Success in preclinical testing and early clinical trials does not ensure that later clinical trials will be successful or sufficient for regulatory approval. Based on results at any stage of clinical trials, we may decide to discontinue development of our product candidates. Even if we obtain approval and begin marketing a product, ongoing clinical trials, including for other indications, may result in additional information that could affect our ability or decision to continue marketing the product. Even if we receive regulatory approval for our product candidates, we must comply with applicable FDA post-marketing regulations governing manufacturing, promotion, labeling, risk management and reporting of adverse events and other information, as well as other regulatory requirements. Failure to comply with applicable regulatory requirements could subject us to criminal prosecution, civil penalties, recall or seizure of products, withdrawal of marketing approval, total or partial suspension of production or injunction, as well as other regulatory actions against our product or us.

We have limited resources with which to conduct pre-clinical and clinical studies, which may limit or delay our ability to discover new products or develop our product candidates and increase the risk that our long-term business objectives will not be met. While we also seek to obtain government grants and other funding to further our research and development activities,

there is no assurance that such monies will be available to us in the future. Without sufficient funding, we may have to significantly reduce the levels of such expenditures.

Despite our limited resources, we intend to explore opportunities to expand our product portfolio by acquiring or in-licensing product candidates. Although we conduct extensive evaluations of product candidate opportunities as part of our due diligence efforts, there can be no assurance that our development efforts for such products will be successful or that we will not become aware of issues or complications that will cause us to alter, delay or terminate these efforts.

We may rely on third parties to help us develop or commercialize our product candidates, and our ability to commercialize such candidates may be impaired or delayed if our collaborations are unsuccessful.

We may in the future selectively pursue strategic collaborations for the development and commercialization of our product candidates in the United States or abroad, which may require us to share any future profits or revenues, issue our equity securities or transfer certain other material rights. With respect to AMR-001, we anticipate that we may need to enter into a collaboration agreement with one or more third parties to conduct and fund Phase 3 clinical trials and to commercialize the product.

Despite our efforts, there can be no assurance that we will be able to identify suitable collaborators or negotiate collaboration agreements on terms that are acceptable to us, if at all. In any future third-party collaboration, we would be dependent upon the success of the collaborators in performing their responsibilities and their continued cooperation. Such collaborators may not cooperate or perform their obligations under their agreements with us. We may be unable to control the amount and timing of our collaborators' resources that will be devoted to performing their responsibilities under their agreements with us. Collaborators may choose to pursue alternative technologies in preference to those being developed in collaboration with us. The development and commercialization of our product candidates will be delayed if collaborators fail to conduct their responsibilities in a timely manner or in accordance with applicable regulatory requirements or if they breach or terminate their collaboration agreements. Disputes with collaborators also could result in product development delays, decreased revenues and litigation expenses.

Contractual arrangements with licensors or collaborators may require us to pay royalties or make other payments related to the development of a product candidate, which would adversely affect the level of our future revenues and profits.

Even if we obtain all applicable regulatory approvals and successfully commercialize one or more of our cell therapy candidates, contractual arrangements between us and a licensor, collaborator or other third party in connection with the respective product may require that we make royalty or other payments to the respective third party, and as a result we would not receive all of the revenue derived from commercial sales of such product.

Under the agreement pursuant to which we acquired Amorcyte, we are required to pay to the former Amorcyte shareholders certain earn-out payments following the first commercial sale of AMR-001, generally equal to 10% of net sales (or 30% of any sublicensing fees, royalties and milestone fees or profit sharing payments), less our out-of-pocket clinical development costs not previously paid or reimbursed and other expenses. Also, our license agreements relating to our Treg therapeutic product candidates include obligations to pay royalties on net sales of licensed products, maintenance fees and milestone fees upon events such as initiation of clinical trial stages, license application filings and regulatory approvals.

Even if we are successful in developing a therapeutic application using our cell technologies, it is unclear whether cell therapy can serve as the foundation for a commercially viable and profitable business.

Stem cell collection techniques are rapidly developing and could undergo significant change in the future. Such rapid technological development could result in our technologies becoming obsolete. While our AMR-001 product candidate, our Treg therapies and VSEL™ technology appear promising, such technologies may fail to be successfully commercialized for numerous reasons, including, but not limited to, competing technologies for the same indication. There can be no assurance that we will be able to develop a commercially successful therapeutic application for this technology or other potential stem cell technologies.

Moreover, advances in other treatment methods or in disease prevention techniques could significantly reduce or entirely eliminate the need for our cell therapy services, planned products and therapeutic efforts. There is no assurance that cell therapies will achieve the degree of success envisioned by us in the treatment of disease. Additionally, technological or medical developments may materially alter the commercial viability of our technology or services, and require us to incur significant costs to replace or modify equipment in which we have a substantial investment. We are focused on cell therapy, and if this field is substantially unsuccessful, this could jeopardize our success or future results. The occurrence of any of these factors may have a material adverse effect on our business, operating results and financial condition.

If we are unsuccessful in building or contracting for commercial sales and marketing capabilities in the United States and abroad, our revenues from any future products will be adversely affected.

We currently have no capabilities or experience in the selling, marketing or commercial distribution of biologic products. If any of our product candidates are ultimately approved for marketing, we would need to hire and develop an internal sales and marketing organization and/or outsource these functions to one or more third parties.

We may be unable to establish sufficient marketing, sales and distribution capabilities necessary to successfully commercialize and gain market acceptance for any of our product candidates. In addition, co-promotion or other marketing arrangements with third parties to commercialize product candidates could significantly limit the revenues we recognize from such product candidates, and these third parties may fail to commercialize the product candidates successfully.

If competitors develop and market products that are more effective, safer, or less expensive than our product candidates or offer other advantages, our commercial prospects will be limited.

Our cell therapy development programs face, and will continue to face, intense competition from pharmaceutical, biopharmaceutical and biotechnology companies, as well as numerous academic and research institutions and governmental agencies engaged in drug discovery activities or funding, both in the United States and abroad. Some of these competitors are pursuing the development of drugs and other therapies that target the same diseases and conditions that we are targeting with our product candidates.

Because AMR-001 generally targets patients without other revascularization options, we do not believe it will compete directly with pharmaceutical therapies being developed to treat less severe stages of our target indications. However, to the extent that therapies are developed that reverse the progression of the ischemic damage or improve blood flow to damaged tissue, they could have the effect of reducing demand for our product. In addition, because AMR-001 requires the removal of bone marrow from the patient, potential competing products that do not require this invasive procedure may have a competitive advantage in terms of patient appeal. New pharmaceutical agents or devices that improve the repair of cardiac injury after a heart attack, with the result that fewer patients develop ischemic heart failure, would also represent a competitive threat for AMR-001.

Furthermore, cell-based therapies, such as skeletal myoblasts, bone marrow-derived stem cells and adipose cells are being pursued by companies such as Aastrom Biosciences, Inc., Angioblast Systems, Inc., Athersys, Inc., Pluristem Therapeutics, Inc., ReNeuron Group, Stemedica Cell Technologies Inc. and Bioheart, Inc. Some other companies, such as Cytori and Miltenyi, are developing medical devices to facilitate the production of therapeutic cell populations by clinicians for the treatment of AMR-001's target indications. Such devices may be approved by the FDA under a less rigorous regulatory process, and less extensive clinical testing and manufacturing controls than we are required to pursue for AMR-001 and thus could reach the market well before AMR-001.

As a general matter, we also face competition from many other companies that are researching and developing cell therapies. Many of these companies have financial and other resources substantially greater than ours. In addition, many of these competitors have significantly greater experience in testing pharmaceutical and other therapeutic products, obtaining FDA and other regulatory approvals, and marketing and selling. If we ultimately obtain regulatory approval for any of our product candidates, we also will be competing with respect to manufacturing efficiency and marketing capabilities, areas in which we have limited or no commercial-scale experience. Mergers and acquisitions in the pharmaceutical and biotechnology industries may result in even more resources being concentrated by our competitors. Competition may increase further as a result of advances made in the commercial applicability of our technologies and greater availability of capital for investment in these fields.

We may be subject to significant product liability claims and litigation, including potential exposure from the use of our product candidates in human subjects, and our insurance may be inadequate to cover claims that may arise.

Our business exposes us to potential product liability risks inherent in the testing, processing and marketing of cell therapy products. Such liability claims may be expensive to defend and result in large judgments against us. We face an inherent risk of product liability exposure related to the testing of AMR-001 and any future product candidates in human clinical trials and will face an even greater risk with respect to any commercial sales of our products once approved. No product candidate has been widely used over an extended period of time, and therefore safety data is limited. Cell therapy companies derive the raw materials for manufacturing of product candidates from human cell sources, and therefore the manufacturing process and handling requirements are extensive, which increases the risk of quality failures and subsequent product liability claims. We presently have product liability insurance limited to $5 million per incident and $5 million in annual aggregate.

We will need to increase our insurance coverage when we begin commercializing product candidates, if ever. At that time, we may not be able to obtain or maintain product liability insurance on acceptable terms with adequate coverage or at all, or if claims against us substantially exceed our coverage, then our financial position could be significantly impaired.

Whether or not we are ultimately successful in any product liability litigation that may arise, such litigation could consume substantial amounts of our financial and managerial resources, decreased demand for our products and injure our reputation.

We seek to maintain errors and omissions, directors and officers, workers' compensation and other insurance at levels we believe to be appropriate to our business activities. If, however, we were subject to a claim in excess of this coverage or to a claim not covered by our insurance and the claim succeeded, we would be required to pay the claim from our own limited resources, which could have a material adverse effect on our financial condition, results of operations and business. Additionally, liability or alleged liability could harm our business by diverting the attention and resources of our management and damaging our reputation.

We may be unable to retain key officers or employees or hire new key officers or employees needed to implement our business strategy and develop our products and businesses.

Given the specialized nature of cell therapy and that it is a relatively new field, there is an inherent scarcity of experienced personnel in the field. We are substantially dependent on the skills and efforts of current senior management for their management and operations, as well as for the implementation of their business strategy. In addition, our future success depends upon our ability to attract and retain additional qualified personnel (including medical, scientific, technical, commercial, business and administrative personnel) necessary to support our anticipated growth, develop our business, perform our contractual obligations to third parties and maintain appropriate licensure. There can be no assurance that we will be successful in attracting or retaining personnel required by us to continue to grow our operations. The loss of a key employee, the failure of a key employee to perform in his or her current position or our inability to attract and/or retain skilled employees, as needed, could result in our inability to continue to grow our business or to implement our business strategy, or may have a material adverse effect on our business, financial condition and operating results.

RISKS RELATED TO OUR CONTRACT DEVELOPMENT AND MANUFACTURING BUSINESS

Cell therapy is in its early stages, it is still a developing field and a significant global market for our third party manufacturing services at PCT may never emerge.

Cell therapy is in its early stages and is still a developing area of research, with few cell therapy products approved for clinical use. Many of the existing cellular therapy candidates are based on novel cell technologies that are inherently risky and may not be understood or accepted by the marketplace, making difficult their own funding to enable them to continue their business. At PCT, the current market and our existing contracts principally consist of providing manufacturing of cell and tissue-based therapeutic products in clinical trials and processing of stem cell products for transplantation programs. The number of people who may use cell or tissue-based therapies and thus the demand for stem cell processing services is difficult to forecast. If cell therapies under development by us or by others to treat disease are not proven effective, demonstrate unacceptable risks or side effects or, where required, fail to receive regulatory approval, our PCT business will be significantly impaired. While the therapeutic application of cells to treat serious diseases is currently being explored by a number of companies, to date there are only a handful of approved products in the United States. Ultimately, our success in developing our contract development and manufacturing business depends on the development and growth of a broad and profitable global market for cell- and tissue-based therapies and services and our ability to capture a share of this market through PCT.

PCT's revenues may vary dramatically from period to period making it difficult to forecast future results.

The nature and duration of PCT's contracts with customers often involve regular renegotiation of the scope, level and price of the services we are providing. If our customers reduce the level of their spending on research and development or marketing or are unsuccessful in attaining or retaining product sales due to market conditions, reimbursement issues or other factors, our results of operations may be materially impacted. In addition, other factors, including the rate of enrollment for clinical studies, will directly impact the level and timing of the products and services we deliver. As such, the levels of our revenues and profitability can fluctuate significantly from one period to another and it can be difficult to forecast the level of future revenues with any certainty.

We have a finite manufacturing capacity at PCT, which could inhibit the long-term growth prospects of this business.

We currently provide services and produce materials for clinical trials at our existing manufacturing facilities in Allendale, New Jersey and Mountain View, California, which we have designed and operated to be compliant with FDA cGMP, and cGTP requirements. While we believe these facilities provide us with sufficient capacity to meet our expected near term demand, it is possible that the demand for our services and products could exceed our existing manufacturing capacity. It may become necessary or desirable for us to expand our manufacturing capabilities for cell therapy services and products in the future, which may require us to invest significant amounts of capital and to obtain regulatory approvals. In this regard, we are reviewing opportunities for commercial and Eurpoean manufacturing capabilities which we expect to have in place in 2013. If we are unable to meet rising demand for products and services on a timely basis or unable to maintain cGMP compliance standards, then it is likely that our clients and potential clients will elect to obtain the products and services from competitors, which could materially and adversely affect the level of our revenues and our prospects for growth.

Components of therapeutic products approved for commercial sale or used in late-stage clinical trials must be manufactured in accordance with cGMP. Manufacturers of cell-based product candidates such as AMR-001 also must comply with the cGTP. In addition, therapeutic products may be required to modify their manufacturing process from time to time in response to FDA requests. Manufacture of live cellular-based products is complex and subjects companies to significant regulatory burdens that may change over time. We may encounter difficulties in the production of our product candidates due to our limited manufacturing experience.

We will need to improve manufacturing efficiency at PCT if we are to realize meaningful gains in PCT's profitability.

Together with our customers, PCT is working to develop new processes and instruments to improve manufacturing efficiency and the profitability of the business. We cannot provide assurances that we will be able to develop process enhancements that are acceptable to the FDA, on a timely basis, on commercially reasonable terms, or at all, or that any expected improvement in profitability will be realized. If we are unsuccessful in our efforts to develop these improvements, we may be unable to profitably operate the PCT business and could face significantly higher capital expenditures, increased facility and personnel costs and other increased operating expenses.

We have a limited marketing staff and budget for our PCT operations, which could limit our ability to grow this business.

The degree of market acceptance of our products and services depends upon a number of factors, including the strength of our sales and marketing support. If our marketing is not effective, our ability to generate revenues could be significantly impaired. Due to capital constraints, our marketing and sales activities at PCT are limited, and the failure to attract a sufficient base of customers will affect our ability to increase our revenues and operate profitably.

The logistics associated with the distribution of materials produced by PCT for third parties and us, including AMR-001, are significant, complex and expensive and may negatively impact our ability to generate and meet future demand for our products and improve profitability.

Current cell therapy products and product candidates, including AMR-001, have a limited shelf life, in certain instances limited to less than 12 hours. Thus, it is necessary to minimize the amount of time between when the cell product is extracted from a patient, arrives at one of our facilities for processing, and is delivered for re-infusion in the patient.

To do so, we need our cell therapy facilities to be located in major population centers in which patients are likely to be located and within close proximity of major airports. In the future, it may be necessary to build new facilities, which would require a significant commitment of capital and may not then be available to us. Even if we are able to establish such new facilities, we may experience challenges in ensuring that they are compliant with cGMP, other FDA requirements, and/or applicable state or local regulatory requirements. We cannot be certain that we would be able to recoup the costs of establishing a facility in a given market. Given these risks, we may choose not to expand our cell processing and manufacturing services into new geographic markets which will limit our future growth prospects.

To effectively and efficiently deliver cell therapy product, we also need to establish and maintain cost-effective relationships with reliable and experienced transportation carriers. Existing transportation carriers are not optimally designed for the transportation of cell therapy products. For example, these carriers generally lack a true point-to-point chain of control, have non-controlled X-ray and inspection, do not guarantee package orientation, handling or storage conditions and, in many cases, lack a standard, documented and tracked operating procedures. While reliable ground carriers with experience in the transport of blood products exist in major U.S. metropolitan areas, air carriers meeting such needs are limited. If our current carrier should cease its medical shipping operations or otherwise be unable to properly meet our transportation needs, the lack of access to safe, reliable and effective transportation options could adversely affect our ability to meet our customers' needs.

RISK RELATED TO OUR CORD BLOOD AND STEM CELL STORAGE BUSINESS

There is no guarantee that the market for our cord blood and adult stem cell collection and storage business will develop, and it exposes us to risks inherent in the long-term storage of these products.

Through NeoStem Family Storage, we provide services related to the collection and storage of umbilical cord blood units and adult stem cells, which we store at our Allendale, New Jersey facility. There currently is no significant global market for stem cell processing or collection and storage, nor is there any guarantee that such markets will develop in the near future, or at all. Major medical institutions currently do not generally recommend private storage, and we believe that the medical community is supportive of the public cord blood collection system. Patients can donate their cord blood to the public cord blood collection system without charge. In addition, the value of our cord blood storage services is related to the higher success rate of autologous cord blood transplants over unrelated ones. If medical research discovers new and more effective medical procedures that make allogeneic cord blood transplants safer and more effective, the clinical advantage of storing a child's umbilical cord blood for his or her own future therapeutic use may significantly decline.

The operation of a cord blood and adult stem cell storage system also exposes us to a number of risks. For example, adverse outcomes or limitations of our stem cell or cord blood collection and storage services, the damage, destruction or a failure in the performance of the cryopreservation storage facility or systems of our service providers, could harm our reputation and business and expose us to significant liability from customers. While we believe that we have procured insurance to cover certain of these risks, we may in fact have insufficient insurance to cover losses beyond the limits on its policies, which could have a material adverse effect on our financial condition.

RISKS RELATED TO GOVERNMENT REGULATION

The development and commercialization of our product candidates is subject to extensive regulation by the FDA and other regulatory agencies in the United States and abroad, and the failure to receive regulatory approvals for AMR-001 or our other product candidates would likely have a material and adverse effect on our business and prospects.

To date, we have not received regulatory approval to market any of our product candidates in any jurisdiction. If we seek approval of AMR-001, we will be required to submit to FDA and European regulatory authorities extensive preclinical and clinical data supporting its safety and efficacy, as well as information about the AMR-001 manufacturing process and to undergo inspection of our PCT manufacturing facilities, among other things. The process of obtaining FDA and other regulatory approvals is expensive, generally takes many years and is subject to numerous risks and uncertainties, particularly with complex and/or novel product candidates such as AMR-001. Changes in regulatory approval policies during the development period, changes in or the enactment of additional statutes or regulations, or changes in regulatory review for each submitted product application, may cause delays in the approval or rejection of an application or may make it easier for our competitors to gain regulatory approval to enter the marketplace. Ultimately, the FDA and other regulatory agencies have substantial discretion in the approval process and may refuse to accept any application or may decide that our product candidate data are insufficient for approval without the submission of additional preclinical, clinical or other studies. In addition, varying agency interpretations of the data obtained from preclinical and clinical testing could delay, limit or prevent regulatory approval of a product candidate. Any regulatory approval we ultimately obtain may be limited or subject to restrictions or post-approval commitments that render the approved product not commercially viable.

Any of the following factors, among others, could cause regulatory approval for our product candidates to be delayed, limited or denied:

- Ÿ the product candidates require significant clinical testing to demonstrate safety and effectiveness before applications for marketing approval can be filed with the FDA and other regulatory authorities;
- Ÿ data obtained from preclinical and nonclinical animal testing and clinical trials can be interpreted in different ways, and regulatory authorities may not agree with our respective interpretations or may require us to conduct additional testing;
- Ÿ negative or inconclusive results or the occurrence of serious or unexpected adverse events during a clinical trial could cause us to delay or terminate development efforts for a product candidate; and/or
- Ÿ FDA and other regulatory authorities may require expansion of the size and scope of the clinical trials.

Any difficulties or failures that we encounter in securing regulatory approval for our product candidates would likely have a substantial adverse impact on our ability to generate product sales, and could make any search for a collaborative partner more difficult.

We may be unsuccessful in our efforts to comply with applicable federal, state and international laws and regulations, which could result in loss of licensure, certification or accreditation or other government enforcement actions or impact our ability to secure regulatory approval of our product candidates.

Although we seek to conduct our business in compliance with applicable governmental healthcare laws and regulations, these laws and regulations are exceedingly complex and often subject to varying interpretations. The cell therapy industry is the topic of significant government interest, and thus the laws and regulations applicable to our business are subject to frequent change and/or reinterpretation. As such, there can be no assurance that we will be able, or will have the resources, to maintain compliance with all such healthcare laws and regulations. Failure to comply with such healthcare laws and regulations, as well as the costs associated with such compliance or with enforcement of such healthcare laws and regulations, may have a material adverse effect on our operations or may require restructuring of our operations or impair our ability to operate profitably.

Facilities engaged in the recovery, processing, storage, labeling, packaging or distribution of any HCT/Ps, or the screening or testing of a donor, are required to register with the FDA. Any third party retained by us to process our samples must be similarly registered with the FDA and comply with HCT/P regulations. We also are required to comply with FDA's cGTP regulations. If we fail to register or update registration information in a timely way, or fail to comply with cGTP regulations, we will be out of compliance with FDA regulations which could adversely affect our business.

Our manufacture of certain cellular therapy products for ourselves or at PCT on behalf of our customers triggers additional FDA requirements applicable to HCT/Ps, or products comprised of HCT/Ps, which are regulated as a drug, biological product, or medical device. FDA's cGMP regulations govern the manufacture, processing, packaging and holding of cell therapy products regulated as drugs. FDA's Quality System Regulation, or QSR, similarly governs the manufacture, processing, packaging and holding of cell therapy products regulated as medical devices. We must comply with cGMP or QSR requirements including quality control, quality assurance and the maintenance of records and documentation for certain products. We may be unable to comply with these cGMP or QSR requirements and with other FDA, state and foreign regulatory requirements. These requirements may change over time and we or third-party manufacturers may be unable to comply with the revised requirements.

If we are unable to conduct clinical studies in accordance with regulations and accepted standards, we may be delayed in receiving, or may never receive, regulatory approvals of our product candidates from the FDA and other regulatory authorities.

To obtain marketing approvals for our product candidates in the United States and abroad, we must, among other requirements, complete adequate and well-controlled clinical trials sufficient to demonstrate to the FDA and other regulatory bodies that the product candidate is safe and effective for each indication for which approval is sought. If a serious adverse event occurs during one of our clinical studies, the FDA can place one or more of our clinical trials on hold if, among other reasons, it finds that patients enrolled in the trial are or would be exposed to an unreasonable and significant risk of illness or injury. If safety concerns develop, we may, or the FDA or an institutional review board may require us to, stop the affected trials before completion. Our Phase 1 trial of AMR-001 was subject to a clinical hold following the death of a subject in the study. We presented evidence that the death was the result of ventricular fibrillation attributed to recurrent myocardial infarction from stent thrombosis preceding infusion of AMR-001 and the FDA lifted the clinical hold.

The completion of our clinical trials also may be delayed or terminated for a number of other reasons, including if:

- Ÿ third-party clinical investigators do not perform the clinical trials on the anticipated schedule or consistent with the clinical trial protocol, good clinical practices required by the FDA and other regulatory requirements, or other third parties do not perform data collection and analysis in a timely or accurate manner;
- Ÿ inspections of clinical trial sites by the FDA or by institutional review boards of research institutions participating in the clinical trials, reveal regulatory violations that require the sponsor of the trial to undertake corrective action, suspend or terminate one or more sites, or prohibit use of some or all of the data in support of marketing applications; or
- Ÿ the FDA or one or more institutional review boards suspends or terminates the trial at an investigational site, or precludes enrollment of additional subjects.

Our development costs will increase if there are material delays in our clinical trials, or if we are required to modify, suspend, terminate or repeat a clinical trial. If we are unable to conduct our clinical trials properly, we may never receive regulatory approval to market our product candidates.

We will continue to be subject to extensive FDA regulation following any product approvals, and if we fail to comply with these regulations, we may suffer a significant setback in our business.

Even if we are successful in obtaining regulatory approval of our product candidates, we will continue to be subject to the requirements of and review by, the FDA and comparable regulatory authorities in the areas of manufacturing processes, post-approval clinical data, adverse event reporting, labeling, advertising and promotional activities, among other things. In addition, any marketing approval we receive may be limited in terms of the approved product indication or require costly post-marketing testing and surveillance. Discovery after approval of previously unknown problems with a product, manufacturer or manufacturing process, or a failure to comply with regulatory requirements, may result in actions such as:

- Ÿ warning letters or other actions requiring changes in product manufacturing processes or restrictions on product marketing or distribution;
- Ÿ product recalls or seizures or the temporary or permanent withdrawal of a product from the market; and
- Ÿ fines, restitution or disgorgement of profits or revenue, the imposition of civil penalties or criminal prosecution.

The occurrence of any of these actions would likely cause a material adverse effect on our business, financial condition and results of operations.

Health care companies have been the subjects of federal and state investigations, and we could become subject to investigations in the future.

Both federal and state government agencies have heightened civil and criminal enforcement efforts. There are numerous ongoing investigations of health care companies, as well as their executives and managers. In addition, amendments to the Federal False Claims Act, including under Healthcare Reform, have made it easier for private parties to bring "*qui tam*" (whistleblower) lawsuits against companies under which the whistleblower may be entitled to receive a percentage of any money paid to the government. The Federal False Claims Act provides, in part, that an action can be brought against any person or entity that has knowingly presented, or caused to be presented, a false or fraudulent request for payment from the federal government, or who has made a false statement or used a false record to get a claim approved. The government has taken the position that claims presented in violation of the federal anti-kickback law, Stark Law or other healthcare-related laws, including laws enforced by the FDA, may be considered a violation of the Federal False Claims Act. Penalties include substantial fines for each false claim, plus three times the amount of damages that the federal government sustained because of the act of that person or entity and/or exclusion from the Medicare program. In addition, a majority of states have adopted similar state whistleblower and false claims provisions.

We are not aware of any government investigations involving any of our facilities or management. While we believe that we are in material compliance with applicable governmental healthcare laws and regulations, any future investigations of our business or executives could cause us to incur substantial costs, and result in significant liabilities or penalties, as well as damage to our reputation.

It is uncertain to what extent the government, private health insurers and third-party payors will approve coverage or provide reimbursement for the therapies and products to which our services relate. Availability for such reimbursement may be further limited by an increasing uninsured population and reductions in Medicare and Medicaid funding in the United States.

To the extent that health care providers cannot obtain coverage or reimbursement for our therapies and products, they may elect not to provide such therapies and products to their patients and, thus, may not need our services. Further, as cost containment pressures are increasing in the health care industry, government and private payors may adopt strategies designed to limit the amount of reimbursement paid to health care providers.

Similarly, the trend toward managed health care and bundled pricing for health care services in the United States, which may accelerate under the healthcare reform legislation approved by Congress on March 23, 2010 and thereafter signed into law ("Healthcare Reform"), could significantly influence the purchase of healthcare services and products, resulting in lower prices and reduced demand for our therapeutic products under development.

We may receive a portion of our revenues from services rendered to patients enrolled in federal health care programs, such as Medicare, and we may also directly or indirectly receive revenues from federal health care programs. Federal health care programs are subject to changes in coverage and reimbursement rules and procedures, including retroactive rate adjustments. These contingencies could materially decrease the range of services covered by such programs or the reimbursement rates paid directly or indirectly for our products and services. To the extent that any health care reform favors the reimbursement of other

therapies over our therapeutic products under development, such reform could affect our ability to sell our services, which may have a material adverse effect on our revenues.

The limitation on reimbursement available from private and government payors may reduce the demand for, or the price of, our services, which could have a material adverse effect on our revenues. Additional legislation or regulation relating to the health care industry or third-party coverage and reimbursement may be enacted in the future which could adversely affect the revenues generated from the sale of our products and services.

Furthermore, there has been a trend in recent years towards reductions in overall funding for Medicare and Medicaid. There has also been an increase in the number of people who do not have any form of health care coverage in recent years and who are not eligible for or enrolled in Medicare, Medicaid or other governmental programs. The extent to which the reforms brought about under Healthcare Reform may be successful in reducing the number of such uninsured is unclear, and the reduced funding of governmental programs and increase in uninsured populations could have a negative impact on the demand for our services to the extent they relate to products and services which are reimbursed by government and private payors.

Unintended consequences of recently adopted healthcare reform legislation in the U.S. may adversely affect our business.

The healthcare industry is undergoing fundamental changes resulting from political, economic and regulatory influences. In the U.S., comprehensive programs are under consideration that seek to, among other things, increase access to healthcare for the uninsured and control the escalation of healthcare expenditures within the economy. On March 23, 2010, healthcare reform legislation was approved by Congress and has been signed into law. While we do not believe this legislation will have a direct impact on our business, the legislation has only recently been enacted and requires the adoption of implementing regulations, which may have unintended consequences or indirectly impact our business. For instance, the scope and implications of the recent amendments pursuant to the Fraud Enforcement and Recovery Act of 2009 (“FERA”), have yet to be fully determined or adjudicated and as a result it is difficult to predict how future enforcement initiatives may impact our business. Also, in some instances our clients may be health insurers that will be subject to limitations on their administrative expenses and new federal review of “unreasonable” rate increases that could impact the prices they pay for our services. If the legislation causes such unintended consequences or indirect impact, it could have a material adverse effect on our business, financial condition and results of operations.

RISKS RELATED TO OUR INTELLECTUAL PROPERTY

We may be unable able to obtain or maintain patent protection for our products and product candidates, which could have a material adverse effect on our business.

Our commercial success will depend, in part, on obtaining and maintaining patent protection for new technologies, product candidates, products and processes and successfully defending such patents against third party challenges. To that end, we file patent applications, and have been issued patents, that are intended to cover certain methods and uses of stem cells, including very small embryonic-like stem cells, as well as compositions and methods relating to T regulatory cells and hematopoietic stem cells. These patent applications may never result in the issuance of patents.

The patent positions of biotechnology companies can be highly uncertain and involve complex legal, scientific and factual questions and recent court decisions have introduced significant uncertainty regarding the strength of patents in the industry. Moreover, the legal systems of some foreign countries do not favor the aggressive enforcement of patents and may not protect our intellectual property rights to the same extent as the laws of the United States. Any of the issued patents we own or license may be challenged by third parties and held to be invalid, unenforceable or with a narrower or different scope of coverage that what we currently believe, effectively reducing or eliminating protection we believed we had against competitors with similar products or technologies. If we ultimately engage in and lose any such patent disputes, we could be subject to competition and/or significant liabilities, we could be required to enter into third-party licenses or we could be required to cease using the disputed technology or product. In addition, even if such licenses are available, the terms of any license requested by a third party could be unacceptable to us.

The claims of any current or future patents that may issue or be licensed to us may not contain claims that are sufficiently broad to prevent others from utilizing the covered technologies and thus may provide us with little commercial protection against competing products. For instance, patents relating to our AMR-001 product candidate are limited to an isolated and non-expanded population of autologous mononuclear cells enriched for $CD34^+$ cells, which further contains a subpopulation of potent $CD34^+/CXCR4^+$ cells that have CXCR4-mediated chemotactic activity. Products that do not contain enriched $CD34^+/CXCR4^+$ cells, or which contain populations of cells that derive efficacy from a different mechanism of action, may not infringe the existing AMR-001 patents. Consequently, our competitors may independently develop competing products that do not infringe our patents or other

intellectual property. To the extent a competitor can develop similar products using a different chemistry, our patents and patent applications may not prevent others from directly competing with us.

Product development and approval timelines in our biotechnology industry are very lengthy. As such, it is possible that any patents that may cover an approved product may have expired at the time of commercialization or only have a short remaining period of exclusivity, thereby reducing the commercial advantages of the patent. In such case, we would then rely solely on other forms of exclusivity, such as regulatory exclusivity provided by the Federal Food, Drug and Cosmetic Act, which may provide less protection to our competitive position.

Litigation relating to intellectual property is expensive, time consuming and uncertain, and we may be unsuccessful in our efforts to protect against infringement by third parties or defend ourselves against claims of infringement.

To protect our intellectual property, we may initiate litigation or other proceedings. In general, intellectual property litigation is costly, time-consuming, diverts the attention of management and technical personnel and could result in substantial uncertainty regarding our future viability, even if we ultimately prevail. Some of our competitors may be able to sustain the costs of such litigation or other proceedings more effectively than can we because of their substantially greater financial resources. The loss or narrowing of our intellectual property protection, the inability to secure or enforce our intellectual property rights or a finding that we have infringed the intellectual property rights of a third party could limit our ability to develop or market our products and services in the future or adversely affect our revenues. Furthermore, any public announcements related to such litigation or regulatory proceedings could adversely affect the price of our Common Stock.

Third parties may allege that the research, development and commercialization activities we conduct infringe patents or other proprietary rights owned by such parties. While we do not believe any of our current activities infringe the rights of others, we have not conducted an exhaustive search or analysis of third-party patent rights to determine whether our pre-clinical or clinical research and development or activities may infringe or be alleged to infringe any third-party patent rights. If we are found to have infringed the patents of a third party, we may be required to pay substantial damages; we also may be required to seek from such party a license, which may not be available on acceptable terms, if at all, to continue our activities. A judicial finding or infringement or the failure to obtain necessary licenses could prevent us from commercializing our products, which would have a material adverse effect on our business, operating results and financial condition.

If we are unable to maintain our licenses, patents or other intellectual property we could lose important protections that are material to continuing our operations and our future prospects.

To obtain and maintain patent protection and licensing rights under certain of our license agreement, we must, among other things, ensure the timely payment of all applicable filing and maintenance fees. Any failure to do so could result in the loss of some or all of our rights to proprietary technology or the inability to secure or enforce intellectual property protection.

Additionally, our license agreements require us to meet certain diligence obligations in the development of the licensed products. Our failure to meet these diligence obligations could result in the loss of some or all of our rights, which could materially and adversely affect our business and future prospects.

If we are unable to protect the confidentiality of trade secrets, our competitive position could be impaired.

A significant amount of our technology, especially regarding manufacturing processes, is unpatented and is maintained as trade secrets. We expend significant efforts in an effort to protect these trade secrets, including through the use of confidentiality agreement. Even so, improper use or disclosure of our confidential information could occur and in such case adequate remedies may not exist. The disclosure of our trade secrets could impair our Company's competitive position.

In certain countries, patent holders may be required to grant compulsory licenses, which would likely have a significant and detrimental effect on any future revenues in such country.

Many countries, including some countries in Europe, have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In addition, most countries limit the enforceability of patents against government agencies or government contractors. In these countries, the patent owner may be limited to monetary relief and may be unable to enjoin infringement, which could materially diminish the value of the patent. Compulsory licensing of life-saving products is also becoming increasingly popular in developing countries, either through direct legislation or international initiatives. Such compulsory licenses could be extended to our product candidates, which may limit our potential revenue opportunities, including with respect to any future revenues that may result from AMR-001.

Changes to U.S. Patent Law may have a material adverse effect on our intellectual property rights.

The Leahy-Smith America Invents Act (AIA), which was signed into law on September 16, 2011, significantly changes United States patent law. It may take some time to establish what the law means, since regulations that will govern how the new law is implemented have not yet been established, and since the law has not yet been implemented, it has not yet been interpreted by the lower courts, and reviewed by either the Federal Circuit Court of Appeals or the Supreme Court, a process that will take years. The first major change is that AIA switches the U.S. patent system from a “first to invent” system to a “first to file” system. Once the first to file system is in effect, there is a risk that another company may independently develop identical or similar patents at approximately the same time, and be awarded the patents instead of us. Once “first to file” is implemented, there will no longer be a need to determine who is the inventor of an invention. As a result, for the second major change, AIA abolishes interference proceedings, and establishes derivation proceedings to replace interference proceedings in all cases in which the time period for instituting an interference proceeding has not lapsed where an inventor named in an earlier application derived the claimed invention from a named inventor. Once derivation proceedings are in effect, there is a risk that the inventorship of any pending patent application can be challenged for reasons of derivation. The third major change is that AIA establishes post-grant opposition proceedings that will apply to patent applications filed after “first to file” becomes effective. Post-grant opposition will enable a person who is not the patent owner to initiate proceedings in the Patent office within 9 months after the grant of a patent that can result in cancellation of a patent as invalid. Therefore there is a risk that any of our patents once granted after the effective date of these provisions of the new law (March 16, 2013) may be subject to post-grant opposition, which will increase uncertainty on the validity of any newly granted patent or may ultimately result in cancellation of the patent.

ITEM 1B. UNRESOLVED STAFF COMMENTS.

Not applicable.

ITEM 2. PROPERTIES.

PCT

We presently operate two cell therapy manufacturing facilities, in Allendale, New Jersey and in Mountain View, California. Longer-term plans include the acquisition and development of other such buildings within and outside of the United States, to be developed into replicable and scalable manufacturing facilities, strategically located to best serve clients' needs. Inherent in the nature of cell therapy today is the biologic shelf life of the cell therapy product itself. This limits the transit times between the time the cell product is extracted from a patient until it arrives at a manufacturing facility and the time that a processed product leaves the manufacturing facility and arrives for re-infusion in the patient. Therefore, it is preferable for cell therapy manufacturing facilities to be located in major population centers and within close proximity of major airport hubs.

In 2007, PCT acquired the facility in Allendale, New Jersey which has been developed into a cell manufacturing facility. 22,000 square feet of the Allendale facility's approximate 30,000 square feet have been developed. The Allendale facility is comprised of ISO Class 7, Class 10,000 manufacturing suites, in addition to quality control, research and development laboratories and support facilities. It has been designed to meet the accreditation requirements of the Foundation for the Accreditation of Cellular Therapy (FACT) and to comply with the FDA's requirements, including applicable cGMP regulations, and to meet the standards of the American Association of Blood Banks (AABB). The facility is also in compliance with a range of state and federal regulatory and licensing requirements. The Allendale facility is subject to two mortgages in favor of T.D. Bank, N.A. having an aggregate principal amount of approximately $3.4 million as of December 31, 2012.

The Mountain View facility is also a licensed cell therapy manufacturing facility, encompassing 25,024 square feet within a single building, of which 17,425 square feet is developed. The developed space is presently used for manufacturing client products. Mountain View is equipped with ISO Class 7, Class 10,000 manufacturing suites, quality control, research and development laboratories and support facilities. We expect to further develop space for cell therapy manufacturing within the facility on an as needed basis. The Mountain View facility is subject to a lease agreement, as amended to date, having a current term that extends through June 2017. The base monthly rent is currently $46,294. Commencing July 1, 2012, the base monthly rent was $41,289.60, subject to adjustments as of July 1, 2013 and each annual anniversary thereafter during the term to reflect any changes in the cost of living; provided, however, that each such annual rental adjustment will not be less than 3% or more than 7% of the rent payable for the calendar month immediately preceding the applicable rental anniversary date. PCT is permitted to make certain improvements, additions and alterations to the premises subject to the terms of the lease with the lessor providing an Improvement Allowance equal to the lesser of $500,000 or the aggregate amount of Reimbursable Costs, as defined in the July 2011 amendment to the lease. PCT has submitted plans for approval and expects to further develop the facility to expand its manufacturing capacity. Build-out is expected to commence in 2013. In connection with the July 2011 amendment to the lease, the lessor required that NeoStem, as sole member of PCT, execute a Guaranty of Lease.

Because of the specialized nature of these cell processing facilities and the time required to conceptualize, design, build, and obtain certification and operating authority, it takes approximately nine months to go from concept to operations once space has been qualified.

NeoStem

In August 2012, the Company signed a new lease for a larger space at its current executive offices at 420 Lexington Avenue, New York, NY 10170. The new lease is believed to be sufficient space for the near future. The lease term began in September 2012 and extends through June 2015. The base monthly rent, which includes storage space, averages approximately $27,000 per month. This property is used as the Company's corporate headquarters.

ITEM 3. LEGAL PROCEEDINGS.

We hereby incorporate by reference into this Item 3 the disclosure appearing under Item 8.01 of our Current Report on Form 8-K dated October 5, 2012.

ITEM 4. MINE SAFTEY DISCLOSURES.

Not applicable.

PART II

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

ITEM 5(a). MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS.

Market For Our Common Equity

Our Common Stock trades on the NYSE MKT under the symbol “NBS.” The following table sets forth the high and low sales prices of our Common Stock for each quarterly period presented, as reported by the NYSE MKT.

2012	High	Low
First Quarter	$0.90	$0.37
Second Quarter	$0.61	$0.30
Third Quarter	$0.84	$0.49
Fourth Quarter	$0.78	$0.59

2011	High	Low
First Quarter	$2.10	$1.14
Second Quarter	$2.08	$1.31
Third Quarter	$1.55	$0.55
Fourth Quarter	$0.75	$0.43

2010	High	Low
First Quarter	$2.15	$1.26
Second Quarter	$3.50	$1.58
Third Quarter	$2.15	$1.52
Fourth Quarter	$2.15	$1.10

Holders

As of March 1, 2013, there were approximately 1,373 stockholders of record of our Common Stock (which does not include beneficial owners for whom Cede & Co. or others act as nominees).

Dividends and Dividend Policy

We have not paid cash dividends on our Common Stock during the periods set forth in the stock price table that appears above. The holders of our Common Stock are each entitled to receive dividends when and if declared by the board of directors out of funds legally available therefor, subject to the terms of any outstanding series of preferred stock. We intend to retain any future earnings to fund the development and growth of our business, and therefore we do not anticipate paying any cash dividends on our Common Stock in the foreseeable future.

Recent Sales of Unregistered Securities

As previously disclosed, and as follows:

The Company has agreed to issue equity to certain consultants for services. Effective December 12, 2012 pursuant to a four month agreement for consulting services in financial consulting and other specified related matters, the Company agreed to issue 350,000 shares of Restricted Common Stock, vesting as to 25% on the effective date and 25% on January 12, February 12 and March 12, 2013. Effective January 1, 2013, pursuant to a six month agreement for consulting services in accounting systems and regulatory compliance, the Company agreed to issue 60,000 shares of Restricted Common Stock, vesting ratably over the term of the agreement on a monthly basis. Also on January 1, 2013, pursuant to a six month agreement for consulting services in information technology and accounting systems, the Company agreed to issue 90,000 shares of Restricted Common Stock, vesting ratably over the term of the agreement on a monthly basis. On January 3, 2013, in consideration for services previously rendered,

the Company agreed to issue to our counsel 300,000 shares of Restricted Common Stock vesting immediately upon issuance. Effective January 2, 2013, pursuant to a seven month agreement for consulting services related to the media and investor relations, the Company agreed to issue 330,000 shares of Restricted Common Stock, vesting as to 110,000 shares on the effective date, 110,000 on April 1, 2013 and 110,000 shares on June 1, 2013. Effective February 6, 2013, pursuant to a ten month agreement for consulting services in investor relations, the Company agreed to issue 50,000 shares of Restricted Common Stock, vesting as to one half on the effective date and one half on December 31, 2013. The issuance of all such securities is or was subject to the approval of the NYSE MKT.

On December 6, 2012, the Company consummated a private placement and issued an aggregate of 8,333 Units (the "Units") at a price of $60.00 per Unit, each Unit consisting of one hundred shares of common stock and seventy-five warrants for an aggregate consideration of $500,000. The warrants have an exercise price of $.75, exercisable six months after the date of issuance and expiring five years from the date of issuance.

The offer and sale by the Company of the securities described above were made in reliance upon the exemption from registration provided by Section 4(2) of the Securities Act of 1933, as amended (the "Securities Act"), for transactions by an issuer not involving a public offering. The offer and sale of such securities were made without general solicitation or advertising to "accredited investors" as such term is defined in Rule 501(a) of Regulation D promulgated under the Securities Act and/or pursuant to Regulation D or Regulation S, each promulgated under the Securities Act and may not be resold in the United States or to U.S. persons unless registered under the Securities Act or pursuant to an exemption from registration under the Securities Act.

ITEM 5(b). USE OF PROCEEDS

Not applicable.

ITEM 5(c). REPURCHASES OF EQUITY SECURITIES.

There were no repurchases of equity securities by or on behalf of the Company or any affiliated purchaser during the fourth quarter of the fiscal year ended December 31, 2012 as to which information is required to be furnished.

ITEM 6. SELECTED FINANCIAL DATA.

Not applicable.

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

The following Management's Discussion and Analysis of Financial Condition and Results of Operations contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors, including those set forth under "Cautionary Note Regarding Forward-Looking Statements" and under "Risk Factors" herein.

Overview

NeoStem, Inc. ("we," "NeoStem" or the "Company") is a leader in the emerging cellular therapy industry. Cellular therapy addresses the process by which new cells are introduced into a tissue to prevent or treat disease, or regenerate damaged or aged tissue, and comprises a separate therapeutic technology platform in addition to the current three pillars of healthcare: pharmaceuticals, biologics and medical devices. Modern cell-based therapies have progressed from the first recorded human to human blood transfusion 200 years ago through to the advanced cellular therapies of today including bone marrow and organ transplantation, tissue banking and reproductive *in vitro* fertilization and future therapies being investigated to treat cancer, cardiologic, neurologic, ophthalmic and orthopedic diseases among others. We anticipate that cellular therapies will have a large role in the fight against chronic disease and in lessening the economic burden that these diseases pose to modern society.

Our business model includes the development of novel proprietary cell therapy products as well as operating a contract development and manufacturing organization ("CDMO") providing services to others in the regenerative medicine industry. The combination of a therapeutic development business and revenue-generating service provider business provides the Company with unique capabilities for cost effective in-house product development and immediate revenue and cash flow generation.

Progenitor Cell Therapy, LLC, our wholly owned subsidiary ("PCT"), is a leading CDMO in the cellular therapy industry. Since its inception in 1997, PCT has provided pre-clinical and clinical current Good Manufacturing Practice ("cGMP") development and manufacturing services to over 100 clients advancing regenerative medicine product candidates through rigorous quality standards all the way through to human testing. PCT has two cGMP, state-of-the art cell therapy research, development, and manufacturing facilities in New Jersey and California, serving the cell therapy community with integrated and regulatory compliant distribution capabilities. Its core competencies in the cellular therapy industry include manufacturing of cell therapy-based products, product and process development, cell and tissue processing, regulatory support, storage, distribution and delivery and consulting services.

Our wholly-owned subsidiary, Amorcyte, LLC ("Amorcyte"), which we acquired in October 2011, is developing our own cell therapy, AMR-001, for the treatment of cardiovascular disease. AMR-001 represents our most clinically advanced therapeutic product candidate and enrollment for our Phase 2 PreSERVE clinical trial to investigate AMR-001's safety and efficacy in preserving heart function after a heart attack in a particular type of post Acute Myocardial Infarction ("AMI") patients commenced in 2012. We expect to complete enrollment for this study in 2013 with the first data readout available six to eight months thereafter.
If approved by the U.S. Food and Drug Administration ("FDA") and/or other worldwide regulatory agencies, AMR-001 would address a significant unmet medical need in the treatment of AMI, potentially improving the quality and longevity of life for those afflicted, and position the Company to capture a meaningful share of the worldwide AMI market.

Through our majority-owned subsidiary, Athelos Corporation ("Athelos"), we are collaborating with Becton-Dickinson in early stage clinical development of a therapy utilizing T-cells, collaborating for autoimmune and inflammatory conditions, including but not limited to, graft vs. host disease, type 1 diabetes, steroid resistant asthma, lupus, multiple sclerosis and solid organ transplant rejection. We plan to investigate the clinical feasibility of nTreg-based therapeutics to prevent and/or treat type 1 diabetes, graft vs. host disease, steroid resistant asthma, lupus, multiple sclerosis and solid organ transplant rejection and expect to file an Investigational New Drug Application ("IND") with the FDA in 2013 and commence human clinical studies in one of these disease conditions thereafter.

Our pre-clinical assets include our VSEL ™ (Very Small Embryonic Like) Technology platform for which we expect to file an IND with the FDA in late 2013 or early 2014 to initiate an National Institutes of Health ("NIH") funded human clinical studies treating periodontitis with VSELs™. We are also working on a Department of Defense funded study of VSELs™ and mesenchymal stem cells for the treatment of chronic wounds.

NeoStem's origins are in adult stem cell collection and storage and we believe that as new therapeutics are developed utilizing one's own stored cells (autologous), the market penetration rate for the collection and storage business may rise sharply from its current low single digits percentage level allowing our developing a network to scale rapidly if the demand grows.

In 2011, we operated our business in three reportable segments: (i) Cell Therapy — United States; (ii) Regenerative Medicine — China; and (iii) Pharmaceutical Manufacturing — China. In 2012, we exited our operations in China. Effective March 31, 2012, we no longer operated in the Regenerative Medicine – China reportable segment, which is now reported in discontinued operations (see Note 16). On November 13, 2012, we completed the sale of our 51% interest in Suzhou Erye, which represented the operations in our Pharmaceutical Manufacturing - China segment, and is also reported in discontinued operations (see Note 16). As a result, we currently operate in a single reporting segment - Cell Therapy, which will focus on CDMO and cell therapy development programs.

We believe that NeoStem is ideally positioned to be an integrated leader in the cell therapy industry. We have significant basic research and development capabilities, manufacturing facilities on both the east and west coast of the United States, the support of regulatory and logistical expertise and a talented and experienced clinical team. We believe this expertise will allow us to achieve our mission of becoming the premier cell therapy company.

Results of Operations

Year Ended December 31, 2012 Compared to Year Ended December 31, 2011

Net loss for the year ended December 31, 2012 was approximately $66.4 million compared to $56.6 million for the year ended December 31, 2011. Our net losses from continuing operations for the years ended December 31, 2012 and 2011 were approximately $36.1 million and $34.6 million, respectively. The net losses from discontinued operations - net for the years ended ended December 31, 2012 and 2011 were approximately $30.3 million and $22.0 million, respectively. The losses from discontinued operations - net, reflects the operations of our Regenerative Medicine – China segment which was deconsolidated in the first quarter of 2012, and the operations of our Pharmaceutical Manufacturing - China segment, which related to the sale of our 51% interest in Suzhou Erye in the fourth quarter of 2012.

Revenues

For the year ended December 31, 2012, total revenues were approximately $14.3 million compared to $10.1 million for the year ended December 31, 2011, representing an increase of $4.3 million, or 43%. Revenues were comprised of the following (in thousands):

	Year Ended December 31,	
	2012	2011
Clinical Services	$ 8,034.8	$ 5,503.5
Clinical Services Reimbursables	3,462.2	2,599.3
Processing and Storage Services	2,644.7	1,738.3
Other	188.2	208.9
	$ 14,329.9	$ 10,050.1

- Clinical Services, representing process development and clinical manufacturing services provided at PCT to its various clients, were approximately $8.0 million for the year ended December 31, 2012 compared to $5.5 million for the year ended December 31, 2011, representing an increase of approximately $2.5 million or 46%. The increase in clinical services revenue is primarily due to an increased penetration into the cell therapy marketplace along with a general increase in the development of autologous cell therapies in the United States due to enhanced investment and expanded marketing programs in 2011 and 2012. The revenue increase was partially offset by a $0.3 million increase in deferred revenue as of December 31, 2012 compared to December 31, 2011, related to ongoing clinical service contracts that had not met revenue recognition completion criteria. In accordance with our revenue recognition policy, revenue is recognized upon contract completion for certain clinical service contracts.

- Clinical Services Reimbursables, representing reimbursement of expenses for certain consumables incurred on behalf of our clinical service revenue clients, were approximately $3.5 million for the year ended December 31, 2012 compared to $2.6 million for the year ended December 31, 2011, representing an increase of approximately $0.9 million or 33%. Our reimbursable revenue increased as a result of increased manufacturing and process development activity.

- Processing and Storage Services, representing revenues from our oncology, cord blood, and adult stem cell banking activities, were approximately $2.6 million for the year ended December 31, 2012 compared to $1.7 million for the year ended December 31, 2011, representing an increase of approximately $0.9 million or 52%. The increase is primarily attributable to increased revenue from our oncology stem cell processing service. Additionally, we added hospital clients during 2012 as more hospitals have begun to outsource their oncology stem cell processing.

- Other Revenue were approximately $0.2 million for the year ended December 31, 2012 compared to $0.2 million for the year ended December 31, 2011. Other revenues primarily represent license fees related to our adult stem cell technology.

Cost of Revenues

For the year ended December 31, 2012, total cost of revenues were approximately $11.9 million compared to $8.6 million for the year ended December 31, 2011, representing an increase of $3.3 million or 38%. Overall, gross profit for the year ended December 31, 2012 was $2.4 million or 17% of 2012 revenues, compared to gross profit for the year ended December 31, 2011 of $1.4 million or 14% or 2011 revenues. The gross profit percentage increase was due to increased efficiency in the usage of our clinical manufacturing facilities, as a result of the increased volume in 2012, which were partially offset by higher levels of clinical services reimbursables revenues that have little or no attributable margin. Gross profit percentages generally will increase as clinical service revenue increases, and will fluctuate in each period due to the mix of service and reimbursable revenues and costs, as well as the timing of our revenue recognition under our clinical services revenue recognition policy.

Operating Expenses

Historically, to minimize our use of cash, we have used a variety of equity and equity-linked instruments to compensate employees, consultants and other service providers. The use of these instruments has resulted in charges to the results of operations, which has from time to time in the past been significant. In general, these equity and equity-linked instruments were used to pay for employee and consultant compensation, director fees, marketing services, investor relations and other activities.

For the year ended December 31, 2012 operating expenses totaled $32.8 million compared to $35.4 million for the year ended December 31, 2011, representing a decrease of $2.6 million or 7%. Operating expenses were comprised of the following:

- Research and development expenses were approximately $10.5 million for the year ended December 31, 2012 compared to $7.7 million for the year ended December 31, 2011, representing an increase of approximately $2.8 million, or 35%. Research and development expenses increased by approximately $6.5 million in 2012, due to the initiation in January 2012 of our Phase 2 clinical trial for AMR-001 . This increase was partially offset by a $1.2 million in-process research and development charge in 2011, as well as reduced internal research activities following the closing of our research facility in Cambridge, Massachusetts in 2012. Equity-based compensation included in research and development expenses for the year ended December 31, 2012 was approximately $0.4 million, compared to approximately $0.9 million for the year ended December 31, 2011, representing a decrease of $0.5 million.

- Selling, general and administrative expenses were approximately $22.3 million for the year ended December 31, 2012 compared to $27.7 million for the year ended December 31, 2011, representing a decrease of approximately $5.4 million, or 19%. Equity-based compensation included in selling, general and administrative expenses for the year ended December 31, 2012 was approximately $6.1 million, compared to approximately $8.9 million for the year ended December 31, 2011, representing a decrease of $2.8 million. General and administrative expenses decreased approximately $1.7 million, primarily due to lower overall professional fees, as well as a one-time contribution in 2011 of $0.6 million paid in equity to the Stem for Life Foundation. Selling expenses also decreased $0.8 million compared to the prior year period.

Other Income (Expense)

Other expense, net for the year ended December 31, 2012 totaled approximately $4.3 million, and primarily represented the increase in the estimated fair value of our contingent consideration liability from $3.1 million as of December 31, 2011 to $7.6 million as of December 31, 2012, which is associated with potential earn out payments on the net sales of our lead product candidate AMR-001 (in the event of and following the date of first commercial sale of AMR-001). The change in estimated fair value is based on the Company's update of the discounted cash flow model using a probability-weighted income approach, taking into account revised assumptions of the market opportunity and development costs, as well as the impact of the time progression through the Phase 2 clinical trial from December 31, 2011 to December 31, 2012. Other income, net for the year ended December 31, 2011 totaled approximately $2.1 million, and primarily relates to the revaluation of derivative liabilities that have

been established in connection with the Convertible Redeemable Series E Preferred Stock. In October 2012, the derivative liability associated with the conversion of the Series E Preferred Stock was written off in connection with the complete redemption of the Series E Preferred Stock.

For the year ended December 31, 2012 interest expense was $1.6 million compared with $2.6 million for the year ended December 31, 2011. Interest expense in each period was primarily due to the amortization of debt discount related to the Series E Preferred Stock. The decrease in interest expense in 2012 was due to the declining Series E Preferred Stock outstanding balance throughout first three quarters of 2012, and the redemption in October 2012 of the remaining outstanding Series E Preferred Stock.

Discontinued Operations

Regenerative Medicine - China segment

In 2009, we operated our Regenerative Medicine-China business in the People's Republic of China ("China" or "PRC") through our subsidiary, a wholly foreign owned entity ("WFOE") and entered into contractual arrangements with certain variable interest entities ("VIEs"). Foreign companies have commonly used VIE structures to operate in the PRC, and while such structures are not uncommon, recently they have drawn greater scrutiny from the local Chinese business community in the PRC who have urged the PRC State Council to restrict the use of these structures. In addition, in December 2011, China's Ministry of Health announced its intention to more tightly regulate stem cell clinical trials and stem cell therapeutic treatments in the PRC, which has created uncertainty regarding the ultimate regulatory environment in the PRC. Accordingly, we took steps to restrict, and ultimately eliminate its regenerative medicine business in the PRC. As a result of these steps, we have discontinued our operations in our Regenerative Medicine-China business. We have determined that any liability arising from the activities of the WFOE and the VIEs will likely be limited to the net assets currently held by each entity.

As of March 31, 2012, we recognized the following loss on exit of the Regenerative Medicine-China business (in thousands):

Cash	$	195.1
Prepaid expenses and other current assets		14.9
Property, plant and equipment, net		1,023.7
Other Assets		330.5
Accounts payable		(177.1)
Accrued liabilities		(79.2)
Accumulated comprehensive income		(169.9)
Loss on exit of segment	$	1,138.0

The operations and cash flows of the Regenerative Medicine - China business were eliminated from ongoing operations as a result of our exit decision, and we will not have continuing involvement in this business going forward. The operating results of the Regenerative Medicine – China business for the years ended December 31, 2012 and 2011, which are included in discontinued operations, were as follows (in thousands):

	Year Ended December 31,	
	2012	2011
Revenue	$ 52.3	$ 274.3
Cost of revenues	(30.6)	(140.6)
Research and development	(103.3)	(378.3)
Selling, general, and administrative	(497.3)	(3,089.8)
Other income (expense)	(6.8)	(9.7)
Loss on exit of segment	(1,138.0)	—
Loss from discontinued operations	$ (1,723.7)	$ (3,344.1)

Pharmaceutical Manufacturing - China segment

On November 13, 2012, we completed the divestiture (the “Erye Sale”) of our 51% interest (the “Erye Interest”) in Suzhou Erye Pharmaceuticals Company Ltd., a Sino-foreign equity joint venture with limited liability organized under the laws of the PRC primarily engaged in the manufacture of generic antibiotics (“Erye”), to Suzhou Erye Economy & Trading Co., Ltd., a limited liability company organized under the laws of the PRC (“EET”), and Highacheive Holdings Limited, a limited liability company organized under the laws of the British Virgin Islands (“Highacheive” and together with EET, each a “Purchaser” and collectively the “Purchasers”). The Erye Sale was consummated pursuant to the terms and conditions of the Equity Purchase Agreement, dated as of June 18, 2012 (as amended, the “Equity Purchase Agreement”), by and among NeoStem, China Biopharmaceuticals Holdings, Inc., a Delaware corporation and a wholly-owned subsidiary of NeoStem (“CBH”), EET, Highacheive, Fullbright Finance Limited, a limited liability company organized under the laws of the British Virgin Islands (“Fullbright”), and Erye. Pursuant to the Equity Purchase Agreement, the aggregate purchase price paid to us by the Purchasers for the Erye Interest consisted of (i) $12.3 million in cash, (ii) the return to us of 1,040,000 shares of NeoStem common stock and (iii) the cancellation of 1,170,000 options and 640,000 warrants to purchase our common stock. The fair value of the shares was based on our closing price on the date of sale, and was recorded as Treasury Stock in our balance sheet. The fair values of the canceled options and warrants were based on the Black-Scholes values on the date of sale, and were recorded against Additional Paid in Capital in the accompanying balance sheet.

We recognized the following loss on the date of sale of its 51% interest in Erye (in thousands):

Fair value of consideration received	$ 13,397.9
Carrying value of segment non-controlling interest	6,015.0
Carrying value of segment accumulated comprehensive income	4,387.4
	$ 23,800.3
Less carrying amount of assets and liabilities sold:	
Cash	$ 8,457.5
Restricted Cash	2,918.1
Accounts Receivable	6,130.2
Inventories	15,077.7
Prepaid expenses and other current assets	957.8
Property, plant and equipment, net	38,102.0
Other assets	5,946.3
Accounts payable	(9,604.8)
Accrued liabilities	(2,008.8)
Bank loans	(15,133.5)
Notes payable	(6,599.3)
Other liabilities	(9,166.8)
Amount due related party	(7,859.7)
	$ 27,216.7
Loss on exit of segment	$ (3,416.4)

The operations and cash flows of the Pharmaceutical Manufacturing - China business were eliminated from ongoing operations with the sale of the Company's 51% interest in Erye. The operating results of the Pharmaceutical Manufacturing - China business for the years ended December 31, 2012 and 2011 were as follows (in thousands):

	Year Ended December 31,	
	2012	2011
Revenue	$ 61,703.1	$ 63,393.6
Cost of revenues	(40,245.2)	(47,186.8)
Research and development	(1,836.4)	(2,904.1)
Selling, general, and administrative	(10,740.0)	(11,068.2)
Other income (expense)	(1,045.2)	(1,081.4)
Provision for income taxes	(1,794.1)	(392.8)
Asset impairments	(31,170.1)	(19,432.7)
Loss on sale of segment	(3,416.4)	—
Loss from discontinued operations	$ (28,544.3)	$ (18,672.4)

Noncontrolling Interests

In connection with accounting for our 51% interest in Erye, which is reported in discontinued operations, we account for the 49% minority shareholder share of Erye's net income or loss with a charge to Noncontrolling Interests. For the year ended December 31, 2012, Erye's minority shareholders' share of net loss totaled approximately $12.3 million, and for the year ended December 31, 2011, Erye's minority shareholders' share of net income totaled approximately $9.1 million. On November 13, 2012, we completed the divestiture of our 51% interest in Erye.

In March 2011, we acquired rights to use patents under licenses from Becton, Dickinson and Company in exchange for an approximately 20% interest in PCT’s Athelos subsidiary. For the years ended December 31, 2012 and 2011, Becton’s minority shareholder’s share of Athelos’ net loss totaled approximately $0.3 million and $0.3 million, respectively.

Warrant Inducements

To raise capital on terms that we deemed favorable, during the year ended December 31, 2012, the Board authorized certain inducements to warrant holders to exercise outstanding common stock purchase warrants significantly before their expiration dates. We determined in each instance that such inducements were modifications of equity instruments, and an incremental fair value of the inducement was determined using the Black-Scholes option pricing model.

In July 2012, warrant holders exercised an aggregate of 2,808,140 warrants at an exercise price of $.51 per share for gross proceeds of approximately $1.4 million. As an inducement to exercise, we issued to each exercising holder a new five year warrant to purchase the identical number of shares of our Common Stock as had been exercised subject to substantially the same terms as the exercised warrant, except that the per share exercise price of each new warrant is between $.66 and $.69, the closing price of our Common Stock on the date the old warrant was exercised. The incremental fair value of the inducement recorded in 2012 was $0.4 million.

In August 2012, a warrant holder exercised warrants to purchase 2,100,000 shares of the Company' common stock at an exercise price of $0.51 per share, for gross proceeds to the Company of approximately $1.1 million. The warrants were originally issued in 2009 with an exercise price of $2.50 per share. The incremental fair value of the inducement recorded in 2012 was $0.2 million.

In August 2012, a warrant holder exercised warrants to purchase 344,825 shares of common stock at $1.85, and 300,000 shares of common stock at $1.45 per share, respectively, for gross proceeds to the Company of approximately $1.1 million. Since the exercise prices of the warrants were significantly above the Company's stock price, the Company issued the warrant holder 1,458,952 shares of the Company's common stock as an inducement to exercise. The incremental fair value of the inducement recorded in 2012 was $0.4 million.

In September through November 2012, warrant holders exercised an aggregate of 2,147,873 warrants at an exercise price of $.51 per share for gross proceeds of approximately $1.1 million. As an inducement to exercise, we paid certain warrant holders $.03 per share upon each exercise. The incremental fair value of the inducement recorded in 2012 was $0.

In October 2012, a warrant holder exercised warrants to purchase 225,000 shares of common stock at an exercise price of $1.45 per share for gross proceeds of approximately $0.3 million. As an inducement to exercise, we paid the warrant holder $.73 per share upon each exercise. The incremental fair value of the inducement recorded in 2012 was $0.

Preferred Dividends

The Convertible Redeemable Series E Preferred Stock called for annual dividends of 7% based on the stated value of the preferred stock. We recorded dividends of approximately $0.5 million for the year ended December 31, 2012, including an additional $235,000 early redemption premium upon our election to early redeem all outstanding Series E Preferred Stock in October 2012. We recorded dividends of approximately $0.6 million for the year ended December 31, 2011.

Analysis of Liquidity and Capital Resources

At December 31, 2012 we had a cash balance of approximately $13.7 million, working capital of approximately $6.8 million, and shareholders' equity of approximately $33.2 million.

During the year ended December 31, 2012, we met our immediate cash requirements through revenue generated from our PCT operations, existing cash balances, private placements and a public offering of our common stock and warrants (which raised an aggregate of approximately $16.4 million), warrant exercises (which raised approximately $6.6 million), the sale of our 51% interest in Erye for consideration which included $12.3 million in cash, and the use of equity and equity-linked instruments to pay for services and compensation.

Net cash provided by or used in operating, financing and investing activities from continuing operations were as follows (in thousands):

	Year Ended December 31,	
	2012	2011
Net cash used in operating activities - continuing operations	$ (18,759.9)	$ (21,773.2)
Net cash provided by (used in) investing activities - continuing operations	11,748.7	(251.4)
Net cash provided by financing activities - continuing operations	17,112.0	17,329.9

Operating Activities - Continuing Operations

Our cash used in operating activities -continuing operations in the year ended December 31, 2012 totaled approximately $18.8 million, which is the sum of (i) our net loss of $66.4 million, less discontinued operations of $30.3 million, and adjusted for non-cash expenses totaling $14.3 million (which includes adjustments for equity-based compensation and depreciation and amortization), and (ii) changes in operating assets and liabilities providing approximately $3.1 million.

Investing Activities - Continuing Operations

In November 2012, we completed the sale of our 51% interest in Erye for approximately $13.4 million in total consideration, including $12.3 million in cash. During the year ended December 31, 2012, we spent approximately $0.5 million for property and equipment.

Financing Activities - Continuing Operations

During the year ended December 31, 2012, we financed our operations in part through a series of securities issuances.

- We received gross proceeds of $6.8 million, prior to deducting underwriting discounts and offering expenses, for net proceeds of approximately $6.0 million in connection with an underwritten public offering of 17,000,000 units (inclusive of exercise of the underwriters over-allotment option) at a purchase price of $0.40 per unit, with each unit consisting of one share of Common Stock and a five year warrant to purchase one share of Common Stock at an exercise price of $0.51 per share.
- We raised gross proceeds of approximately $7.1 million in private placements of an aggregate of approximately 13.4 million shares of Common Stock and 8.9 million five year warrants at exercise prices ranging from $0.51 to $0.74.

- We raised gross proceeds of approximately $3.3 million (all of which was raised fourth quarter 2012) through the issuance of 5.3 million shares of Common Stock under the provisions of our equity line of credit with Aspire.

- We raised approximately $6.6 million from the exercise of approximately 11.1 million warrants. To induce the exercise of certain of these warrants, we provided consideration to the warrant holders in the form of either cash, stock or additional warrants.

During 2012, we made cash payment totaling $5.7 million for the repayment of our Series E Preferred Stock and dividends.

Liquidity and Capital Requirements Outlook

Capital Requirements

We expect to incur substantial additional costs in connection with our continuing transition to a cell therapy development company. In particular, Amorcyte is currently recruiting clinical trial sites for a 160 patient, Phase 2 clinical trial for Amorcyte's lead product candidate, AMR-001, for the treatment of AMI. The trial began enrollment in January 2012, and is expected to cost approximately $16 million over the first two years and anticipated to cost up to approximately $22 million over a five year period, inclusive of manufacturing costs. We have incurred approximately $6.7 million on the Phase 2 trial as of December 31, 2012.

Liquidity

To support our liquidity needs, in 2012:

- we raised an aggregate of approximately $20.5 million (or net proceeds of approximately $19.7 million) through an underwritten public offering of common stock and warrants, private placements, and warrant exercises.

- we raised an aggregate of approximately $3.3 million under the Purchase Agreement with Aspire Capital, which provides that Aspire Capital is committed to purchase up to $20 million of shares of the Company's common stock over the term of that Agreement through September 30, 2015, subject to certain terms and conditions, including a floor price.

- we completed the sale of our 51% interest in Erye for total consideration including approximately $12.3 million in cash.

We anticipate that we will take further steps to raise additional capital in order to (i) fund the development of advanced cell therapies, including the development of AMR-001, and (ii) grow the PCT business, including expanding into Europe, implementing additional automation capabilities and establishing commercial capacity.

To meet our short and long term liquidity needs, we currently expect to use existing cash balances and the growth of our revenue generating activities, and a variety of other means that could include, but not be limited to, the use of our current equity line, potential additional warrant exercises, option exercises, issuances of other debt or equity securities in public or private financings, and/or sale of assets. In addition, we will continue to seek as appropriate grants for scientific and clinical studies from the National Institutes of Health, Department of Defense, and other governmental agencies and foundations, but there can be no assurance that we will be successful in qualifying for or obtaining such grants. Our history of operating losses and liquidity challenges, may make it difficult for us to raise capital on acceptable terms or at all. The demand for the equity and debt of small cap biopharmaceutical companies like ours is dependent upon many factors, including the general state of the financial markets. During times of extreme market volatility, capital may not be available on favorable terms, if at all. Our inability to obtain such additional capital could materially and adversely affect our business operations.

In August 2011, the Department of Defense (DOD) Peer Reviewed Medical Research Program (PRMRP) of the Office of the Congressionally Directed Medical Research Programs (CDMRP) awarded NeoStem approximately $1.78 million to be applied towards funding the Company's VSEL ™ Technology, which award will support an investigation of a unique stem cell population, Very Small Embryonic-Like (VSEL) stem cells, for its bone building and regenerative effects in the treatment of osteoporosis. This past year marked a new level of achievement for VSEL™ Technology as we received a two year grant totaling approximately $1.2 million for "Repair of Bone Defects with Human Autologous Pluripotent Very Small Embryonic-Like Stem Cells (VSEL)" from the National Institute of Dental and Craniofacial Research (NIDCR), a division of the National Institutes of Health (NIH). This peer-reviewed grant is to support the first NIH approved clinical study of VSELs™ in humans.

While we continue to seek capital through a number of means, there can be no assurance that additional financing will be available or on acceptable terms, if at all, and our negotiating position in capital generating efforts may worsen as existing

resources are used. Additional equity financing may be dilutive to our stockholders; debt financing, if available, may involve significant cash payment obligations and covenants that restrict our ability to operate as a business, our stock price may not reach levels necessary to induce option or warrant exercises, and asset sales may not be possible on terms we consider acceptable. If we are unable to raise the funds necessary to meet our long-term liquidity needs, we may have to delay or discontinue the acquisition and development of cell therapies, and/or the expansion of our business or raise funds on terms that we currently consider unfavorable.

Commitments and Contingencies

The following table summarizes our obligations to make future payments under current contracts as of December 31, 2012 (in thousands):

	Total	Less than 1 Year	1-3 Years	3-5 Years	More than 5 Years
Contractual Obligations					
Mortgages Payable	$ 3,438.5	$ 201.8	$ 438.2	$ 2,414.8	$ 383.7
Capital Lease Obligations	254.9	83.4	171.5	—	—
Operating Lease Obligations	3,592.9	1,143.3	1,592.5	857.1	—
	$ 7,286.3	$ 1,428.5	$ 2,202.2	$ 3,271.9	$ 383.7

Under an agreement with an external clinical research organization (“CRO”), we will incur expenses relating to our AMR-001 Phase 2 clinical trial for the treatment of AMI. The timing and amount of these disbursements are based on the achievement of certain milestones, patient enrollment, services rendered or as expenses are incurred by the CRO and therefore, we cannot reasonably estimate the timing of these payments.

SEASONALITY

NeoStem does not believe that its operations are seasonal in nature.

OFF-BALANCE SHEET ARRANGEMENTS

NeoStem does not have any off-balance sheet arrangements.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and judgments that affect the amounts reported in the financial statements. On an ongoing basis, the Company evaluates its estimates and assumptions. The Company bases its estimates on historical experience and other assumptions believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results could differ from these estimates.

An accounting policy is considered to be critical if it is important to the Company’s financial condition and results of operations and if it requires management’s most difficult, subjective and complex judgments in its application. For a summary of all of the Company’s significant accounting policies, see Note 2 to the Company’s Consolidated Financial Statements.

Revenue Recognition

Clinical Services: The Company recognizes revenue for its (i) cell process development and (ii) cell manufacturing services based on the terms of individual contracts.

Revenues associated with cell process development services generally contain multiple stages that do not have stand-alone values and are dependent upon one another, and are recognized as revenue on a completed contract basis. We recognize revenues for cell development services when all of the following conditions are met:

- persuasive evidence of an arrangement exists;
- delivery has occurred or the services have been rendered;

- the fee is fixed or determinable; and
- collectability is probable.

The Company considers signed contracts as evidence of an arrangement. The Company assesses whether the fee is fixed or determinable based on the payment terms associated with the transaction and whether the payment terms are subject to refund or adjustment. The Company assesses cash collectability based on a number of factors, including past collection history with the client and the client's creditworthiness. If the Company determines that collectability is not reasonably assured, it defers revenue recognition until collectability becomes reasonably assured, which is generally upon receipt of the cash. The Company's arrangements are generally non-cancellable, though clients typically have the right to terminate their agreement for cause if the Company materially fails to perform.

Cell manufacturing services are generally distinct arrangements whereby the Company is paid for time and materials or for fixed monthly amounts. Revenue is recognized when efforts are expended or contractual terms have been met.

Some client agreements include multiple elements, comprised of cell process development and cell manufacturing services. The Company believes that cell process development and cell manufacturing services each have stand-alone value because these services can be provided separately by other companies. In accordance with ASC Update No. 2009-13, “Revenue Recognition (Topic 605): Multiple-Deliverable Revenue Arrangements,” The Company (1) separates deliverables into separate units of accounting when deliverables are sold in a bundled arrangement and (2) allocates the arrangement's consideration to each unit in the arrangement based on its relative selling price.

Clinical Services Reimbursements: The Company separately charges the customers for the expenses associated with certain consumable resources (reimbursable expenses) that are specified in each clinical services contract. On a monthly basis, the Company bills customers for reimbursable expenses and immediately recognizes these billings as revenue, as the revenue is deemed earned as reimbursable expenses are incurred.

Processing and Storage Services: The Company recognizes revenue related to the collection and cryopreservation of cord blood and autologous adult stem cells when the cryopreservation process is completed which is approximately twenty-four hours after cells have been collected. Revenue related to advance payments of storage fees is recognized ratably over the period covered by the advance payments.

Share-Based Compensation

The Company expenses all share-based payment awards to employees, directors, advisors and consultants, including grants of stock options, warrants, and restricted stock, over the requisite service period based on the grant date fair value of the awards. Advisor and consultant awards are remeasured each reporting period through vesting. For awards with performance-based vesting criteria, the Company estimates the probability of achievement of the performance criteria and recognizes compensation expense related to those awards expected to vest. The Company determines the fair value of certain share-based awards using the Black-Scholes option-pricing model which uses both historical and current market data to estimate the fair value. This method incorporates various assumptions such as the risk-free interest rate, expected volatility, expected dividend yield and expected life of the options or warrants. The fair value of the Company’s restricted stock and restricted stock units is based on the closing market price of the Company’s common stock on the date of grant.

Goodwill and Other Intangible Assets

Goodwill is the excess of purchase price over the fair value of identified net assets of businesses acquired. The Company’s intangible assets with an indefinite life are related to in process research and development for AMR-001, the clinical candidate acquired in the Amorcyte acquisition, as the Company expects this research and development to provide the Company with substantial benefit for a period that extends beyond the foreseeable horizon. Amortized intangible assets consist of customer lists, manufacturing technology, and tradename, as well as patents and rights associated primarily with the VSEL™ Technology. These intangible assets are amortized on a straight line basis over their respective useful lives.

The Company reviews goodwill and indefinite-lived intangible assets at least annually for possible impairment. Goodwill and indefinite-lived intangible assets are reviewed for possible impairment between annual tests if an event occurs or circumstances change that would more likely than not reduce the fair value of the reporting unit below its carrying value. The Company tests its goodwill and indefinite-lived intangible assets each year on December 31. The Company reviews the carrying value of goodwill and indefinite-lived intangible assets utilizing a discounted cash flow model, and, where appropriate, a market value approach is also utilized to supplement the discounted cash flow model. The Company makes assumptions regarding estimated future cash

flows, discount rates, long-term growth rates and market values to determine each reporting unit's estimated fair value. If these estimates or related assumptions change in the future, the Company may be required to record impairment charges. In accordance with it's accounting policy, the Company tested goodwill for impairment as of December 31, 2012 for its two reporting units, and concluded there was no risk of failing step 1 of the goodwill impairment testing evaluation.

Evaluation of Long-lived Assets

The Company reviews long-lived assets and finite-lived intangibles assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset exceeds the fair value of the asset. If other events or changes in circumstances indicate that the carrying amount of an asset that the Company expects to hold and use may not be recoverable, the Company will estimate the undiscounted future cash flows expected to result from the use of the asset or its eventual disposition, and recognize an impairment loss. The impairment loss, if determined to be necessary, would be measured as the amount by which the carrying amount of the assets exceeds the fair value of the assets.

Recognizing and Measuring Assets Acquired and Liabilities Assumed in Business Combinations at Fair Value

The Company accounts for acquired businesses using the purchase method of accounting, which requires that assets acquired and liabilities assumed be recorded at date of acquisition at their respective fair values. The consolidated financial statements and results of operations reflect an acquired business after the completion of the acquisition. The fair value of the consideration paid, including contingent consideration, is assigned to the underlying net assets of the acquired business based on their respective fair values. Any excess of the purchase price over the estimated fair values of the net assets acquired is recorded as goodwill. Beginning in 2009, amounts allocated to IPR&D are included on the balance sheet . Intangible assets, including IPR&D assets upon successful completion of the project and approval of the product, are amortized on a straight-line basis to amortization expense over the expected life of the asset. Significant judgments are used in determining the estimated fair values assigned to the assets acquired and liabilities assumed and in determining estimates of useful lives of long-lived assets. Fair value determinations and useful life estimates are based on, among other factors, estimates of expected future net cash flows, estimates of appropriate discount rates used to present value expected future net cash flow streams, the timing of approvals for IPR&D projects and the timing of related product launch dates, the assessment of each asset's life cycle, the impact of competitive trends on each asset's life cycle and other factors. These judgments can materially impact the estimates used to allocate acquisition date fair values to assets acquired and liabilities assumed and the resulting timing and amount of amounts charged to, or recognized in current and future operating results. For these and other reasons, actual results may vary significantly from estimated results.

The Company determines the acquisition date fair value of contingent consideration obligations based on a probability-weighted income approach derived from revenue estimates, post-tax gross profit levels and a probability assessment with respect to the likelihood of achieving contingent obligations including contingent payments such as milestone obligations, royalty obligations and contract earn-out criteria, where applicable. The fair value measurement is based on significant inputs not observable in the market and thus represents a Level 3 measurement as defined in fair value measurement accounting. The resultant probability-weighted cash flows are discounted using an appropriate effective annual interest rate. At each reporting date, the contingent consideration obligation will be revalued to estimated fair value and changes in fair value will be reflected as income or expense in our consolidated statement of operations. Changes in the fair value of the contingent consideration obligations may result from changes in discount periods and rates, changes in the timing and amount of revenue estimates and changes in probability assumptions with respect to the likelihood of achieving the various contingent payment obligations. Changes in assumptions utilized in our contingent consideration fair value estimates could result in an increase or decrease in our contingent consideration obligation and a corresponding charge to operating income.

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

Not applicable.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

The financial statements and notes thereto required to be filed under this Item are presented commencing on page

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of this Annual Report on Form 10-K.

NeoStem, Inc. and Subsidiaries

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Report of Independent Registered Public Accounting Firm

Board of Directors and Stockholders
NeoStem, Inc.

We have audited the accompanying consolidated balance sheets of NeoStem, Inc. (a Delaware corporation) and subsidiaries (the “Company”) as of December 31, 2012 and 2011, and the related consolidated statements of operations, comprehensive loss, equity, and cash flows for each of the two years in the period ended December 31, 2012. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of NeoStem, Inc. and subsidiaries as of December 31, 2012 and 2011, and the results of their operations and their cash flows for each of the two years in the period ended December 31, 2012 in conformity with accounting principles generally accepted in the United States of America.

/s/ GRANT THORNTON LLP

New York, New York
March 8, 2013

NEOSTEM, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

	December 31, 2012	December 31, 2011
ASSETS		
Current Assets		
Cash and cash equivalents	$ 13,737,452	$ 3,935,160
Accounts receivable trade, net of allowance for doubtful accounts of $626,054 and $187,600, respectively	1,053,604	1,010,475
Inventory	1,113,025	647,745
Prepaids and other current assets	803,135	649,739
Assets related to discontinued operations	—	32,367,217
Total current assets	16,707,216	38,610,336
Property, plant and equipment, net	11,153,143	11,616,053
Goodwill	11,117,770	11,117,770
Intangible assets, net	14,480,827	15,086,038
Other assets	947,307	3,326,938
Assets related to discontinued operations	—	75,570,645
	$ 54,406,263	$ 155,327,780
LIABILITIES AND EQUITY		
Current Liabilities		
Accounts payable	$ 2,555,240	$ 2,287,201
Accrued liabilities	2,284,813	1,090,176
Notes payable	202,558	148,062
Mortgages payable	3,438,475	3,635,061
Unearned revenues	1,468,341	1,121,134
Liabilities related to discontinued operations	—	28,165,010
Total current liabilities	9,949,427	36,446,644
Long-term Liabilities		
Deferred income taxes	3,599,122	3,774,655
Unearned revenues	—	169,198
Notes payable	171,528	—
Derivative liabilities	101,156	474,463
Acquisition-related contingent consideration	7,550,000	3,130,000
Other long-term liabilities	214,871	—
Liabilities related to discontinued operations	—	26,388,976
Total long-term liabilities	11,636,677	33,937,292
Commitments and Contingencies		
Redeemable Securities		
Convertible Redeemable Series E Preferred Stock; 10,582,011 shares designated, liquidation value $1.00 per share; issued and outstanding 0 shares and 6,662,748 shares at December 31, 2012 and 2011, respectively	—	4,811,326
EQUITY		
Stockholders' Equity		
Preferred stock; authorized, 20,000,000 shares Series B convertible redeemable preferred stock liquidation value, 1 share of common stock, $.01 par value; 825,000 shares designated; issued and outstanding, 10,000 shares at December 31, 2012 and December 31, 2011	100	100
Common stock, $.001 par value, authorized 500,000,000 shares; issued and outstanding, 163,753,653 and 109,329,587 shares, at December 31, 2012 and December 31, 2011, respectively	163,754	109,330

Additional paid-in capital	231,071,236	200,858,638
Treasury stock, at cost	(665,600)	—
Accumulated deficit	(197,392,361)	(143,094,854)
Accumulated other comprehensive income	—	4,152,343
Total NeoStem, Inc. stockholders' equity	33,177,129	62,025,557
Noncontrolling interests	(356,970)	18,106,961
Total equity	32,820,159	80,132,518
	$ 54,406,263	$ 155,327,780

See accompanying notes to consolidated financial statements.

NEOSTEM, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended December 31,	
	2012	**2011**
Revenues	$ 14,329,889	$ 10,050,086
Cost of revenues	11,949,124	8,646,687
Gross profit	2,380,765	1,403,399
Research and development	10,451,070	7,720,748
Selling, general, and administrative	22,315,346	27,687,162
Operating Expenses	32,766,416	35,407,910
Operating loss	(30,385,651)	(34,004,511)
Other income (expense):		
Other (expense) income, net	(4,314,228)	2,085,870
Interest expense	(1,576,975)	(2,647,692)
	(5,891,203)	(561,822)
Loss from operations before provision for income taxes and noncontrolling interests	(36,276,854)	(34,566,333)
Provision (benefit) for income taxes	(175,533)	—
Net loss from continuing operations	(36,101,321)	(34,566,333)
Loss from discontinued operations - net	(30,267,990)	(22,016,524)
Net loss	(66,369,311)	(56,582,857)
Less - loss from continuing operations attributable to noncontrolling interests	(287,181)	(299,789)
Less - loss from discontinued operations attributable to noncontrolling interests	(12,312,646)	(9,148,599)
Net loss attributable to NeoStem, Inc.	(53,769,484)	(47,134,469)
Warrant inducements	(1,012,819)	—
Preferred dividends	(528,023)	(639,765)
Net loss attributable to NeoStem, Inc. common stockholders	$ (55,310,326)	(47,774,234)
Amounts Attributable to NeoStem, Inc. common stockholders:		
Loss from continuing operations	$ (35,814,140)	$ (34,266,544)
Loss from discontinued operations - net of taxes	(17,955,344)	(12,867,925)
Warrant inducements	(1,012,819)	—
Preferred dividends	(528,023)	(639,765)
Net loss attributable to NeoStem, Inc. common stockholders	$ (55,310,326)	$ (47,774,234)
Basic and diluted (loss) per share attributable to NeoStem, Inc. common stockholders:		
Continuing operations	$ (0.26)	$ (0.39)
Discontinued operations	$ (0.13)	(0.15)
NeoStem, Inc. common stockholders	$ (0.40)	$ (0.54)
Weighted average common shares outstanding	138,419,965	88,598,696

See accompanying notes to consolidated financial statements.

NEOSTEM, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

	Year Ended December 31,	
	2012	**2011**
Net loss	$ (66,369,311)	$ (56,582,857)
Other comprehensive income (loss):		
Foreign currency translation elimination on exit of segment	(169,993)	—
Foreign currency translation elimination on sale of segment	(4,387,371)	—
Foreign currency translation	405,021	2,606,639
Total other comprehensive (loss) income	(4,152,343)	2,606,639
Comprehensive loss	(70,521,654)	(53,976,218)
Noncontrolling interests elimination on sale of segment	(6,014,981)	—
Comprehensive loss attributable to noncontrolling interests	(12,448,950)	(8,215,026)
Comprehensive net loss attributable to NeoStem, Inc. common stockholders	$ (52,057,723)	$ (45,761,192)

See accompanying notes to consolidated financial statements.

NEOSTEM, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF EQUITY

	Series B Convertible Preferred Stock		Common Stock		Additional Paid in Capital	Accumulated Other Comprehensive Income	Accumulated Deficit	Treasury Stock	Total NeoStem, Inc. Stockholders' Equity	Non-Controlling Interest in Subsidiary	Total Equity
	Shares	Amount	Shares	Amount							
Balance at December 31, 2010	10,000	$ 100	64,221,130	$ 63,813	$ 141,137,522	$ 2,779,066	$ (95,320,620)	$ —	$ 48,659,881	$ 37,827,738	$ 86,487,619
Net loss	—	—	—	—	—	—	(47,134,469)	—	(47,134,469)	(9,448,388)	(56,582,857)
Foreign currency translation	—	—	—	—	—	1,373,277	—	—	1,373,277	1,223,710	2,596,987
Exercise of stock options	—	—	5,000	5	7,095	—	—	—	7,100	—	7,100
Share-based compensation	—	—	3,824,018	3,824	10,262,199	—	—	—	10,266,023	—	10,266,023
Proceeds from issuance of common stock	—	—	19,678,224	19,678	21,133,004	—	—	—	21,152,682	—	21,152,682
Shares issued for charitable contribution	—	—	—	408	606,955	—	—	—	607,363	—	607,363
Repayment of Series E Preferred Principal and Dividends	—	—	5,157,732	5,158	4,254,907	—	(639,765)	—	3,620,300	—	3,620,300
Dividends to related party	—	—	—	—	—	—	—	—	—	(11,726,099)	(11,726,099)
Technology contributed to Athelos by Non-Controlling Interest	—	—	—	—	920,000	—	—	—	920,000	230,000	1,150,000
Shares issued in PCT Merger	—	—	10,600,000	10,600	17,189,400	—	—	—	17,200,000	—	17,200,000
Shares issued in Amorcyte Merger	—	—	5,843,483	5,844	5,347,556	—	—	—	5,353,400	—	5,353,400
Balance at December 31, 2011	10,000	$ 100	109,329,587	$ 109,330	$ 200,858,638	$ 4,152,343	$ (143,094,854)	$ —	$ 62,025,557	$ 18,106,961	$ 80,132,518
Net loss	—	—	—	—	—	—	(53,769,484)	—	(53,769,484)	(12,599,827)	(66,369,311)
Foreign currency translation	—	—	—	—	—	235,028	—	—	235,028	150,877	385,905
Share-based compensation	—	—	3,364,268	3,364	6,709,172	—	—	—	6,712,536	—	6,712,536
Proceeds from issuance of common stock	—	—	35,732,289	35,732	16,393,095	—	—	—	16,428,827	—	16,428,827
Proceeds from warrant exercises	—	—	11,076,182	11,077	6,593,342	—	—	—	6,604,419	—	6,604,419
Shares, options and warrants received in Erye sale	—	—	—	—	(452,301)	—	—	(665,600)	(1,117,901)	—	(1,117,901)
Elimination of equity associated with sale of Erye	—	—	—	—	—	(4,387,371)	—	—	(4,387,371)	(6,014,981)	(10,402,352)
Repayment of Series E Preferred Principal and Dividends	—	—	2,792,375	2,792	1,199,425	—	(528,023)	—	674,194	—	674,194
Warrant inducements	—	—	1,458,952	1,459	(230,135)	—	—	—	(228,676)	—	(228,676)
Balance at December 31, 2012	10,000	$ 100	163,753,653	$ 163,754	$ 231,071,236	$ —	$ (197,392,361)	$ (665,600)	$ 33,177,129	$ (356,970)	$ 32,820,159

See accompanying notes to consolidated financial statements.

NEOSTEM, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31,	
	2012	2011
Cash flows from operating activities:		
Net loss	$ (66,369,311)	$ (56,582,857)
Loss from discontinued operations	30,267,990	22,016,524
Adjustments to reconcile net loss to net cash used in operating activities:		
Common stock, stock options and warrants issued as payment for compensation, services rendered and interest expense	6,712,536	10,266,023
Depreciation and amortization	1,550,571	1,440,576
Amortization of preferred stock discount and issuance cost	1,609,495	2,440,241
Changes in fair value of derivative liability	(373,307)	(2,096,904)
Changes in acquisition-related contingent consideration	4,420,000	—
Write off of acquired in-process research and development	—	1,150,000
Loss on disposal of assets	13,653	—
Contributions paid with common stock	—	607,363
Bad debt expense (recovery)	511,755	(87,773)
Deferred income taxes	(175,533)	—
Changes in operating assets and liabilities, net of the effect of acquisitions:		
Prepaid expenses and other current assets	(178,011)	(350,227)
Accounts receivable	(554,884)	(443,132)
Inventory	(465,280)	(647,745)
Unearned revenues	178,008	948,452
Other assets	2,414,842	53,211
Accounts payable, accrued expenses and other current liabilities	1,677,551	(486,952)
Net cash used in operating activities - continuing operations	(18,759,925)	(21,773,200)
Net cash provided by operating activities - discontinued operations	4,907,407	845,206
Net cash used in operating activities	(13,852,518)	(20,927,994)
Cash flows from investing activities:		
Cash received in acquisitions	—	320,863
Cash received in divestiture	12,280,000	—
Change in restricted cash used as collateral for notes payable	—	2,596
Acquisition of property and equipment	(531,315)	(574,857)
Net cash provided by (used in) investing activities - continuing operations	11,748,685	(251,398)
Net cash used in investing activities - discontinued operations	(5,660,305)	(1,803,182)
Net cash provided by (used in) investing activities	6,088,380	(2,054,580)
Cash flows from financing activities:		
Net proceeds from exercise of options	—	7,100
Net proceeds from exercise of warrants	6,604,418	—
Net proceeds from issuance of capital stock	16,428,827	21,152,682
Repayment of mortgage loan	(196,585)	(149,542)
Proceeds from notes payable	666,501	149,766
Repayment of notes payable	(440,477)	(180,132)
Repayment of debt to related party	—	(3,000,000)

Repayment of preferred stock	(5,394,263)	(650,000)
Payment of dividend for preferred stock	(327,748)	—
Payment for warrant inducement	(228,676)	—
Net cash provided by financing activities - continuing operations	17,111,997	17,329,874
Net cash (used in) provided by financing activities - discontinued operations	(8,370,228)	2,739,496
Net cash provided by financing activities	8,741,769	20,069,370
Impact of changes of foreign exchange rates	14,389	46,245
Net increase (decrease) in cash and cash equivalents	992,020	(2,866,959)
Cash and cash equivalents at beginning of period	12,745,432	15,612,391
Cash and cash equivalents at end of period	13,737,452	12,745,432
Less cash and cash equivalents of discontinued operations at end of period	—	8,810,272
Cash and cash equivalents of continuing operations at end of period	$ 13,737,452	$ 3,935,160
Supplemental Disclosure of Cash Flow Information:		
Cash paid during the period for:		
Interest	$ 1,771,800	$ 1,522,700
Taxes	2,100,000	1,119,500
Supplemental Schedule of non-cash investing activities:		
Capitalized interest	182,000	384,300
Common stock, warrants and options received upon sale of Erye	1,117,901	—
Supplemental schedule of non-cash financing activities		
Common stock, warrants and contingent consideration issued with the acquisition of Amorcyte	—	8,483,400
Common stock and warrants issued with the acquisition of PCT	—	17,200,000
Common stock issued pursuant to the redemption of Convertible Redeemable Series E 7% Preferred Stock	1,026,600	3,511,200
Common stock issued in payment of dividends for the Convertible Redeemable Series E 7% Preferred Stock	175,700	748,900
Dividend to related party reinvested as loan payable	—	11,726,100

See accompanying notes to consolidated financial statements.

NEOSTEM, INC. AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1 – The Business

Overview

NeoStem, Inc. (“we,” “NeoStem” or the “Company”) is a leader in the emerging cellular therapy industry. Cellular therapy addresses the process by which new cells are introduced into a tissue to prevent or treat disease, or regenerate damaged or aged tissue, and comprises a separate therapeutic technology platform in addition to the current three pillars of healthcare: pharmaceuticals, biologics and medical devices. Modern cell-based therapies have progressed from the first recorded human to human blood transfusion 200 years ago through to the advanced cellular therapies of today including bone marrow and organ transplantation, tissue banking and reproductive *in vitro* fertilization and future therapies being investigated to treat cancer, cardiologic, neurologic, ophthalmic and orthopedic diseases among others. We anticipate that cellular therapies will have a large role in the fight against chronic disease and in lessening the economic burden that these diseases pose to modern society.

Our business model includes the development of novel proprietary cell therapy products as well as operating a contract development and manufacturing organization (“CDMO”) providing services to others in the regenerative medicine industry. The combination of a therapeutic development business and revenue-generating service provider business provides the Company with unique capabilities for cost effective in-house product development and immediate revenue and cash flow generation.

Progenitor Cell Therapy, LLC, our wholly owned subsidiary (“PCT”), is a leading CDMO in the cellular therapy industry. Since its inception in 1997, PCT has provided pre-clinical and clinical current Good Manufacturing Practice (“cGMP”) development and manufacturing services to over 100 clients advancing regenerative medicine product candidates through rigorous quality standards all the way through to human testing. PCT has two cGMP, state-of-the art cell therapy research, development, and manufacturing facilities in New Jersey and California, serving the cell therapy community with integrated and regulatory compliant distribution capabilities. Its core competencies in the cellular therapy industry include manufacturing of cell therapy-based products, product and process development, cell and tissue processing, regulatory support, storage, distribution and delivery and consulting services.

Our wholly-owned subsidiary, Amorcyte, LLC (“Amorcyte”), which we acquired in October 2011, is developing our own cell therapy, AMR-001, for the treatment of cardiovascular disease. AMR-001 represents our most clinically advanced therapeutic product candidate and enrollment for our Phase 2 PreSERVE clinical trial to investigate AMR-001's safety and efficacy in preserving heart function after a heart attack in a particular type of post Acute Myocardial Infarction (“AMI”) patients commenced in 2012. We expect to complete enrollment for this study in 2013 with the first data readout available six to eight months thereafter.
If approved by the U.S. Food and Drug Administration ("FDA") and/or other worldwide regulatory agencies, AMR-001 would address a significant unmet medical need in the treatment of AMI, potentially improving the quality and longevity of life for those afflicted, and position the Company to capture a meaningful share of the worldwide AMI market.

Through our majority-owned subsidiary, Athelos Corporation (“Athelos”), we are collaborating with Becton-Dickinson in early stage clinical development of a therapy utilizing T-cells, collaborating for autoimmune and inflammatory conditions, including but not limited to, graft vs. host disease, type 1 diabetes, steroid resistant asthma, lupus, multiple sclerosis and solid organ transplant rejection. We plan to investigate the clinical feasibility of nTreg-based therapeutics to prevent and/or treat type 1 diabetes, graft vs. host disease, steroid resistant asthma, lupus, multiple sclerosis and solid organ transplant rejection and expect to file an Investigational New Drug Application ("IND") with the FDA in 2013 and commence human clinical studies in one of these disease conditions thereafter.

Our pre-clinical assets include our VSEL ™ (Very Small Embryonic Like) Technology platform for which we expect to file an IND with the FDA in late 2013 or early 2014 to initiate an National Institutes of Health ("NIH") funded human clinical studies treating periodontitis with VSELs™. We are also working on a Department of Defense funded study of VSELs™ and mesenchymal stem cells for the treatment of chronic wounds.

NeoStem's origins are in adult stem cell collection and storage and we believe that as new therapeutics are developed utilizing one's own stored cells (autologous), the market penetration rate for the collection and storage business may rise sharply from its current low single digits percentage level allowing our developing a network to scale rapidly if the demand grows.

In 2011, we operated our business in three reportable segments: (i) Cell Therapy — United States; (ii) Regenerative Medicine — China; and (iii) Pharmaceutical Manufacturing — China. In 2012, we exited our operations in China. Effective

March 31, 2012, we no longer operated in the Regenerative Medicine – China reportable segment, which is now reported in discontinued operations (see Note 16). On November 13, 2012, we completed the sale of our 51% interest in Suzhou Erye, which represented the operations in our Pharmaceutical Manufacturing - China segment, and is also reported in discontinued operations (see Note 16). As a result, we currently operate in a single reporting segment - Cell Therapy, which will focus on CDMO and cell therapy development programs.

We believe that NeoStem is ideally positioned to be an integrated leader in the cell therapy industry. We have significant basic research and development capabilities, manufacturing facilities on both the east and west coast of the United States, the support of regulatory and logistical expertise and a talented and experienced clinical team. We believe this expertise will allow us to achieve our mission of becoming the premier cell therapy company.

Basis of Presentation

The accompanying Consolidated Financial Statements have been prepared in accordance with accounting principles generally accepted in the United States of America (“generally accepted accounting principles”) and include the accounts of the Company and its wholly owned and partially owned subsidiaries, the operations of our former Regenerative Medicine - China segment through the deconsolidation date on March 31, 2012 (see Note 16), and the operations of our former Pharmaceutical Manufacturing - China reporting segment through November 13, 2012, the date on which the segment was sold (see Note 16). In the opinion of management, the accompanying Consolidated Financial Statements of the Company and its subsidiaries, include all normal and recurring adjustments considered necessary to present fairly the Company's financial position as of December 31, 2012 and 2011, and the results of its operations and its cash flows for the periods presented.

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements. Estimates also affect the reported amounts of revenues and expenses during the reporting period. Accordingly, actual results could differ from those estimates.

Principles of Consolidation

The Consolidated Financial Statements include the accounts of NeoStem, Inc. and its wholly owned and partially owned subsidiaries and affiliates as listed below, as well as the operations of our former Regenerative Medicine - China segment through the deconsolidation date on March 31, 2012 (see Note 16), and the operations of our former Pharmaceutical Manufacturing - China reporting segment through November 13, 2012, representing the date which the segment was sold (see Note 16). These former segments are reported in discontinued operations.

Entity	Percentage of Ownership	Location
NeoStem, Inc.	Parent Company	United States of America
NeoStem Therapies, Inc.	100%	United States of America
Stem Cell Technologies, Inc.	100%	United States of America
Amorcyte, LLC	100%	United States of America
CBH Acquisition LLC	100%	United States of America
China Biopharmaceuticals Holdings, Inc. (CBH)*	100% owned by CBH Acquisition LLC	United States of America
Progenitor Cell Therapy, LLC (PCT)	100%	United States of America
NeoStem Family Storage, LLC	100% owned by PCT	United States of America
Athelos Corporation	80.1% owned by PCT	United States of America
PCT Allendale, LLC	100% owned by PCT	United States of America

* The 51% interest in Erye formerly held by our subsidiary CBH was sold on November 13, 2012.

Note 2 – Summary of Significant Accounting Policies

Cash and Cash Equivalents

Cash and cash equivalents include short-term, highly liquid, investments with maturities of ninety days or less when purchased.

Accounts Receivable

Accounts receivable are carried at original invoice amount less an estimate made for doubtful accounts. The Company applies judgment in connection with establishing the allowance for doubtful accounts. Specifically, the Company analyzes the aging of accounts receivable balances, historical bad debts, customer concentration and credit-worthiness, current economic trends and changes in the Company's customer payment terms. Significant changes in customer concentrations or payment terms, deterioration of customer credit-worthiness or weakening economic trends could have a significant impact on the collectability of the receivables and the Company's operating results. If the financial condition of the Company's customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances may be required. Management regularly reviews the aging of receivables and changes in payment trends by its customers, and records a reserve when it believes collection of amounts due are at risk.

Inventories

The Company, through its PCT subsidiary, regularly enters into contracts with clients for services that have multiple stages and are dependent on one another to complete the contract and recognize revenue. The Company's inventory represents work in process for costs incurred on such projects at PCT that have not been completed. The Company reviews these projects periodically to determine that the value of each project is stated at the lower of cost or market.

Property, Plant, and Equipment

The cost of property, plant and equipment is depreciated over the estimated useful lives of the related assets. Depreciation is computed on the straight-line method. Repairs and maintenance expenditures that do not extend original asset lives are charged to expense as incurred. The estimated useful lives of property, plant and equipment are as follows:

Building and improvements	25-30 years
Machinery and equipment	8-12 years
Lab equipment	5-7 years
Furniture and fixtures	5-12 years
Software	3-5 years
Leasehold improvements	Life of lease

Goodwill and Other Intangible Assets

Goodwill is the excess of purchase price over the fair value of identified net assets of businesses acquired. The Company's intangible assets with an indefinite life are related to in process research and development for AMR-001, the clinical candidate acquired in the Amorcyte acquisition, as the Company expects this research and development to provide the Company with substantial benefit for a period that extends beyond the foreseeable horizon. Amortized intangible assets consist of customer lists, manufacturing technology, and tradename, as well as patents and rights associated primarily with the VSEL™ Technology. These intangible assets are amortized on a straight line basis over their respective useful lives.

The Company reviews goodwill and indefinite-lived intangible assets at least annually for possible impairment. Goodwill and indefinite-lived intangible assets are reviewed for possible impairment between annual tests if an event occurs or circumstances change that would more likely than not reduce the fair value of the reporting unit below its carrying value. The Company tests its goodwill and indefinite-lived intangible assets each year on December 31. The Company reviews the carrying value of goodwill and indefinite-lived intangible assets utilizing a discounted cash flow model, and, where appropriate, a market value approach is also utilized to supplement the discounted cash flow model. The Company makes assumptions regarding estimated future cash flows, discount rates, long-term growth rates and market values to determine each reporting unit's estimated fair value. If these estimates or related assumptions change in the future, the Company may be required to record impairment charges.

Evaluation of Long-lived Assets

The Company reviews long-lived assets and finite-lived intangibles assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset exceeds the fair value of the asset. If other events or changes in circumstances indicate that the carrying amount of an asset that the Company expects to hold and use may not be recoverable, the

Company will estimate the undiscounted future cash flows expected to result from the use of the asset or its eventual disposition, and recognize an impairment loss. The impairment loss, if determined to be necessary, would be measured as the amount by which the carrying amount of the assets exceeds the fair value of the assets.

Recognizing and Measuring Assets Acquired and Liabilities Assumed in Business Combinations at Fair Value

The Company accounts for acquired businesses using the purchase method of accounting, which requires that assets acquired and liabilities assumed be recorded at date of acquisition at their respective fair values. The consolidated financial statements and results of operations reflect an acquired business after the completion of the acquisition. The fair value of the consideration paid, including contingent consideration, is assigned to the underlying net assets of the acquired business based on their respective fair values. Any excess of the purchase price over the estimated fair values of the net assets acquired is recorded as goodwill. Beginning in 2009, amounts allocated to IPR&D are included on the balance sheet . Intangible assets, including IPR&D assets upon successful completion of the project and approval of the product, are amortized on a straight-line basis to amortization expense over the expected life of the asset. Significant judgments are used in determining the estimated fair values assigned to the assets acquired and liabilities assumed and in determining estimates of useful lives of long-lived assets. Fair value determinations and useful life estimates are based on, among other factors, estimates of expected future net cash flows, estimates of appropriate discount rates used to present value expected future net cash flow streams, the timing of approvals for IPR&D projects and the timing of related product launch dates, the assessment of each asset's life cycle, the impact of competitive trends on each asset's life cycle and other factors. These judgments can materially impact the estimates used to allocate acquisition date fair values to assets acquired and liabilities assumed and the resulting timing and amount of amounts charged to, or recognized in current and future operating results. For these and other reasons, actual results may vary significantly from estimated results.

The Company determines the acquisition date fair value of contingent consideration obligations based on a probability-weighted income approach derived from revenue estimates, post-tax gross profit levels and a probability assessment with respect to the likelihood of achieving contingent obligations including contingent payments such as milestone obligations, royalty obligations and contract earn-out criteria, where applicable. The fair value measurement is based on significant inputs not observable in the market and thus represents a Level 3 measurement as defined in fair value measurement accounting. The resultant probability-weighted cash flows are discounted using an appropriate effective annual interest rate. At each reporting date, the contingent consideration obligation will be revalued to estimated fair value and changes in fair value will be reflected as income or expense in our consolidated statement of operations. Changes in the fair value of the contingent consideration obligations may result from changes in discount periods and rates, changes in the timing and amount of revenue estimates and changes in probability assumptions with respect to the likelihood of achieving the various contingent payment obligations. Changes in assumptions utilized in our contingent consideration fair value estimates could result in an increase or decrease in our contingent consideration obligation and a corresponding charge to operating income.

Share-Based Compensation

The Company expenses all share-based payment awards to employees, directors, advisors and consultants, including grants of stock options, warrants, and restricted stock, over the requisite service period based on the grant date fair value of the awards. Advisor and consultant awards are remeasured each reporting period through vesting. For awards with performance-based vesting criteria, the Company estimates the probability of achievement of the performance criteria and recognizes compensation expense related to those awards expected to vest. The Company determines the fair value of certain share-based awards using the Black-Scholes option-pricing model which uses both historical and current market data to estimate the fair value. This method incorporates various assumptions such as the risk-free interest rate, expected volatility, expected dividend yield and expected life of the options or warrants. The fair value of the Company's restricted stock and restricted stock units is based on the closing market price of the Company's common stock on the date of grant.

Loss Per Share

Basic loss per share is based on the weighted effect of all common shares issued and outstanding, and is calculated by dividing net loss attributable to common stockholders by the weighted average shares outstanding during the period. Diluted loss per share, which is calculated by dividing net loss attributable to common stockholders by the weighted average number of common shares used in the basic loss per share calculation plus the number of common shares that would be issued assuming conversion of all potentially dilutive securities outstanding, is not presented as such potentially dilutive securities are anti-dilutive in all periods presented.

Derivatives

Derivative instruments, including derivative instruments embedded in other contracts, are recorded on the balance sheet as either an asset or liability measured at its fair value. Changes in the fair value of derivative instruments are recognized currently in results of operations unless specific hedge accounting criteria are met. The Company has not entered into hedging activities to date. Changes in the derivative value are recorded as other income (expense) on the consolidated statements of operations.

Income Taxes

The Company recognizes (a) the amount of taxes payable or refundable for the current year and (b) deferred tax liabilities and assets for the future tax consequences of events that have been recognized in the Company's financial statements or tax returns. The Company continues to evaluate the accounting for uncertainty in tax positions. The guidance requires companies to recognize in their financial statements the impact of a tax position if the position is more likely than not of being sustained on audit. The position ascertained inherently requires judgment and estimates by management. The Company recognizes interest and penalties as a component of income tax expense.

Foreign Currency Translation

Results of the the Company's former Chinese operating segments were translated at the average exchange rates during the period, and assets and liabilities were translated at the closing rate at the end of each reporting period. Cash flows were also translated at average exchange rates for the period, therefore, amounts reported on the consolidated statement of cash flows did not necessarily agree with changes in the corresponding balances on the consolidated balance sheet.

Revenue Recognition

Clinical Services: The Company recognizes revenue for its (i) cell process development and (ii) cell manufacturing services based on the terms of individual contracts.

Revenues associated with cell process development services generally contain multiple stages that do not have stand-alone values and are dependent upon one another, and are recognized as revenue on a completed contract basis. We recognize revenues for cell development services when all of the following conditions are met:

- persuasive evidence of an arrangement exists;
- delivery has occurred or the services have been rendered;
- the fee is fixed or determinable; and
- collectability is probable.

The Company considers signed contracts as evidence of an arrangement. The Company assesses whether the fee is fixed or determinable based on the payment terms associated with the transaction and whether the payment terms are subject to refund or adjustment. The Company assesses cash collectability based on a number of factors, including past collection history with the client and the client's creditworthiness. If the Company determines that collectability is not reasonably assured, it defers revenue recognition until collectability becomes reasonably assured, which is generally upon receipt of the cash. The Company's arrangements are generally non-cancellable, though clients typically have the right to terminate their agreement for cause if the Company materially fails to perform.

Cell manufacturing services are generally distinct arrangements whereby the Company is paid for time and materials or for fixed monthly amounts. Revenue is recognized when efforts are expended or contractual terms have been met.

Some client agreements include multiple elements, comprised of cell process development and cell manufacturing services. The Company believes that cell process development and cell manufacturing services each have stand-alone value because these services can be provided separately by other companies. In accordance with ASC Update No. 2009-13, "Revenue Recognition (Topic 605): Multiple-Deliverable Revenue Arrangements," The Company (1) separates deliverables into separate units of accounting when deliverables are sold in a bundled arrangement and (2) allocates the arrangement's consideration to each unit in the arrangement based on its relative selling price.

Clinical Services Reimbursements: The Company separately charges the customers for the expenses associated with certain consumable resources (reimbursable expenses) that are specified in each clinical services contract. On a monthly basis, the Company

bills customers for reimbursable expenses and immediately recognizes these billings as revenue, as the revenue is deemed earned as reimbursable expenses are incurred. For the years ended December 31, 2012 and 2011, clinical services reimbursements were $3.5 million and $2.6 million, respectively.

Processing and Storage Services: The Company recognizes revenue related to the collection and cryopreservation of cord blood and autologous adult stem cells when the cryopreservation process is completed which is approximately twenty-four hours after cells have been collected. Revenue related to advance payments of storage fees is recognized ratably over the period covered by the advance payments.

Research and Development Costs

Research and development ("R&D") expenses include salaries, benefits, and other headcount related costs, clinical trial and related clinical manufacturing costs, contract and other outside service fees including sponsored research agreements, and facilities and overhead costs. The Company expenses the costs associated with research and development activities when incurred.

To further drive the Company's cell therapy initiatives, the Company will continue targeting key governmental agencies, congressional committees and not-for-profit organizations to contribute funds for the Company's research and development programs. The Company accounts for government grants as a deduction to the related expense in research and development operating expenses when earned.

New Accounting Pronouncements

In July 2012, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update 2012-02 ("ASU 2012-02"), Intangibles - Goodwill and Other (Topic 350) - Testing Indefinite-Lived Intangible Assets for Impairment. The guidance is intended to simplify impairment testing of indefinite-lived intangible assets such as In-Process Research and Development by first assessing qualitative factors to determine whether it is "more likely than not" that the fair value of an asset is less than its carrying amount as a basis for determining whether it is necessary to perform a quantitative impairment test. The more-likely-than-not threshold is defined as having a likelihood of more than 50%. This guidance is effective for annual and interim tests performed for fiscal years beginning after September 15, 2012. The adoption of this guidance is not expected to have a significant impact on the Company's financial position or results of operations.

In October 2012, the FASB issued Accounting Standards Update 2012-04 ("ASU 2012-04"), Technical Corrections and Improvements. The amendments in this update have covered a wide range of topics and included technical corrections and improvements to the Accounting Standards Codification. The amendments in ASU 2012-04 will be effective for interim and annual reporting periods beginning after December 15, 2012. The adoption of this guidance is not expected to have a significant impact on the Company's financial position or results of operations.

Note 3 – Acquisitions

Amorcyte Acquisition

On October 17, 2011 (the "Closing Date"), Amo Acquisition Company I, Inc. ("Subco"), a newly-formed wholly-owned subsidiary of NeoStem, merged (the "Amorcyte Merger") with and into Amorcyte, Inc., a Delaware corporation ("Amorcyte"), in accordance with the terms of the Agreement and Plan of Merger, dated as of July 13, 2011 (the "Amorcyte Merger Agreement"), among NeoStem, Amorcyte, Subco, and Amo Acquisition Company II, LLC ("Subco II"). As a result of the consummation of the Amorcyte Merger, Amorcyte is now a wholly-owned subsidiary of NeoStem. Amorcyte is a development stage cell therapy company focusing on novel treatments for cardiovascular disease.

Pursuant to the terms of the Amorcyte Merger Agreement, all of the shares of Amorcyte common stock and Amorcyte Series A Preferred Stock and all options and warrants to acquire equity of Amorcyte, issued and outstanding immediately prior to the effective time of the Amorcyte Merger (the "Effective Time"), were by virtue of the Amorcyte Merger cancelled and converted into the right to receive, in the aggregate:

i. 5,843,483 shares of NeoStem Common Stock (reflecting certain adjustments taken at the closing, and subject to further adjustment following the closing in accordance with the Amorcyte Merger Agreement) (the "Base Stock Consideration");

ii. up to 4,092,768 shares of NeoStem Common Stock (the "Contingent Shares", and together with the Base Stock Consideration, the "Stock Consideration"), which Contingent Shares will be issued only if certain specified business milestones (described below) are accomplished;

iii. warrants to purchase 1,881,008 shares of NeoStem Common Stock exercisable over a seven (7) year period at an exercise price of $1.466 per share (the "Warrants") (such Warrants are redeemable in certain circumstances, and transfer of any shares of NeoStem Common Stock issued upon exercise of the Warrants was restricted until one year after the Closing Date); and

iv. earn out payments equal to 10% of the net sales of Amorcyte's lead product candidate AMR-001 (in the event of and following the date of first commercial sale of AMR-001), provided that in the event NeoStem sublicenses AMR-001, the applicable earn out payment will be equal to 30% of any sublicensing fees, and provided further that NeoStem will be entitled to recover direct out-of-pocket clinical development costs not previously paid or reimbursed and any costs, expenses, liabilities and settlement amounts arising out of claims of patent infringement or otherwise challenging Amorcyte's right to use intellectual property, by reducing any earn out payments due by 50% until such costs have been recouped in full (the "Earn Out Payments").

In accordance with the Amorcyte Merger Agreement, NeoStem deposited into an escrow account with the escrow agent (who is initially NeoStem's transfer agent), 5,843,483 shares of NeoStem Common Stock for eventual distribution to the former Amorcyte stockholders (subject to further adjustment following the closing, including in connection with any indemnification claims of NeoStem, all in accordance with the Amorcyte Merger Agreement).

The Contingent Shares will be issued to the former Amorcyte stockholders only if certain business milestones are achieved, as follows:

- One-third of the Contingent Shares (1,364,256 shares) will be issued upon (a) the completion of Phase 2 clinical trial for Amorcyte's product candidate AMR-001 and (b) issuance of a statistically significant analysis demonstrating satisfaction of the primary clinical end points from the Phase 2 clinical trial, which primary clinical endpoints are described in the Phase 2 clinical trial protocol submitted by Amorcyte to the FDA on July 5, 2011.

- One-third of the Contingent Shares will be issued following a Type B End of Phase 2/Pre-Phase 3 meeting with the FDA wherein AMR-001 is acknowledged in writing by the FDA to be ready for Phase 3.

- The remaining one-third of the Contingent Shares will be issued upon the first dosing of the first patient in the pivotal Phase 3 clinical study for AMR-001.

The merger consideration described above will be distributed to Amorcyte's former securityholders consistent with applicable liquidation preferences contained in Amorcyte's governing documents, all in accordance with the Amorcyte Merger Agreement.

The fair value of the net assets acquired in the Amorcyte Merger was $4.4 million. The fair value of the consideration paid by NeoStem was valued at $8.5 million, resulting in the recognition of goodwill in the amount of $4.1 million. The consideration paid was comprised of equity issued and the earn out payments. The fair value of the equities issued by NeoStem included 5,843,483 shares of NeoStem Common stock valued at $3.7 million, up to 4,092,768 Contingent Shares valued at $940,000, and NeoStem warrants to purchase up to 1,881,008 shares valued at $673,600. The right to receive the Contingent Shares is contingent upon the accomplishment of a certain milestones. Such contingent consideration has been classified as equity and will not be subject to remeasurement. The fair value of the earn out payments was valued at $3.1 million. The earn out is contingent upon future net sales upon the first commercial sale of AMR-001. Such contingent consideration has been classified as a liability and will be subject to remeasurement. The contingent consideration is based on earn out payments equal to 10% of the net sales of Amorcyte's lead product candidate AMR-001 (in the event of and following the date of first commercial sale of AMR-001). The Company will be entitled to recover direct out-of-pocket clinical development costs not previously paid or reimbursed and any costs, expenses, liabilities and settlement amounts arising out of claims of patent infringement or otherwise challenging Amorcyte's right to use intellectual property, by reducing any earn out payments due by 50% until such costs have been recouped in full (the "Earn Out Payments").

The fair value of assets acquired and liabilities assumed on October 17, 2011 is as follows (in thousands):

Cash	$	92.9
Prepaid Expenses		178.2
In Process R&D		9,400.0
Goodwill		4,104.5
Accounts Payable & Accrued Liabilities		1,177.1
Deferred Tax Liability		3,774.7
Amount Due Related Party		340.4

For the portion of 2011 following the acquisition (October 17-December 31, 2011), NeoStem recorded a net loss of approximately $0.9 million or $0.01 basic and diluted loss per share attributable to Amorcyte.

PCT Acquisition

On January 19, 2011, (the "Closing Date"), NBS Acquisition Company LLC ("Subco"), a newly formed wholly-owned subsidiary of NeoStem, merged (the "PCT Merger") with and into Progenitor Cell Therapy, LLC, a Delaware limited liability company ("PCT"), with PCT as the surviving entity, in accordance with the terms of the Agreement and Plan of Merger, dated September 23, 2010 (the "PCT Merger Agreement"), among NeoStem, PCT and Subco. As a result of the consummation of the PCT Merger, NeoStem acquired all of the membership interests of PCT, and PCT is now a wholly-owned subsidiary of NeoStem.

Pursuant to the terms of the PCT Merger Agreement, all of the membership interests of PCT outstanding immediately prior to the effective time of the PCT Merger were converted into the right to receive, in the aggregate, (i) 10,600,000 shares of the common stock, par value $0.001 per share, of NeoStem (the "NeoStem Common Stock") (reflecting certain final price adjustments agreed to at the closing) and (ii) warrants to purchase an aggregate 3,000,000 shares of NeoStem Common Stock as follows:

i. common stock purchase warrants to purchase one million (1,000,000) shares of NeoStem Common Stock, exercisable over a seven year period at an exercise price of $7.00 per share (the "$7.00 Warrants"), and which will vest only if a specified business milestone (described in the PCT Merger Agreement) is accomplished within three (3) years of the Closing Date of the PCT Merger; and

ii. common stock purchase warrants to purchase one million (1,000,000) shares of NeoStem Common Stock exercisable over a seven year term at an exercise price of $3.00 per share (the "$3.00 Warrants"); and

iii. common stock purchase warrants to purchase one million (1,000,000) shares of NeoStem Common Stock exercisable over a seven year period at an exercise price of $5.00 per share (the "$5.00 Warrants" and, collectively with the $7.00 Warrants and the $3.00 Warrants, the "Warrants").

The Warrants are redeemable in certain circumstances. Transfer of the shares issuable upon exercise of the Warrants was restricted until the one year anniversary of the Closing Date.

The fair value of the net assets acquired in the PCT Merger was $10.2 million. The fair value of the equity issued as consideration by NeoStem was valued at $17.2 million resulting in the recognition of goodwill in the amount of $7.0 million. The fair value of the equities issued by NeoStem included 10,600,000 shares of NeoStem Common stock valued at $15.9 million and NeoStem warrants to purchase up to 3,000,000 shares valued at $1.3 million. A portion of the consideration paid is contingent upon the accomplishment of a certain milestone for the $7.00 Warrants. Such contingent consideration totaled $70,000, and was determined using a Black-Scholes valuation and probability of success factor, and has been classified as equity and will not be subject to remeasurement. The goodwill that has been created by this acquisition is reflective of values and opportunities of utilizing PCT's cell collection, processing and storage (cell banking) resources and production capacities, as mentioned above.

The fair value of assets acquired and liabilities assumed on January 19, 2011 is as follows (in thousands):

Cash	$ 227.9
Accounts Receivable	451.4
Other Current Assets	166.2
Property, Plant & Equipment	11,755.0
Intangibles	5,700.0
Goodwill	7,013.5
Other Assets	581.9
Accounts Payable	1,370.9
Other Liabilities	540.5
Amount Due Related Party	3,000.0
Mortgages Payable	3,784.6

For the portion of 2011 following the acquisition (January 19-December 31, 2011), NeoStem recorded $9.7 million in revenues and a net loss of approximately $3.7 million or $0.04 basic and diluted loss per share attributable to PCT.

Amorcyte and PCT Combined Pro Forma Financial Information

The following supplemental table presents unaudited consolidated pro forma financial information as if the closing of the acquisitions of Amorcyte and PCT had occurred on January 1, 2010 (in thousands, except per share amounts):

	Year Ended December 31,	
	2011 (As Reported)	2011 (Pro Forma)
Revenues	$ 10,050	$ 10,322
Cost of revenues	8,647	8,923
Gross profit	1,403	1,400
Research and development	7,721	7,964
Selling, general, and administrative	27,687	29,473
Operating loss	(34,005)	(36,037)
Other expense, net	(562)	(548)
Net loss from continuing operations	(34,566)	(36,586)
Loss from discontinued operations - net	(22,017)	(22,017)
Net loss	(56,583)	(58,602)
Less – net income attributable to noncontrolling interests	(9,448)	(9,448)
Preferred dividends	640	640
Net loss attributable to NeoStem, Inc. common stockholders	$ (47,774)	$ (49,794)
Basic and diluted loss per share	$ (0.54)	$ (0.53)
Weighted average common shares outstanding	88,599	93,793

The unaudited supplemental pro forma financial information should not be considered indicative of the results that would have occurred if the acquisitions of Amorcyte and PCT had been consummated on January 1, 2010, nor are they indicative of future results.

Athelos

Athelos Corporation (“Athelos”) is a subsidiary of PCT pursuing the development of T regulatory cells (TRegs) as a therapeutic to treat disorders of the immune system. Pursuant to a Stock Purchase and Assignment Agreement dated March 28, 2011, Athelos issued approximately 20% of its shares to Becton Dickinson and Company (“BD”) in exchange for the rights to certain intellectual property relating to TRegs that BD owned. PCT valued BD’s share of the contributed intellectual properties at $1,150,000. The

acquisition of contributed intellectual properties did not qualify as a business combination, did not reach technological feasibility, and did not have any future alternative use. As a result, the Company characterized this acquired intangible asset as in-process research and development as expense within research and development expense.

Note 4 – Cash and Cash Equivalents

As of December 31, 2012 and December 31, 2011, the Company had cash and cash equivalents of approximately $13.7 million and $3.9 million, respectively, including bank deposits of approximately $0.8 million and $0.8 million, respectively, covered by the Federal Deposit Insurance Corporation.

Note 5 – Inventories

Inventories, representing work in process for costs incurred on projects at PCT that have not been completed, were $1.1 million and $0.6 million as of December 31, 2012 and December 31, 2011, respectively. The Company also has deferred revenue of approximately $1.2 million and $1.0 million of billings received as of December 31, 2012 and December 31, 2011, respectively, related to these contracts.

Note 6 – Property, Plant and Equipment

Property, plant, and equipment consisted of the following (in thousands):

	December 31,	
	2012	2011
Building and improvements	$ 9,897.8	$ 9,874.0
Machinery and equipment	39.5	17.9
Lab equipment	1,800.6	1,559.1
Furniture and fixtures	683.7	632.4
Software	99.5	98.3
Leasehold improvements	654.5	702.0
Property, plant and equipment, gross	13,175.6	12,883.7
Accumulated depreciation	(2,022.5)	(1,267.6)
Property, plant and equipment, net	$ 11,153.1	$ 11,616.1

The Company's results included depreciation expense of approximately $1.0 million and $0.9 million for the years ended December 31, 2012 and December 31, 2011, respectively.

Note 7 – Loss Per Share

For the years ended December 31, 2012 and 2011, the Company incurred net losses and therefore no common stock equivalents were utilized in the calculation of loss per share. At December 31, 2012 and 2011, the Company excluded the following potentially dilutive securities:

	December 31,	
	2012	2011
Stock Options	21,686,680	17,143,505
Warrants	55,287,611	37,389,825
Series E Preferred Stock, Common stock equivalents	—	3,989,669
Restricted Shares	342,500	976,668

Note 8 – Fair Value Measurements

Fair value of financial assets and liabilities that are being measured and reported are defined as the exchange price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants in the principal

market at the measurement date (exit price). The Company is required to classify fair value measurements in one of the following categories:

Level 1 inputs are defined as quoted prices (unadjusted) in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date.

Level 2 inputs are defined as inputs other than quoted prices included within Level 1 that are observable for the assets or liabilities, either directly or indirectly.

Level 3 inputs are defined as unobservable inputs for the assets or liabilities. Financial assets and liabilities are classified based on the lowest level of input that is significant to the fair value measurement. The Company's assessment of the significance of a particular input to the fair value measurement requires judgment, and may affect the valuation of the fair value of assets and liabilities and their placement within the fair value hierarchy levels.

The Company determined the fair value of funds invested in money market investments, which are considered trading securities, to be level 1 inputs measured by quoted prices of the securities in active markets. The money market investments are included within prepaids and other current assets on the balance sheet as of December 31, 2011. The Company determined the fair value of funds invested in money market funds to be level 1. The Company determined the fair value of the embedded derivative liabilities and warrant derivative liabilities to be level 3 inputs. These inputs require material subjectivity because value is derived through the use of a lattice model that values the derivatives based on probability weighted discounted cash flows. The following table sets forth by level within the fair value hierarchy the Company's financial assets and liabilities that were accounted for at fair value on a recurring basis as of December 31, 2012, and December 31, 2011 (in thousands):

	December 31, 2012		
	Fair Value Measurements Using Fair Value Hierarchy		
	Level 1	Level 2	Level 3
Warrant derivative liabilities	$ —	$ —	$ 101.2
Contingent consideration	—	—	7,550.0

	December 31, 2011		
	Fair Value Measurements Using Fair Value Hierarchy		
	Level 1	Level 2	Level 3
Money market investments	$ 2,497.4	$ —	$ —
Embedded derivative liabilities	—	—	391.7
Warrant derivative liabilities	—	—	82.7
Contingent consideration	—	—	3,130.0

Contingent consideration was recognized on October 17, 2011 in connection with the Company's acquisition of Amorcyte (see Note 3). The fair value measurement of the contingent consideration obligations is determined using Level 3 inputs. The fair value of contingent consideration obligations is based on a discounted cash flow model using a probability-weighted income approach. The measurement is based upon unobservable inputs supported by little or no market activity based on our own assumptions and experience. The value of our contingent consideration was initially calculated using a discount rate of 30%. We base the timing to complete the development and approval of this product on the current development stage of the product and the inherent difficulties and uncertainties in developing a product candidate, such as obtaining U.S. Food and Drug Administration (FDA) and other regulatory approvals. In determining the probability of regulatory approval and commercial success, we utilize data regarding similar milestone events from several sources, including industry studies and our own experience. These fair value measurements represent Level 3 measurements as they are based on significant inputs not observable in the market. Significant judgment is employed in determining the appropriateness of these assumptions as of the acquisition date and for each subsequent period. Accordingly, changes in assumptions could have a material impact on the amount of contingent consideration expense we record in any given period. Changes in the fair value of the contingent consideration obligations are recorded in our consolidated statement of operations. The contingent consideration fair value increased from $3.1 million as of December 31, 2011 to $7.6 million as of December 31, 2012. The change in estimated fair value is based on the Company's update of the discounted cash flow model using a probability-weighted income approach, taking into account a 27% discount rate, revised assumptions of the

market opportunity and development costs, and the impact of the time progression through the Phase 2 clinical trial from December 31, 2011 to December 31, 2012.

For those financial instruments with significant Level 3 inputs, the following table summarizes the activity for the year ended December 31, 2012 by type of instrument (in thousands):

	Year Ended December 31, 2012		
	Embedded Derivatives	Warrants	Contingent Consideration
Beginning liability balance	$ 391.7	$ 82.7	$ 3,130.0
Change in fair value recorded in earnings	(391.7)	18.5	4,420.0
Ending liability balance	$ —	$ 101.2	$ 7,550.0

For those financial instruments with significant Level 3 inputs, the following table summarizes the activity for the year ended December 31, 2011 by type of instrument (in thousands):

	Year Ended December 31, 2011		
	Embedded Derivatives	Warrants	Contingent Consideration
Beginning liability balance	$ 2,281.8	$ 289.6	$ —
Change in fair value recorded in earnings	(1,890.1)	(206.9)	3,130.0
Ending liability balance	$ 391.7	$ 82.7	$ 3,130.0

Some of the Company’s financial instruments are not measured at fair value on a recurring basis, but are recorded at amounts that approximate fair value due to their liquid or short-term nature, such as cash and cash equivalents, accounts receivable, accounts payable, notes payable and bank loans.

Note 9 – Goodwill and Other Intangible Assets

The Company's goodwill was $11.1 million as of December 31, 2012 and December 31, 2011, respectively.

The Company's intangible assets and related accumulated amortization as of December 31, 2012 and December 31, 2011 consisted of the following (in thousands):

		December 31, 2012			December 31, 2011		
	Useful Life	Gross	Accumulated Amortization	Net	Gross	Accumulated Amortization	Net
Customer list	10 years	$ 1,000.0	$ (195.1)	$ 804.9	$ 1,000.0	$ (95.1)	$ 904.9
Manufacturing technology	10 years	3,900.0	(760.9)	3,139.1	3,900.0	(370.9)	3,529.1
Tradename	10 years	800.0	(156.1)	643.9	800.0	(76.2)	723.8
In process R&D	Indefinite	9,400.0	—	9,400.0	9,400.0	—	9,400.0
VSEL patent rights	19 years	669.0	(176.1)	492.9	669.0	(140.8)	528.2
Total Intangible Assets		$ 15,769.0	$ (1,288.2)	$ 14,480.8	$ 15,769.0	$ (683.0)	$ 15,086.0

Total intangible amortization expense was classified in the operating expense categories for the periods included below as follows (in thousands):

	Year Ended December 31,	
	2012	2011
Cost of revenue	$ 390.0	$ 370.9
Research and development	35.2	35.2
Selling, general and administrative	180.0	171.2
Total	$ 605.2	$ 577.3

Estimated intangible amortization expense on an annual basis for the succeeding five years is as follow (in thousands):

2013	$ 605.2
2014	605.2
2015	605.2
2016	605.2
2017	605.2
Thereafter	11,454.8
	$ 14,480.8

Note 10 – Accrued Liabilities

Accrued liabilities were as follow (in thousands):

	December 31,	
	2012	2011
Salaries, employee benefits and related taxes	$ 1,597.2	$ 365.7
Professional fees	606.6	240.0
Other	81.0	484.5
	$ 2,284.8	$ 1,090.2

Note 11 – Debt

Notes Payable

As of December 31, 2012 and December 31, 2011, the Company had notes payable of approximately $374,100 and $148,100, respectively. The notes relate to certain insurance policies and equipment financings, require monthly payments, and mature within one to three years.

Mortgages Payable

On October 31, 2007, PCT issued a note to borrow $3,120,000 (the “Note”) in connection with its $3,818,500 purchase of condominium units in an existing building in Allendale, New Jersey (the “Property”) that PCT uses as a laboratory and stem cell processing facility. The Note is payable in 239 consecutive monthly payments of principal and interest, based on a 20 year amortization schedule; and one final payment of all outstanding principal plus accrued interest then due. The current monthly installment is $20,766, which includes interest at an initial rate of 5.00%; the interest rate and monthly installments payments are subject to adjustment on October 1, 2017. On that date, upon prior written notice, the lender has the option to declare the entire outstanding principal balance, together with all outstanding interest, due and payable in full. The Note is secured by substantially all of the assets of PCT, including a first mortgage on the Property and assignment of an amount approximately equal to eighteen months debt service held in escrow. The Note matures on October 1, 2027 if not called by the lender on October 1, 2017. The note is subject to certain debt service coverage and total debt to tangible net worth financial covenant ratios measured semi-annually. PCT was not in compliance with such covenants at the measurement date of December 31, 2011, June 30, 2012, and December 31, 2012, and obtained a covenant waiver letter from the lender for each period. The outstanding balance was approximately $2.6 million and $2.7 million at December 31, 2012 and December 31, 2011, respectively, of which $120,500 is payable within twelve months as of December 31, 2012. The mortgage is classified as a current liability.

On December 6, 2010 PCT Allendale, a wholly-owned subsidiary of PCT, entered into a note for a second mortgage in the amount of $1 million on the Allendale Property with TD Bank, N.A. This loan is guaranteed by PCT, DomaniCell (a wholly-owned subsidiary of PCT, now known as NeoStem Family Storage, LLC), Northern New Jersey Cancer Associates ("NNJCA") and certain partners of NNJCA and is subject to an annual financial covenant starting December 31, 2011. PCT was not in compliance with such covenants at the measurement date of December 31, 2012 and 2011, respectively, and obtained a covenant waiver letter from the lender for each period. The loan is for 124 months at a fixed rate of 6% for the first 64 months. The loan is callable for a certain period prior to the interest reset date. The outstanding balance was approximately $0.8 million and $0.9 million at December 31, 2012 and December 31, 2011, respectively, of which $81,300 is payable within twelve months as of December 31, 2012. The mortgage is classified as a current liability.

Note 12 – Preferred Stock

Convertible Redeemable Series E 7% Preferred Stock

On November 19, 2010, the Company sold 10,582,011 Preferred Offering Units consisting of (i) one share ("Preferred Share") of Series E 7% Senior Convertible Preferred Stock (the "Series E Preferred Stock"), par value $0.01 per share, of the Company, (ii) a warrant to purchase 0.25 of a share of Common Stock (consisting of at issuance an aggregate of 1,322,486 warrants, adjusted to an aggregate of 1,769,588 as of December 31, 2012); and (iii) 0.0155 of a share of Common Stock (an aggregate of 164,418 common shares). Each Preferred Offering Unit was priced at $0.945 and total gross and net proceeds received by the Company were $10,000,000 and $8,876,700, respectively.

Monthly dividend and principal payments began on March 21, 2011, and continued on the 19th of each month thereafter with the final payment due on May 20, 2012. On October 25, 2012, the Company completed the redemption of all 2,351,558 outstanding shares of its Series E Preferred Stock, for an aggregate cash redemption price of approximately $3.4 million, $2.5 million of which was funded by money placed into escrow when the Series E Preferred stock was issued in November 2010. The cash redemption included the repayment of $3.1 million outstanding principal, an additional early redemption premium of $235,000, which was in dividends, and $36,000 of accrued interest.

Dividends on the Preferred Shares had accrued at a rate of 7% per annum and were payable monthly in arrears. Payments were made in cash or, upon notification to the holders, in shares of Company common stock, provided certain conditions were satisfied or holders of Preferred Shares agree to waive the conditions for that payment period. Through the October 25, 2012 redemption date, the Company had issued 7,950,107 shares of Company common stock in payment of monthly dividends and principal.

The characteristics of the Series E Preferred Stock require that this instrument be treated as mezzanine equity. The Company bifurcated the fair value of the embedded conversion options and redemption options from the preferred stock since the conversion options and certain redemption options were determined to not be clearly and closely related to the Series E Preferred Stock and recorded the fair value of the embedded conversion and redemption options as long-term derivative liabilities. The Company also recorded the fair value of the warrants as a long-term derivative liability. The fair value of the preferred stock (net of issuance costs and discounts) and embedded derivatives as of December 31, 2011 were approximately $4.8 million and $391,700, respectively. The fair values of the warrant derivatives as of December 31, 2012 and 2011 were $101,200 and $82,700, respectively. The Company reports changes in the fair value of the embedded derivatives and warrant derivative in earnings within other income (expense), net (see Note 8).

Note 13 – Stockholders' Equity

Equity Plans

The Company's 2003 Equity Participation Plan (the "2003 Equity Plan") permits the grant of share options and shares to its employees, directors, consultants and advisors for up to 2,500,000 shares of Common Stock as stock-based compensation. The 2009 Equity Compensation Plan (the "2009 Equity Plan") makes up to 33,950,000 shares of Common Stock of the Company (as of December 31, 2012) available for issuance to employees, consultants, advisors and directors of the Company and its subsidiaries pursuant to incentive or non-statutory stock options, restricted and unrestricted stock awards and stock appreciation rights.

All stock options under the 2003 Equity Plan and the 2009 Equity Plan are granted at the fair market value of the Common Stock at the grant date. Stock options vest either on the date of grant, ratably over a period determined at time of grant, or upon the accomplishment of specified business milestones, and generally expire 3, 5 or 10 years from the grant date depending on the status of the recipient as a consultant, advisor, employee or director of the Company.

The 2009 Equity Plan was originally adopted by the stockholders of the Company on May 8, 2009. On October 29, 2009, the stockholders of the Company approved an amendment to the 2009 Equity Plan to increase the number of shares of common stock available for issuance thereunder from 3,800,000 to 9,750,000. At the 2010 Annual Meeting of Stockholders of the Company held on June 2, 2010, the stockholders approved an amendment to increase this number to 13,750,000. At a Special Meeting of Stockholders of the Company held on January 18, 2011, the stockholders approved an amendment to increase this number to 17,750,000. At the 2011 Annual Meeting of Stockholders of the Company held on October 14, 2011, the stockholders approved an amendment to increase this number to 23,750,000. At the 2012 Annual Meeting of Stockholders of the Company held on October 5, 2012, the stockholders approved an amendment to (i) merge the 5,700,000 shares reserved for issuance under the Company's 2009 Non-U.S. Based Equity Compensation Plan (the "Non-U.S. Plan") with and into the 2009 Equity Plan, and (ii) increase by 4,500,000 the aggregate number of shares authorized for issuance under the 2009 Equity Plan (the “2009 Amended & Restated Equity Plan”). The Non-U.S. Plan was originally adopted by the stockholders of the Company on October 29, 2009, and was subsequently amended on June 2, 2010 to increase the shares from 4,700,000 to 8,700,000, and on October 14, 2011 to decrease the shares to 5,700,000, prior to the merger into the 2009 Equity Plan.

The number of remaining shares authorized to be issued under the various equity plans are as follows:

	2003 Equity Plan	2009 Equity Plan
Shares Authorized for Issuance	2,500,000	33,950,000
Outstanding Stock Options	(1,390,300)	(20,296,380)
Exercised Stock Options	(92,500)	(5,000)
Restricted stock or equity grants issued under Equity Plans	(889,939)	(4,606,482)
Total common shares remaining to be issued under the Equity Plans	127,261	9,042,138

Equity Issuances

In the spring of 2012, the Company completed an underwritten offering of 15,000,000 units at a purchase price of $0.40 per unit, with each unit consisting of one share of Common Stock and a five year warrant to purchase one share of Common Stock at an exercise price of $0.51 per share (the “ March 2012 Offering”). The Company received gross proceeds of $6,000,000, prior to deducting underwriting discounts and offering expenses payable by the Company, for net proceeds of approximately $5,297,000. In April 2012, the underwriters in the March 2012 Offering exercised their over-allotment option for an additional 2,000,000 units. The Company received additional gross proceeds of $800,000, prior to deducting underwriting discounts, for net proceeds of approximately $744,000. Additionally in April 2012, the warrants issued in connection with the offering initially exercisable beginning on September 30, 2012, were accelerated and became exercisable immediately.

In September 2011, the Company entered into a Common Stock Purchase Agreement (the “Purchase Agreement”) with Aspire Capital Fund, LLC, an Illinois limited liability company (“Aspire Capital”), which provides that, subject to certain terms and conditions, Aspire Capital is committed to purchase up to an aggregate of $20.0 million worth of shares of the Company’s common stock over the 24-month term of the Purchase Agreement. At the Company’s discretion, it may present Aspire Capital with purchase notices under the Purchase Agreement from time to time, to purchase the Company’s Common Stock, provided certain price and other requirements are met. The purchase price for the shares of stock will be based upon one of two formulas set forth in the Purchase Agreement depending on the type of purchase notice we submit to Aspire Capital from time to time, and will be based on market prices of the Company’s common stock (in the case of regular purchases) or a discount of 5% applied to volume weighted average prices (in the case of VWAP purchases), in each case as determined by parameters defined in the agreement. The Company and Aspire Capital shall not effect any sales under the Purchase Agreement on any date where the closing sales price is less than 75% of the closing sales price on the business day immediately preceding the date of the Purchase Agreement. The Company’s net proceeds will depend on the purchase price and the frequency of the Company’s sales of shares to Aspire Capital; provided, however, that the maximum aggregate proceeds from sales of shares is $20.0 million. The Company’s delivery of purchase notices will be made subject to market conditions, in light of the Company’s capital needs from time to time and under the limitations contained in the Purchase Agreement. As consideration for entering into the Purchase Agreement, effective September 30, 2011, we issued 990,099 shares of our Common Stock to Aspire Capital (the “Commitment Shares”). The issuance of shares of common stock to Aspire Capital pursuant to the Purchase Agreement, including the Commitment Shares, and the sale of those shares from time to time by Aspire Capital to the public, are covered by an effective shelf registration statement on Form S-3.

In August 2012, the Company and Aspire entered into an amendment to the Purchase Agreement dated September 28, 2011, providing for an extension of the 24-month term of the Purchase Agreement until September 30, 2015. Pursuant to the amendment, we agreed to issue to Aspire a five-year warrant to purchase up to 1,612,903 shares of our common stock at an exercise price of

$0.60 per share (the closing price of our common stock on the date the amendment was executed). In the fourth quarter of 2012, the Company issued 5.3 million shares of Common Stock under the provisions of its equity line of credit with Aspire for gross proceeds of approximately $3.3 million. As of December 31, 2012, the remaining amount available to the Company under the Purchase Agreement was $16.7 million.

In 2012, the Company issued securities in a number of private placements of common stock or units consisting of common stock and warrants. In the aggregate, the Company raised gross proceeds of approximately $7.1 million in private placements of an aggregate of approximately 13.4 million shares of Common Stock and 8.9 million five year warrants at exercise prices ranging from $.51 to $.74. The warrants have been classified as equity and will not be subject to remeasurement.

In 2011, the Company raised an aggregate of approximately $6.3 million in a series of private placements consummated from March 2011 to July 2011 pursuant to which 18 persons and entities acquired an aggregate of 4,938,125 shares of Common Stock (purchase price of $1.28 per share). The investors included Steven. S. Myers (one of the Company's directors) (who purchased 390,625 shares) and Dr. Andrew L. Pecora (the Chief Medical Officer of the Company's subsidiary PCT, who is now the Chief Medical Officer and a director of NeoStem, and the Chief Scientific Officer of Amorcyte) (who purchased 78,125 shares).

In July 2011, the Company completed an underwritten offering of 13,750,000 units at a purchase price of $1.20 per unit, with each unit consisting of one share of Common Stock and a five year warrant to purchase 0.75 of a share of Common Stock at an exercise price of $1.45 per share (the "Offering"). The Company received gross proceeds of $16.5 million, prior to deducting underwriting discounts and offering expenses payable by the Company, for net proceeds of approximately $14.8 million.

Warrant Exercises

To raise capital on terms that we deemed favorable, during the year ended December 31, 2012, the Board authorized certain inducements to warrant holders to exercise outstanding common stock purchase warrants significantly before their expiration dates. The Company determined in each instance that such inducements were modifications of equity instruments, and an incremental fair value of the inducement was determined using the Black-Scholes option pricing model.

In July 2012, warrant holders from the March 2012 Offering exercised an aggregate of 3,150,344 warrants at an exercise price of $0.51 per share for gross proceeds of approximately $1.6 million.

In July 2012, warrant holders exercised an aggregate of 2,808,140 warrants at an exercise price of $0.51 per share for gross proceeds of approximately $1.4 million. As an inducement to exercise, we issued to each exercising holder a new warrant to purchase the identical number of shares of our Common Stock as had been exercised subject to substantially the same terms as the exercised warrant, except that the per share exercise price of each new warrant is between $0.66 and $0.69, the closing price of our Common Stock on the date the old warrant was exercised. The incremental fair value of the inducement recorded in 2012 was $0.4 million.

In August 2012, a warrant holder exercised warrants to purchase 2,100,000 shares of the Company' common stock at an exercise price of $0.51 per share, for gross proceeds to the Company of approximately $1.1 million. The warrants were originally issued in 2009 with an exercise price of $2.50 per share. The incremental fair value of the inducement recorded in 2012 was $0.2 million.

In August 2012, a warrant holder exercised warrants to purchase 344,825 shares of common stock at $1.85, and 300,000 shares of common stock at $1.45 per share, respectively, for gross proceeds to the Company of approximately $1.1 million. Since the exercise prices of the warrants were significantly above the Company's stock price, the Company issued the warrant holder 1,458,952 shares of the Company's common stock as an inducement to exercise. The incremental fair value of the inducement recorded in 2012 was $0.4 million.

In September through November 2012, warrant holders exercised an aggregate of 2,147,873 warrants at an exercise price of $0.51 per share for gross proceeds of approximately $1.1 million. As an inducement to exercise, we paid certain warrant holders $0.03 per share upon each exercise. The incremental fair value of the inducement recorded in 2012 was $0.

In October 2012, a warrant holder exercised warrants to purchase 225,000 shares of common stock at an exercise price of $1.45 per share for gross proceeds of approximately $0.3 million. As an inducement to exercise, we paid the warrant holder $0.73 per share upon each exercise. The incremental fair value of the inducement recorded in 2012 was $0.

Stock Options and Warrants

The following table summarizes the activity for stock options and warrants for the year ended December 31, 2012:

	Stock Options		Warrants	
	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price
Outstanding at December 31, 2010	13,032,214	$1.66	21,843,507	$2.62
Changes during the Year:				
Granted	8,697,600	$1.50	15,993,947	$2.09
Exercised	(5,000)	$1.42	—	—
Forfeited	(1,217,189)	$1.96	(447,629)	$6.18
Expired	(3,364,120)	$1.82	—	—
Outstanding at December 31, 2011	17,143,505	$1.71	37,389,825	$2.35
Changes during the Year:				
Granted	7,787,529	$0.50	31,082,615	$0.57
Exercised	—	—	(11,076,182)	$0.60
Forfeited	(3,020,209)	$1.66	(790,003)	$2.17
Expired	(224,145)	$1.88	(1,318,644)	$4.60
Outstanding at December 31, 2012	21,686,680	$1.29	55,287,611	$1.57

During the years ended December 31, 2012 and 2011, the Company issued warrants for services as follows ($ in thousands, except share data):

	Year Ended December 31,	
	2012	2011
Number of Common Stock Purchase Warrants Issued	419,690	670,000
Value of Common Stock Purchase Warrants Issued	$ 172.2	$ 495.1

Restricted Stock

During the years ended December 31, 2012 and 2011, the Company issued restricted stock for services as follows ($ in thousands, except share data):

	Year Ended December 31,	
	2012	2011
Number of Restricted Stock Issued	2,295,533	3,467,451
Value of Restricted Stock Issued	$ 1,325.1	$ 3,580.6

The weighted average estimated fair value of restricted stock issued for services in the years ended December 31, 2012 and 2011 was $0.58 and $1.03 per share, respectively. The fair value of the restricted stock was determined using the Company's closing stock price on the date of issuance. The vesting terms of restricted stock issuances are generally within one year.

Note 14 – Share-Based Compensation

Share-based Compensation

We utilize share-based compensation in the form of stock options, warrants and restricted stock. The following table summarizes the components of share-based compensation expense for the years ended December 31, 2012 and 2011 (in thousands):

	Year Ended December 31,	
	2012	2011
Cost of goods sold	$ 195.0	$ 96.9
Research and development	432.9	867.8
Selling, general and administrative	6,084.6	9,301.3
Total share-based compensation expense	$ 6,712.5	$ 10,266.0

Total compensation cost related to nonvested awards not yet recognized and the weighted-average periods over which the awards are expected to be recognized at December 31, 2012 were as follows (dollars in thousands):

	Stock Options	Warrants	Restricted Stock
Unrecognized compensation cost	$ 1,620.1	$ 20.5	$ 143.0
Expected weighted-average period in years of compensation cost to be recognized	1.68	0.44	0.19

Total fair value of shares vested and the weighted average estimated fair values of shares grant for the years ended December 31, 2012 and 2011 were as follows (dollars in thousands):

	Stock Options		Warrants	
	Year Ended December 31,		Year Ended December 31,	
	2012	2011	2012	2011
Total fair value of shares vested	$ 5,408.0	$ 6,194.1	$ 171.6	$ 269.1
Weighted average estimated fair value of shares granted	0.36	1.06	0.41	0.74

On April 4, 2011, the Company entered into an amendment of its May 26, 2006 employment agreement with Dr. Robin L. Smith, pursuant to which, as previously amended (the “Agreement”), Dr. Smith serves as Chairman of the Board and Chief Executive Officer of the Company. Pursuant to the amendment, among other things, Dr. Smith was granted an option to purchase 1,500,000 shares of Common Stock at a per share exercise price equal to the closing price of the Common Stock on the date of the amendment, with 500,000 shares vesting on each of the date of grant, December 31, 2011 and December 31, 2012; all other unvested options held by Dr. Smith were immediately vested, and any vested options previously or hereafter granted to Dr. Smith during the remainder of the term shall remain exercisable following termination of employment for the full option term until the expiration date. Pursuant to the modification on April 4, 2011 of Dr. Smith’s stock options, the Company recognized $722,900 of incremental compensation cost during the twelve months ended December 31, 2011. On November 13, 2012, the Company further amended the Agreement pursuant to which all unvested options immediately vested. This modification did not result in additional incremental compensation cost.

Valuation Assumptions

The fair value of stock options and warrants at the date of grant was estimated using the Black-Scholes option pricing model. The expected volatility is based upon historical volatility of the Company’s stock. The expected term for the options is based upon observation of actual time elapsed between date of grant and exercise of options for all employees. The expected term for the warrants is based upon the contractual term of the warrants.

The range of assumptions made in calculating the fair values of stock options and warrants was as follow:

	Stock Options		Warrants	
	Year Ended December 31,		Year Ended December 31,	
	2012	2011	2012	2011
Expected term - minimum (in years)	2	3	2	3
Expected term - maximum (in years)	10	10	5	5
Expected volatility - minimum	73%	79%	76%	80%
Expected volatility - maximum	84%	85%	83%	86%
Expected dividend yield	—	—	—	—
Risk-free interest rate - minimum	0.28%	0.40%	0.27%	0.78%
Risk-free interest rate - maximum	1.99%	3.45%	0.88%	2.19%

Note 15 – Income Taxes

The provision for income taxes is determined by applying the U.S. Federal statutory rate of 34% to income before income taxes as a result of the following:

	Years Ended December 31,	
	2012	2011
U.S. Federal benefit at statutory rate	$ (12,334.1)	$ (12,005.5)
State and local benefit net of U.S. federal tax	(2,154.1)	(2,177.0)
Permanent non deductible expenses for U.S. taxes	(2,781.4)	5,907.3
Reduction in deferred tax assets primarily related to deductibility of certain share-based compensation	—	(72.4)
True-up of prior year net operating loss	321.6	1,367.3
Return to actual	(384.8)	—
Foreign earnings not permanently reinvested	(1,810.3)	1,810.3
Effect of change in deferred tax rate	525.7	2,852.1
Valuation allowance for deferred tax assets	18,441.9	2,317.9
Tax provision	$ (175.5)	$ —

Deferred income taxes at December 31, 2012 and 2011 consist of the following:

	December 31,	
	2012	2011
Deferred Tax Assets:		
Accumulated net operating losses (tax effected)	$ 25,727.7	$ 17,816.7
Deferred revenue	23.1	212.9
Contingent accounts payable	15.2	13.8
Share-based compensation	5,466.7	3,917.4
Accumulated depreciation	348.7	—
Charitable contributions	391.8	408.2
Bad debt provision	239.7	107.3
Capital loss carryforward	6,644.5	—
Other	—	48.5
Deferred tax assets prior to tax credit carryovers	38,857.4	22,524.8
Deferred Tax Liabilities:		
Accumulated depreciation	—	(155.1)
Intangible and indefinite lived assets	(3,311.8)	(3,303.0)
Foreign earnings not permanently reinvested	—	(2,138.5)
Deferred tax liabilities	(3,311.8)	(5,596.6)
	35,545.6	16,928.2
Valuation reserve	(39,144.7)	(20,702.9)
Net deferred tax liability	$ (3,599.1)	$ (3,774.7)

The Tax Reform Act of 1986 enacted a complex set of rules limiting the utilization of net operating loss carryforwards (“NOL”) to offset future taxable income following a corporate ownership change. The Company’s ability to utilize its NOL carryforwards is limited following a change in ownership in excess of fifty percentage points during any three-year period.

Since the year 2000, the Company has had several changes in ownership which has resulted in a limitation on the Company’s ability to apply net operating losses to future taxable income. As of December 31, 2012 the Company has lost $26.0 million or $8.8 million in tax benefits, of net operating losses applicable to Federal income taxes which expired due to these limitations and expiration of net operating loss carryforwards. At December 31, 2012, the Company had net operating loss carryforwards of approximately $69.7 million applicable to future Federal income taxes. The tax loss carryforwards are subject to annual limitations and expire at various dates through 2030. The Company has recorded a full valuation allowance against its net deferred tax asset because it is more likely than not that such deferred tax assets will not be realized.

As of December 31, 2012, management does not believe the Company has any material uncertain tax positions that would require it to measure and reflect the potential lack of sustainability of a position on audit in its financial statements. The Company will continue to evaluate its uncertain tax positions in future periods to determine if measurement and recognition in its financial statements is necessary. The Company does not believe there will be any material changes in its unrecognized tax positions over the next year.

Note 16 – Discontinued Operations

Regenerative Medicine - China segment

In 2009, the Company operated its Regenerative Medicine-China business in the People’s Republic of China (“China” or “PRC”) through its subsidiary, a wholly foreign owned entity (“WFOE”) and entered into contractual arrangements with certain variable interest entities (“VIEs”). Foreign companies have commonly used VIE structures to operate in the PRC, and while such structures are not uncommon, recently they have drawn greater scrutiny from the local Chinese business community in the PRC who have urged the PRC State Council to clamp down on these structures. In addition, in December 2011, China’s Ministry of Health announced its intention to more tightly regulate stem cell clinical trials and stem cell therapeutic treatments in the PRC, which has created uncertainty regarding the ultimate regulatory environment in the PRC. Accordingly, the Company took steps to restrict, and ultimately eliminate, its regenerative medicine business in the PRC. As a result of these steps, the Company has

discontinued its operations in its Regenerative Medicine-China business. The Company has determined that any liability arising from the activities of the WFOE and the VIEs will likely be limited to the net assets currently held by each entity. As of March 31, 2012, the Company recognized the following loss on exit of the Regenerative Medicine-China business (in thousands):

Cash	$ 195.1
Prepaid expenses and other current assets	14.9
Property, plant and equipment, net	1,023.7
Other Assets	330.5
Accounts payable	(177.1)
Accrued liabilities	(79.2)
Accumulated comprehensive income	(169.9)
Loss on exit of segment	$ 1,138.0

The operations and cash flows of the Regenerative Medicine - China business were eliminated from ongoing operations as a result of our exit decision, and the Company will not have continuing involvement in this business going forward. The operating results of the Regenerative Medicine – China business for the years ended December 31, 2012 and 2011, which are included in discontinued operations, were as follows (in thousands):

	Year Ended December 31,	
	2012	2011
Revenue	$ 52.3	$ 274.3
Cost of revenues	(30.6)	(140.6)
Research and development	(103.3)	(378.3)
Selling, general, and administrative	(497.3)	(3,089.8)
Other income (expense)	(6.8)	(9.7)
Loss on exit of segment	(1,138.0)	—
Loss from discontinued operations	$ (1,723.7)	$ (3,344.1)

The summary of the assets and liabilities related to Regenerative Medicine-China discontinued operations as of December 31, 2011 was as follows (in thousands):

	December 31, 2011
Assets:	
Cash and cash equivalents	$ 103.3
Prepaid expenses and other current assets	284.4
Property, plant and equipment, net	1,256.8
Other Assets	149.0
	$ 1,793.5
Liabilities:	
Accounts payable	$ 177.8
Accrued liabilities	31.0
	$ 208.8

On October 12, 2012, the Company signed a settlement agreement with Yeyan Zhang, legal representative of the WFOE, to arrange for the orderly disposition and liquidation of the WFOE and the VIEs, and to formally assign the Company’s rights, title and interest of the WFOE to Mr. Zhang.

Pharmaceutical Manufacturing - China segment

On November 13, 2012, the Company completed the divestiture (the “Erye Sale”) of our 51% interest (the “Erye Interest”) in Suzhou Erye Pharmaceuticals Company Ltd., a Sino-foreign equity joint venture with limited liability organized under the laws

of the PRC primarily engaged in the manufacture of generic antibiotics ("Erye"), to Suzhou Erye Economy & Trading Co., Ltd., a limited liability company organized under the laws of the PRC ("EET"), and Highacheive Holdings Limited, a limited liability company organized under the laws of the British Virgin Islands ("Highacheive" and together with EET, each a "Purchaser" and collectively the "Purchasers"). The Erye Sale was consummated pursuant to the terms and conditions of the Equity Purchase Agreement, dated as of June 18, 2012 (as amended, the "Equity Purchase Agreement"), by and among our Company, China Biopharmaceuticals Holdings, Inc., a Delaware corporation and a wholly-owned subsidiary of NeoStem ("CBH"), EET, Highacheive, Fullbright Finance Limited, a limited liability company organized under the laws of the British Virgin Islands ("Fullbright"), and Erye. Pursuant to the Equity Purchase Agreement, the aggregate purchase price paid to the Company by the Purchasers for the Erye Interest consisted of (i) approximately $12.3 million in cash, (ii) the return to the Company of 1,040,000 shares of NeoStem common stock and (iii) the cancellation of 1,170,000 options and 640,000 warrants to purchase our common stock. The fair value of the shares was based on the Company's closing price on the date of sale, and was recorded as Treasury Stock in our balance sheet. The fair values of the canceled options and warrants were based on the Black-Scholes values on the date of sale, and were recorded against Additional Paid in Capital in the accompanying balance sheet. The Company recognized the following loss on the date of sale of its 51% interest in Erye (in thousands):

Fair value of consideration received	$ 13,397.9
Carrying value of segment non-controlling interest	6,015.0
Carrying value of segment accumulated comprehensive income	4,387.4
	$ 23,800.3
Less carrying amount of assets and liabilities sold:	
Cash	$ 8,457.5
Restricted Cash	2,918.1
Accounts Receivable	6,130.2
Inventories	15,077.7
Prepaid expenses and other current assets	957.8
Property, plant and equipment, net	38,102.0
Other assets	5,946.3
Accounts payable	(9,604.8)
Accrued liabilities	(2,008.8)
Bank loans	(15,133.5)
Notes payable	(6,599.3)
Other liabilities	(9,166.8)
Amount due related party	(7,859.7)
	$ 27,216.7
Loss on exit of segment	$ (3,416.4)

The operations and cash flows of the Pharmaceutical Manufacturing - China business were eliminated from ongoing operations with the sale of the Company's 51% interest in Erye. The operating results of the Pharmaceutical Manufacturing - China business for the years ended December 31, 2012 and 2011 were as follows (in thousands):

	Year Ended December 31,	
	2012	2011
Revenue	$ 61,703.1	$ 63,393.6
Cost of revenues	(40,245.2)	(47,186.8)
Research and development	(1,836.4)	(2,904.1)
Selling, general, and administrative	(10,740.0)	(11,068.2)
Other expense	(1,045.2)	(1,081.4)
Provision for income taxes	(1,794.1)	(392.8)
Asset impairments	(31,170.1)	(19,432.7)
Loss on sale of segment	(3,416.4)	—
Loss from discontinued operations	$ (28,544.3)	$ (18,672.4)

The summary of the assets and liabilities related to Pharmaceutical Manufacturing - China discontinued operations as of December 31, 2011 were as follows (in thousands):

	December 31, 2011
Cash and cash equivalents	$ 8,707.0
Accounts receivable, net	5,525.7
Inventory	16,505.7
Deferred income taxes	463.7
Prepaid expenses and other current assets	777.5
Property, plant and equipment, net	36,490.4
Land use rights, net	4,872.4
Goodwill	8,495.7
Intangible assets, net	21,846.4
Other assets	2,459.9
Total assets	$ 106,144.4
Accounts payable	$ 7,950.3
Accrued liabilities	1,705.8
Bank loans	15,712.0
Income tax payable	621.6
Deferred income taxes	6,177.4
Unearned revenue	1,315.4
Amount due related parties	20,862.7
Total liabilities	$ 54,345.2

Related Party Transactions

At December 31, 2011, Erye owed EET, the 49% shareholder of Erye, approximately $20.9 million, which represents dividends paid and loaned back to Erye. In the year ended December 31, 2012, Erye paid EET approximately $0.7 million of accrued interest, and $11.6 million of loan principal.

Pursuant to the terms and conditions of the October 2009 Erye Joint Venture Agreement, dividend distributions to EET and the Company's subsidiary were to be made in proportion to their respective ownership interests in Erye; provided, however, that for the three-year period commencing on the first day of the first fiscal quarter after the Joint Venture Agreement became effective distributions were to be made as follows: for undistributed profits generated subsequent to the acquisition date: (i) the 49% of undistributed profits (after tax) of the joint venture due EET were to be distributed to EET and lent back to Erye to help finance costs in connection with its construction of and relocation to a new facility (to be repaid gradually after construction is completed); and (ii) of the net profit (after tax) of the joint venture due the Company, 45% were to be provided to Erye as part of the new facility construction fund and will be characterized as additional paid-in capital for the Company's 51% interest in Erye, and 6% will be distributed to the Company. It was contemplated by the Joint Venture Agreement that the construction would continue for

three years. As such, 45% of the dividend we had been entitled to by reason of our 51% ownership would have remained in Erye through 2012 to complete the construction while EET would loan back their dividend during the same period at a prevailing bank interest rate. In January 2011, a dividend totaling approximately $13,671,100 based on earnings for Fiscal Year 2009 was declared and approximately $6,698,800 was distributed to EET and lent back to Erye and approximately $6,972,300 due the Company was reinvested and re-characterized as additional paid-in capital in the business. In April 2011, a dividend totaling $10,259,700 based on earnings for Fiscal Year 2010 was declared and approximately $5,027,300 was distributed to EET and lent back to Erye, and approximately $5,232,400 due the Company was reinvested and re-characterized as additional paid-in capital in the business. A10% withholding tax was required on dividends payable to the Company. As a result, Erye withheld approximately $1,220,500 in taxes related to the Company's Fiscal Year 2009 and 2010 dividend amounts, and such amount has been paid to the local Chinese tax authorities as of December 31, 2011.

Note 17 – Related Party Transactions

On November 13, 2012, we and our subsidiary, CBH, sold our 51% ownership interest in Erye to Fullbright and EET (see Note 16). EET was prior to the sale the holder of the minority 49% ownership interest in Erye, and was a party along with our subsidiary CBH to the Joint Venture Agreement which had governed the ownership of the respective interests in Erye. Fullbright is an affiliate of EET. Mr. Shi Mingsheng (a former member of our Board of Directors, and Chairman of the Board of Erye) and Madam Zhang Jian (the General Manager of Erye, and formerly our Vice President of Pharmaceutical Operations) are the principal equity holders of each of EET and Fullbright. Fullbright assigned all its rights and obligations under the Equity Purchase Agreement (except for its obligations in respect of the return of certain NeoStem securities held by it as part of the purchase price, and its obligations in respect of closing deliverables) to Highacheive Holdings Limited, a limited liability company organized under the laws of the British Virgin Islands and an affiliate of Fullbright ("Highacheive"). As a result of the assignment, the Purchasers of our Erye Interest were EET and Highacheive.

Note 18 – Commitments and Contingencies

Lease Commitments

The Company leases offices, of which certain have escalation clauses and renewal options, and also leases equipment under certain noncancelable operating leases that expire from time to time through 2017. In August 2012, the Company signed a new lease for a larger space at its current executive offices at 420 Lexington Avenue, New York, NY 10170. The new lease is believed to be sufficient space for the near future. The lease term began in September 2012 and shall extend through June 2015. The base monthly rent, which includes storage space, averages approximately $27,000 per month, with subleases that will aggregate approximately $7,500 per month. This property is used as the Company's corporate headquarters.

A summary of future minimum rental payments required under operating leases that have initial or remaining terms in excess of one year as of December 31, 2012 are as follows (in thousands):

Years ended	Operating Leases
2013	$ 1,143.3
2014	878.8
2015	713.7
2016	563.9
2017	293.2
Total minimum lease payments	$ 3,592.9

Expense incurred under operating leases was approximately $1.5 million and $1.7 million for the years ended December 31, 2012 and 2011, respectively.

Contingencies

Under license agreements with third parties the Company is typically required to pay maintenance fees, make milestone payments and/or pay other fees and expenses and pay royalties upon commercialization of products. The Company also sponsors research at various academic institutions, which research agreements generally provide us with an option to license new technology discovered during the course of the sponsored research.

In connection with the issuance to investors and service providers of many of the shares of the Company's common stock and warrants to purchase common stock previously disclosed and described herein, the Company granted the holders registration rights providing for the registration of such shares of common stock and shares of common stock underlying warrants on a registration statement to be filed with the Securities and Exchange Commission ("SEC") so as to permit the resale of those shares. Certain of the registration rights agreements provided for penalties for failure to file or failure to obtain an effective registration statement. With respect to satisfying its obligations to the holders of these registration rights, the Company has been in various situations. The Company had previously filed a registration statement as required for some of the holders, and in May 2011 filed a registration statement for all of the holders (except for holders whose shares of Common Stock were currently salable under Rule 144 of the Securities Act or who waived certain rights); such registration statement was declared effective by the SEC on September 30, 2011. The Company has certain obligations to maintain the effectiveness of this registration statement. Certain holders who had outstanding registration rights had previously waived their registration rights or were subject to lock-up agreements. No holder has yet asserted any claim against the Company with respect to a failure to satisfy any registration obligations. Were someone to assert a claim against the Company for breach of registration obligations, the Company believes it has several defenses that would result in relieving it from some or any liability, although no assurances can be given. The Company also notes that damage claims may be limited, as (i) most shares of Common Stock as to which registration rights attached are either now registered or currently salable under Rule 144 of the Securities Act or are otherwise currently subject to other restrictions on sale and (ii) the shares of Common Stock underlying warrants with registration rights are now registered, and during much of the relevant periods the warrants with registration rights generally have been out of the money, were subject to lock-up agreements and/or the underlying shares of Common Stock were otherwise subject to restrictions on resale. Accordingly, were holders to assert claims against the Company based on breach of the Company's obligation to register, the Company believes that the Company's maximum exposure would not be material.

Note 19 – Subsequent Events

Pursuant to the Purchase Agreement with Aspire (see Note 13), from January 1, 2013 through February 28, 2013, Aspire has purchased 2.9 million shares of the Company's common stock for an aggregate consideration of approximately $1.8 million pursuant to the Purchase Agreement.

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

Not applicable.

ITEM 9A. CONTROLS AND PROCEDURES.

(a) Disclosure Controls and Procedures

Disclosure controls and procedures are the Company's controls and other procedures that are designed to ensure that information required to be disclosed in the reports that the Company files or submits under the Securities Exchange Act of 1934, as amended (the "Exchange Act") is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed in the reports that the Company files under the Exchange Act is accumulated and communicated to management, including the Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. Due to the inherent limitations of control systems, not all misstatements may be detected. These inherent limitations include the realities that judgments in decision-making can be faulty and that breakdowns can occur because of a simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the control. Controls and procedures can only provide reasonable, not absolute, assurance that the above objectives have been met.

As of December 31, 2012, the Company carried out an evaluation, with the participation of the Company's management, including the Company's Chief Executive Officer and Chief Financial Officer, of the effectiveness of the Company's disclosure controls and procedures pursuant to Rule 13a-15 of the Exchange Act. Based on that evaluation, the Company's Chief Executive Officer and Chief Financial Officer concluded that the Company's disclosure controls and procedures were effective, at the reasonable assurance level, in ensuring that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms and is accumulated and communicated to management, including the Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

(b) Changes in Internal Control over Financial Reporting

There have been no changes in the Company's internal controls over financial reporting, as such term is defined in Exchange Act Rule 13a-15, that occurred during the Company's last quarter to which this report relates that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

ITEM 9B. OTHER INFORMATION.

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE.

DIRECTORS

The following table sets forth certain information about the current directors of our Company. Directors are elected to hold office until the next annual meeting of stockholders and until their successors are elected and qualified. There are no family relationships among any of our directors and executive officers. For biographical information regarding our directors, see the discussion under "Biographical Information — Directors," below.

Name	Age	Director Since
Robin L. Smith, M.D.(1)	48	2006
Richard Berman	70	2006
Steven S. Myers	66	2006
Eric H.C. Wei	56	2009
Drew Bernstein	56	2009
Andrew Pecora, M.D., FACP(2)	55	2011
Martyn D. Greenacre	71	2011
Stephen W. Potter	56	2013

(1) Since 2006, Dr. Smith has also served as Chief Executive Officer and Chairman of the Board.

(2) Our Company's acquisition of Progenitor Cell Therapy, LLC ("PCT") closed on January 19, 2011 (the "PCT Merger") pursuant to an Agreement and Plan of Merger dated September 23, 2010 (the "PCT Merger Agreement"). Since the PCT Merger, Dr. Pecora also serves as Chief Medical Officer of PCT and since August 17, 2011, as the Company's Chief Medical Officer. Additionally, he serves as Chief Scientific Officer of our subsidiary Amorcyte, LLC ("Amorcyte"), which we acquired on October 17, 2011 (the "Amorcyte Merger") pursuant to an Agreement and Plan of Merger dated as of July 13, 2011 (the "Amorcyte Merger Agreement").

EXECUTIVE OFFICERS AND OTHER KEY OFFICERS

The following table sets forth certain information about the current executive officers of our Company. There are no family relationships among any of our directors and executive officers. For biographical information regarding our executive officers, see the discussion under "Biographical Information — Executive and Key Officers," below.

Name	Age	Position
Robin L. Smith, M.D.(1)	48	Chief Executive Officer and Chairman of the Board
Andrew L. Pecora, M.D., F.A.C.P.(1)	55	Chief Medical Officer of NeoStem, Chief Medical Officer of PCT and Chief Scientific Officer of Amorcyte
Robert A. Preti, PhD. (1)	56	President and Chief Scientific Officer of PCT
Larry A. May (1)	63	Vice President and Chief Financial Officer
Catherine M. Vaczy (1)	51	Vice President and General Counsel
Joseph Talamo (1)	43	Vice President, Corporate Controller and Chief Accounting Officer
Jonathan Sackner-Bernstein, M.D.	52	Vice President, Clinical Development and Regulatory Affairs
Martin E. Schmieg	51	Vice President, Corporate Development
Jeff Liter	56	Chief Operating Officer of PCT
Timothy Fong, PhD.	55	Vice President, Technology & Product Development of PCT

(1) Executive Officer

BIOGRAPHICAL INFORMATION

Background on Director Qualifications

We believe that the Company is best served by having a mix of leadership personnel from our largest stockholder (Mr. Wei from RimAsia), members of our executive leadership team (Dr. Smith and Dr. Pecora) and industry experts (Mr. Potter, Dr. Pecora, Mr. Greenacre and Dr. Smith). Given that we are a growth stage company, we also believe it is important to have directors with experience in finance and strategic transactions (Messrs. Bernstein, Berman, Myers, Greenacre and Wei).

All Board members are expected to possess certain personal characteristics necessary to creating a functional Board: high personal and professional ethics, integrity and values; practical wisdom and mature judgment; an inquisitive and objective perspective; professional experience at a policy-making level in business or medicine; time availability for in-person participation at Board and committee meetings; and a commitment to representing the long-term interests of our stockholders. We look for a range of professional backgrounds including senior management operational experience, accounting and finance capabilities, deep industry-related experience, business development leadership, and medical and scientific proficiencies.

Directors

Robin L. Smith, M.D.

Dr. Robin L. Smith joined us as Chairman of our Advisory Board in September 2005 and, effective June 2, 2006, became the Chief Executive Officer and Chairman of the Board. Dr. Smith, who received a medical degree from Yale University in 1992 and a master’s degree in business administration from the Wharton School in 1997, brings to us extensive experience in medical enterprises and business development. From 2000 to 2003, Dr. Smith served as President & Chief Executive Officer of IP2M, a multi-platform media company specializing in healthcare. During her term, the company was selected as being one of the 10 fastest growing technology companies in Houston, Texas. IP2M was sold to a publicly traded company in February 2003. Previously, from 1998 to 2000, Dr. Smith was Executive Vice President and Chief Medical Officer for HealthHelp, Inc., a national radiology management company that managed 14 percent of all healthcare dollars spent by large insurance companies. Dr. Smith has acted as a senior advisor to, and investor in, both publicly traded and privately held companies where she has played a significant role in restructuring and or growing such businesses. She currently serves on the Board of Trustees of the NYU Langone Medical Center and is past Chairman of the Board of Directors for the New York University Hospital for Joint Diseases where she headed up new development efforts and board member recruitment. Dr. Smith has also served on the Board of Choose Living as well as other public and private companies. Currently, Dr. Smith is the President and serves as Chairman of the Board of Directors of The Stem for Life Foundation, a non-profit entity with the goal of educating the public about the growing benefits of stem cell therapies and applications. She was also appointed to the Board of Directors, Science and Faith STOQ Foundation in Rome as well as the Capital Formation Committee of the Alliance for Regenerative Medicine. The Board of Directors concluded that Dr. Smith should continue serving as a director based upon her expertise in business development and medicine, including her extensive and diversified experience serving in executive and board capacities in medical enterprises and healthcare-based entities, and her leadership of the Company over the past seven years.

Richard Berman

Richard Berman joined our Board of Directors in November 2006, serves as Chairman of the Compensation Committee and until March 2009 and February 2013, respectively, Chairman of the Audit Committee, and a member of the Nominating and Governance Committee. Mr. Berman continues to serve as a member of the Audit Committee. Mr. Berman's business career spans over thirty-five years of venture capital, management and merger & acquisitions experience. In the past 5 years, Mr. Berman has served as a director and/or officer of over a dozen public and private companies. From 2006-2011, he was Chairman of National Investment Managers (OTC: NIVM.OB), a company with $12 billion in pension administration assets. In 2012, he became vice chairman of Energy Smart Resources, Inc., a privately-held company. Mr. Berman is currently a director of two additional public companies: Advaxis, Inc. (OTC: NIVM.OB), and Lustros, Inc. (OTC: LSLD). From 1998-2000, he was employed by Internet Commerce Corporation (now Easylink Services (Nasadaq: ESIC)) as Chairman and CEO. Previously, Mr. Berman worked at Goldman Sachs; was Senior Vice President of Bankers Trust Company, where he started the M&A and Leveraged Buyout Departments; helped create the largest battery company in the world by merging Prestolite, General Battery and Exide to form Exide Technologies (NASDAQ: XIDE); helped create what is now Soho (NYC) by developing five buildings; and advised on over $4 billion of M&A transactions. Mr. Berman is a past director of the Stern School of Business of NYU, where he received B.S. and M.B.A. degrees. Mr. Berman also has United States and foreign law degrees from Boston College and The Hague Academy of International Law, respectively. We believe that Mr. Berman's financial and business expertise, including his background in investment banking and mergers and acquisitions, and his extensive and diversified experience as a director in the public company context, give him the qualifications and skills to serve as director.

Steven S. Myers

Steven S. Myers joined our Board of Directors in November 2006 and serves on the Compensation Committee, Audit Committee and Nominating and Governance Committee. In March 2009, Mr. Myers became Chairman of the Nominating and Governance Committee. Mr. Myers is the founder, and until his retirement in March 2007 was the Chairman and CEO, of SM&A (Nasdaq:WINS), the world's leading provider of Competition Management Services. SM&A helps businesses win structured competitive procurements and design successful transitions from proposals to programs. Since 1982, SM&A has managed over 1,000 proposals worth more than $340 billion for its clients. SM&A routinely supports clients such as Boeing, Lockheed Martin, Accenture, Raytheon, Northrop Grumman, Motorola, and other Fortune 500 companies. SM&A was publicly traded until 2008.

Mr. Myers graduated from Stanford University with a B.S. in Mathematics and had a successful career in the aerospace and defense sector supporting Department of Defense and NASA programs before founding SM&A. He has a strong technical background in systems engineering and program management. Mr. Myers is also founder, President and CEO of Dolphin Capital Holdings, Inc, which owns, operates and leases business jet aircraft and does private equity investing in innovative enterprises. A serial entrepreneur, Mr. Myers has spearheaded a number of business innovations in aerospace & defense and in business aviation. He is a highly accomplished aviator. The Board of Directors concluded that Mr. Myers should continue serving as a director based upon his technical background and diversified entrepreneurial and business expertise, including his having established and managed innovative enterprises (in the areas of proposal development for competitive procurements, aircraft leasing and private equity investment), together with his technical experience in the aerospace and defense sector.

Drew Bernstein

Drew Bernstein was appointed to our Board of Directors on June 9, 2009. Mr. Bernstein serves as Chairman of the Audit Committee. The Board of Directors has determined that Mr. Bernstein qualifies as an "audit committee financial expert" as defined in applicable SEC rules. Mr. Bernstein also serves as a member of our Compensation Committee. Mr. Bernstein co-founded Bernstein & Pinchuk LLP (B&P) in 1983 (now the managing member of Marcum Bernstein & Pinchuk (MarcumBP), a PCAOB-registered accounting firm headquartered in New York). His early recognition of the global marketplace and his extensive work in China resulted in the rapid expansion of the firm's services to the PRC where he established associate offices to better serve client needs. In addition, his diverse experience in retail, manufacturing, hospitality, professional practices and real estate contributed to the expansion of the firm's client base abroad. He is a frequent speaker at industry, investment banking and university conferences. Mr. Bernstein provides business advisory and specialized auditing and accounting services to public and non-public companies throughout the United States, China, Europe and Africa.

Mr. Bernstein has been responsible for more than 200 real estate transactions with an aggregate value in excess of US$3 billion. He is qualified to perform accounting and auditing services for public companies and has qualified as an expert witness. He is an active member of the board of directors and an officer of a prestigious foundation that was honored with the President's Voluntary Action Award by the late President Ronald Reagan.

Mr. Bernstein received his BS degree from the University of Maryland Business School, is licensed in the State of New York, Connecticut, California, Texas and Maryland and is a member of the AICPA, the NYSSCPA and the NSA. Mr. Bernstein is a director (and the chairman of the audit committee) for Orient Paper, Inc. (AMEX: ONP), a holding company for a producer and distributor of paper products in China. The Board of Directors concluded that Mr. Bernstein should continue serving as a director based upon his diversified financial, accounting and business expertise, including his extensive background in accounting and auditing services and his knowledge of the global marketplace.

Eric H.C. Wei

Pursuant to the terms of the agreement governing our acquisition o our former Erye subsidiary, Eric H.C. Wei was appointed to the NeoStem Board of Directors upon the consummation of the Erye Merger in October 2009. From July 2006 to Mark 2007, Mr. Wei served as a director of CBH . Eric H.C. Wei is one of the founders and the Managing Partner of RimAsia Capital Partners, L.P. a private equity firm focused on the pan-Asian mid-market sector and a greater-than-5% stockholder of NeoStem. Prior to establishing RimAsia in January of 2005, Mr. Wei was a managing director of Gilbert Global Equity Partners, a US$1.2 billion global private equity fund; a founding partner of Crimson Asia Capital Partners, a US$435 million Asian private equity program; a founder and investment committee member of the US$800 million Asian Infrastructure Fund, and an investor and director of The Asian MBO Fund. Mr. Wei has also previously been an investment banker with over 10 years of experience at Peregrine Capital, Prudential Securities, Lazard Freres and Citibank. Mr. Wei received a Bachelor of Science degree in Math and Economics from Amherst College and a Master of Business Administration degree from the Wharton Graduate School of Management at the University of Pennsylvania. The Board of Directors concluded that Mr. Wei should continue serving as a director based upon his diversified financial and business expertise, including his background in investment banking, his extensive experience in managing private equity funds, and his familiarity with the pan-Asian mid-market sector.

Andrew L. Pecora, M.D., F.A.C.P.

Andrew L. Pecora, M.D., F.A.C.P. was appointed to our Board of Directors on December 8, 2011. Dr. Pecora is co-founder and past Chairman and Chief Executive Officer of Progenitor Cell Therapy, LLC ("PCT"), which is a subsidiary of the Company. Dr. Pecora has served as NeoStem's Chief Medical Officer since August 17, 2011 and as PCT's Chief Medical Officer since January 19, 2011 following the Company's acquisition of PCT. Prior to the acquisition, Dr. Pecora had served from 1999 to 2011 as Chairman, Chief Executive Officer and Chief Medical Officer of PCT, and as a member of PCT's Board of Managers. Dr. Pecora is also Chief Scientific Officer of Amorcyte, Inc. ("Amorcyte"), a subsidiary of the Company acquired in October 2011, and held such position prior to the acquisition. Dr. Pecora served as the Chairman and Director of the John Theurer Cancer Center at Hackensack University Medical Center (HUMC) from 2001 to 2011, and commencing 2011 Dr. Pecora serves the John Theurer Cancer Center as Chief Innovations Officer, Professor and Vice President of Cancer Services. Since 1996 Dr. Pecora has been Co-Managing Partner of the Northern New Jersey Cancer Center, which is a private physicians practice group affiliated with HUMC. He has also been a Professor of Medicine at the University of Medicine and Dentistry of New Jersey since 2004. Dr. Pecora serves on the board of Cancer Genetics, Inc. and is chairman of the board of Tetralogics, Inc., a company developing small molecules to treat cancer. Dr. Pecora brings a variety of business development and practical business skills to NeoStem. He has worked with numerous companies in developing their products and manages a large clinical practice and the cancer department at a major health care institution. Dr. Pecora also has significant experience in the design of clinical trials (Phase 1 to 3), institutional review board practices, conduct of clinical trials, clinical research, and payor relationships both domestically and on a global basis. Dr. Pecora received an M.D. from the University of Medicine and Dentistry of New Jersey, graduating with honors. He went on to complete his medical education in internal medicine at New York Hospital and in hematology and oncology at Memorial Sloan-Kettering Cancer Center, both in New York City. He is board certified in internal medicine, hematology, and oncology. Dr. Pecora's appointment to the NeoStem Board of Directors was a term of the Company's merger agreement with PCT which closed in January 2011. The Board of Directors has concluded that Dr. Pecora should continue serving as a director based on his diversified experience in healthcare, including his expertise in clinical trial design and product development, and his management experience.

Martyn D. Greenacre

Martyn D. Greenacre was appointed to our Board of Directors on December 8, 2011 and serves on the Audit Committee and Nominating and Governance Committee. Mr. Greenacre has served as Chairman of Life Mist Technologies, Inc. a privately-held fire suppression equipment company, since 2002. He previously was Chairman of the Board of BMP Sunstone Corporation, which was acquired by Sanofi-Aventis in February 2011. Mr. Greenacre also served as a director of Cephalon Inc., a biopharmaceutical company that was acquired by Teva Pharmaceutical Industries in October 2011, and Orchestra Therapeutics, an immuno-pharmaceutical company. He currently has the role of Chairman of the Board of Acusphere, Inc., a drug delivery company, and sits on the board of Curis, Inc., a biotechnology company. From 1997 to 2001, Mr. Greenacre served as Chief Executive Officer and director of Delsys Pharmaceutical Corporation, a formulation and drug delivery system company, where he helped raise more than $50 million in equity and partnership financing and formed three development partnerships with leading pharmaceutical companies. From 1993 to 1997, Mr. Greenacre served as President and Chief Executive Officer of Zynaxis Inc., a biopharmaceutical company, where he was responsible for a critical acquisition, divesting a non-performing business and negotiating a strategic merger. From 1989 to 1992, Mr. Greenacre was Chairman, Europe, SmithKline Beecham Pharmaceutical Company. He joined SmithKline & French in 1973, where he held positions of increasing responsibility in its European organization. Mr. Greenacre received a B.A. from Harvard College and an MBA from Harvard Business School. The Board of Directors has concluded that Mr. Greenacre should continue serving as a director based on his diversified board and management experience, particularly in the biotechnology field.

Stephen W. Potter

Effective as of February 11, 2013, the Company appointed Stephen W. Potter to serve as an independent member of the Company's Board of Directors and he has been appointed to the Nominating and Governance Committee of the Board of Directors. During 2011 and 2012, Mr. Potter served as Senior Vice President of Operations and Corporate Development for Osiris Therapeutics, Inc. During his tenure at Osiris, he worked as a member of the senior leadership that achieved approval of the first-ever stem cell drug therapy, Prochymal®. He was also responsible for the launch and overall management of the Bio-Surgery business unit as well as operational oversight for multiple functional areas including manufacturing, human resources, IT, legal, and business development. Prior to his tenure at Osiris, from 2006 through 2010, Mr. Potter served as Senior Vice President of Corporate and Business Development at Genzyme Corporation and as Vice President of Corporate and Business Development from 2000 through 2006. Over his ten years at Genzyme, he was the senior leader for its global corporate and business development team that provided strategic and transaction support, including support for many of Genyzme's cell therapy opportunities. Mr. Potter has also held positions at DuPont Pharmaceuticals, E.I. Dupont de Nemours and Company, Inc., and Booz Allen & Hamilton. Mr. Potter earned a B.S. from University of Massachusetts and an MBA from Harvard Business School.

Executive Officers and Other Key Officers

Robin L. Smith, M.D.

See the discussion under “Biographical Information - Directors,” above.

Andrew L. Pecora, M.D., F.A.C.P.

See the discussion under “Biographical Information - Directors,” above.

Robert A. Preti, Ph.D

Pursuant to an employment agreement that became effective on January 19, 2011, Dr. Preti serves as President of PCT. Dr. Preti also serves as Chief Scientific Officer of PCT. Prior to our acquisition of PCT, Dr. Preti had served from 1999 to 2011 as President and Chief Scientific Officer for PCT, and as a member of PCT's Board of Managers.

Dr. Preti was Scientific Director of Hackensack University Medical Center's stem cell laboratory from 1996 - 1999. Prior to that, he served as director at the Clinical Services Division of the New York Blood Center from 1989 to 1996. He is one of the country's leading authorities on cell engineering and the principal investigator for a number of clinical trials relating to stem cell transplantation. He was a founding member and Treasurer of the International Society for Hematotherapy and Graft Engineering and served for 10 years on its Executive Committee and Board of Directors. He is now representing Cellular Therapy as a Director of the American Association of Blood Banks. Dr. Preti has authored numerous papers in the field and has been invited to speak at national and international meetings relating to the manufacturing, regulatory and quality aspects of cell therapy and regenerative medicine. In addition to having served as an inspector for the Foundation for Accreditation of Cellular Therapy, Dr. Preti also serves on professional and state committees charged with the development of regulations for cellular therapy. Dr. Preti received his Doctor of Philosophy degree from New York University, graduating with distinction. During his tenure at NYU, Dr. Preti studied and received his degrees in Cellular Biology, with a specialty in hematology, studying erythropoiesis under the mentorship of Albert S. Gordon, PhD. Immediately following his graduate work, Dr. Preti joined Marrow Tech, Inc. (which later became Advanced Tissue Sciences) where he served as Group Leader in the development Marrow Tech's proprietary three-dimensional, matrix-based hematopoietic culture system for *ex vivo* expansion of bone marrow stem cells.

Larry A. May

Larry A. May, the former Treasurer of Amgen (NASDAQ GS: AMGN), one of the world's largest biotechnology companies, initially joined us to assist with licensing activities in September 2003. He became an officer upon our acquisition of the business of NS California in January 2006. For the last 25 years, Mr. May has worked in the areas of life science and biotechnology. From 1983 to 1998, Mr. May worked for Amgen as Corporate Controller (1983 to 1988), Vice President/Corporate Controller/Chief Accounting Officer (1988 to 1997), and Vice President/Treasurer (1997 to 1998). At Amgen, Mr. May helped build Amgen's accounting, finance and IT organizations. From 1998 to 2000, Mr. May served as the Senior Vice President, Finance & Chief Financial Officer of Biosource International, Inc., a provider of biologic research reagents and assays. From 2000 to May 2003, Mr. May served as the Chief Financial Officer of Saronyx, Inc., a company focused on developing productivity tools and secure communication systems for research scientists. From August 2003 to January 2005, Mr. May served as the Chief Financial Officer of NS California. In March 2005, Mr. May was appointed CEO of NS California and in May 2005 he was elected to the Board of Directors of NS California. He received a Bachelor of Science degree in Business Administration & Accounting in 1971 from the University of Missouri.

Catherine M. Vaczy

Catherine M. Vaczy joined us in April 2005 as Vice President and General Counsel. Ms. Vaczy is responsible for overseeing our legal affairs. From 1997 through 2003, Ms. Vaczy held various senior positions at ImClone Systems Incorporated, a then publicly-traded company developing a portfolio of targeted biologic treatments to address the medical needs of patients with a variety of cancers, most recently as its Vice President, Legal and Associate General Counsel. While at ImClone, Ms. Vaczy served as a key advisor in the day-to-day operation of the company and helped forge a number of important strategic alliances, including a $1 billion co-development agreement for Erbitux®, the company's targeted therapy approved for the treatment of metastatic colorectal and head and neck cancers. From 1988 through 1996, Ms. Vaczy served as a corporate attorney advising clients in the life science industry at the New York City law firm of Ross & Hardies. Ms. Vaczy is Secretary and serves on the Board of Trustees of The Stem for Life Foundation. Ms. Vaczy received a Bachelor of Arts degree in 1983 from Boston College and a Juris Doctor

from St. John's University School of Law in 1988.

Joseph Talamo

Joseph Talamo has been NeoStem's Vice President, Corporate Controller and Chief Accounting Officer since June 2011. From 1996 to 2010, Mr. Talamo held various senior positions at OSI Pharmaceuticals, Inc. (“OSI”), a publicly-traded biopharmaceutical company focused on discovering, developing and commercializing products for the treatment of cancer, diabetes and obesity, and most recently served as its Vice President and Corporate Controller from 2006 to 2010 and its Corporate Controller from 2002 to 2006. While at OSI, Mr. Talamo helped build the accounting and finance infrastructure to support the clinical development and commercial launch of Tarceva®, OSI's targeted therapy approved for the treatment of patients with non-small cell lung cancer and pancreatic cancer. Prior to OSI, Mr. Talamo worked at Bristol-Myers Squibb from 1995 to 1996 in the Financial Reporting and Consolidations Group, and at KPMG from 1993 to 1995 in the Health Care and Life Sciences Audit Group. Mr. Talamo also serves as Treasurer of the Stem For Life Foundation, since 2012. Mr. Talamo also served as Treasurer of the OSI Pharmaceuticals Foundation from 2008 to 2010. Mr. Talamo received a Bachelor of Business Administration in Accounting from Hofstra University in 1991, and a Master of Business Administration in Finance from Hofstra University in 1999. Mr. Talamo is a certified public accountant in the State of New York.

Jonathan Sackner-Bernstein, M.D.

Jonathan Sackner-Bernstein, M.D., FACC, was appointed as the Company’s Vice President of Clinical Development and Regulatory Affairs in April 2012. He brings to the Company over 20 years of experience in clinical practice, medical research, and healthcare management. From 2008 to 2011, Dr. Sackner-Bernstein served as Associate Center Director for Technology and Innovation at U.S. Food and Drug Administration’s Center for Devices and Radiological Health. During his tenure at the FDA, he launched the Center’s Entrepreneurs in Residence program; led the Center for Devices for Devices and Radiological Health Innovation Initiative; served as chairman of the Center’s task force focused on using new science in regulatory decision-making; and established the Center’s Council on Medical Device Innovation in concert with several other federal agencies. Previously, Dr. Sackner-Bernstein served as Chief Medical Officer at the clinical research organization, Clinilabs, where he established a Phase I research unit from 2006 to 2008. He also served as assistant professor of medicine at the Columbia University College of Physicians and Surgeons from 1993 to 2003. His academic accomplishments include contributions to medical therapy of heart failure and patients following heart attack as well as leadership in changing the paradigms of drug development in heart failure. Dr. Sackner-Bernstein’s model for rewarding altruism and increasing donation of kidneys for organ transplant was recently enacted by the Israeli government. In 2011 Dr. Sackner-Bernstein founded ExVivos, LLC, a privately-held company focusing on engineering tissues and organs from human cells for the development of drugs, vaccines and biological products, for which he continues to serve as Chairman and Chief Executive Officer. Dr. Sackner-Bernstein earned his B.S.E. from the Moore School of Electrical Engineering at the University of Pennsylvania and his M.D. from Jefferson Medical College. He completed training in Internal Medicine and Cardiology at Mount Sinai Hospital in New York.

Martin Schmieg

Martin E. Schmieg joined our Company in June 2012 as Vice President, Corporate Development. Mr. Schmieg brings to NeoStem his expertise in business development for health care products and medical companies ranging from early-stage privately funded technology ventures to market driven public companies. While originally trained in accounting and finance, Martin's career also has included hands-on management of research and development, regulatory, manufacturing, marketing, sales, customer service, and business development functions.

Prior to joining NeoStem, Mr. Schmieg, from October 2010 to June 2012, served as General Manager of Besser Consulting, LLC where he provided strategic consulting services to clients such as Beckman Coulter Genomics. From March 2006 to October 2010, Mr. Schmieg served as President and Chief Executive Officer of Freedom-2, Inc. with merged with and became Nuvilex, Inc. (OTCQB: NVLX). He has also held senior management positions with Isolagen, Inc. (now Fibrocell Science, Inc., OTCBB: FCSC), Sirna Therapeutics, Inc. (acquired by Merck & Co., NYSE: MRK, in 2006), Advanced Bionics Corporation (acquired by Boston Scientific, NYSE: BSX, in 2004) and Cytometrics, Inc., where he was also served on the board of directors. Martin has expertise in financing, mergers and acquisitions and the development of companies with novel technologies from lab to market. Selected transaction include the multi-billion dollar sale of Advanced Bionic Corporation to Boston Scientific, the development and market launch of the Cytoscan instrument for observation and measurement of the human microcirculatory system, and the establishing credible relationships with the venture capital and investment banking communities. Martin has also practiced as a certified public accountant. He is a graduate of LaSalle University.

Jeff Liter

Jeff Liter became PCT's Chief Operating officer in August 2012. Mr. Liter brings to PCT a breadth of multi-function expertise including operations, finance, merger & acquisition integration, corporate development, strategy development and sales. Additionally, Mr. Liter's work experience spans multiple industries with his most recent four years being dedicated to the life sciences. In his consulting role for On Point (a privately-held company), Mr. Liter led complex international integration initiatives for the likes of Beckman Coulter, Onyx Pharmaceuticals, and Haemonetics. Mr. Liter worked for On Point in 2009 and again in 2012. Additionally, from January 2010 to late in 2011 Mr. Liter spent nearly two years working as the Director of Strategy, Licensing, & Corporate Development for Beckman's Diagnostic Division which was acquired by Danaher Corporation in late 2011. Prior to 2009 Mr. Liter spent nearly ten years working for ADC Corporation where from 2007 to 2008 he led ADC's Corporate Development Team. Mr. Liter has conducted well over a dozen M&A transaction across the globe ranging from $4 million to $2.6 billion. Mr. Liter's integration efforts have included consolidating multi-national manufacturing plants and ensuring the appropriate registrations and line validations across varying regulatory bodies were effectively incorporated into the transition plans. Mr. Liter has led operational restructuring in the United States, several countries in Europe, Australia, and China. Mr. Liter brings a vast set of experiences in working with government agencies, regulating bodies, and works councils in streamlining operations through time urgent transitions. Mr. Liter has a MBA in Finance from the University of Minnesota.

Timothy Fong, Ph.D

Timothy Fong joined PCT in 2011 and brings biotech industry experience to assay, product and process development for client-specific projects as well as development of internal novel cell therapy products and manufacturing technology platforms. Dr. Fong received an MBA from the Executive Program at Saint Mary's College in Moraga, California, a Ph.D. in immunology from the Department of Microbiology and Immunology, UCLA School of Medicine in Los Angeles, California, an M.S. in biological chemistry, from the UCLA School of Medicine, and a B.S. in biochemistry from the University of California, Los Angeles. Dr. Fong earned his doctorate in immunology at UCLA in the laboratory of Dr. T. Makinodan, studying the effects of aging on the immune system with a focus on T cell activation and response. He continued his training with postdoctoral fellowships with Dr. B. Emerson at the Salk Institute in La Jolla, CA identifying molecular mechanisms in beta-globin gene regulation and with Dr. T. Kipps at University of California, San Diego on the regulation of human CD80 expression. Dr. Fong was most recently Technical Director Cell Therapy at BD Biosciences, San Jose, CA and was responsible for the development and manufacturing of clinical grade antibody reagents for use in cGMP cell isolation. From December 2005 through October 2011, Dr. Fong was employed at Becton Dickinson as the technical director of cell therapy resarch (from October 2008 through October 2011) and prior to that from December 2005 through September 2008, the program director of the Becton Dickinson cell therapy initiative to develop a T regulatory cell product for the treatment of graft-versus-host disease (GVHD) and autoimmune diseases. Dr. Fong has over 18 years of drug development experience and has led research and development groups in cell and gene therapies, bio-active peptides and recombinant proteins from discovery research to early human clinical trials in oncology and autoimmune and inflammatory diseases.

CORPORATE GOVERNANCE

Director Independence

NeoStem’s current Board members consist of Dr. Smith, Dr. Pecora, Mr. Berman, Mr. Myers, Mr. Bernstein, Mr. Potter, Mr. Wei, and Mr. Greenacre. The Board of Directors has determined that Messrs. Myers, Berman, Bernstein, Greenacre and Mr. Potter are independent applying the definition of independence under the listing standards of the NYSE MKT and SEC regulations.

Board Leadership Structure and Role in Risk Oversight

Our Chief Executive Officer also serves as the Chairman of the Board. We do not have a lead independent director. Our Chairman of the Board, when present, presides over all meetings of our Board of Directors. We believe this leadership structure is appropriate for our Company at this time because (1) of our size, (2) of the size of our Board, (3) our Chief Executive Officer is responsible for our day-to-day operation and implementing our strategy, and (4) discussion of developments in our business and financial condition and results of operations are important parts of the discussion at Board meetings and it makes sense for our Chief Executive Officer to chair those discussions.

Our Board of Directors oversees our risk management. This oversight is administered primarily through the following:

- The Board’s review and approval of our business plans and budget (prepared and presented to the Board by the Chief Executive Officer and other management), including the projected opportunities and challenges facing our business;

- At least quarterly review of our business developments, business plan implementation and financial results;
- Our Audit Committee's oversight of our internal controls over financial reporting and its discussions with management and the independent accountants regarding the quality and adequacy of our internal controls and financial reporting; and
- Our Compensation Committee's review and recommendations to the Board regarding our executive officer compensation and its relationship to our business plans.

Committees

Our Board of Directors has established (i) an Audit Committee, (ii) a Compensation Committee and (iii) a Nominating and Governance Committee. Each Committee has only independent directors as members.

Audit Committee

The Audit Committee consists of four directors: Mssrs. Bernstein (chairman), Myers, Greenacre and Berman. Each member of the committee is independent applying the definition of independence under the listing standards of the NYSE MKT and SEC regulations. The Audit Committee meets at least four times during the year. The Board has determined that Mr. Bernstein qualifies as an "audit committee financial expert" as defined by Item 407(d)(5)(ii) of Regulation S-K.

Pursuant to the terms of the Audit Committee charter, our Audit Committee is required to consist of at least three of our "independent" directors and shall serve at the pleasure of the Board of Directors. An "independent" director is defined as an individual who (a) is not our officer or salaried employee or an affiliate, (b) does not have any relationship that, in the opinion of the Board of Directors, would interfere with his or her exercise of independent judgment as an Audit Committee member, (c) meets the independence requirements of the SEC and the NYSE MKT or such other securities exchange or market on which our securities are traded and (d) except as permitted by the SEC and the NYSE MKT or such other securities exchange or market on which our securities are traded, does not accept any consulting, advisory or other compensatory fee from us.

The Audit Committee has a charter that requires the committee to oversee our accounting and financial reporting process, our system of internal controls regarding finance, accounting, legal compliance and ethics, and the audits of our financial statements, a current copy of which charter is available to stockholders on our website, *www.neostem.com* . The primary duties of the Audit Committee consist of, among other things:

- serving as an independent and objective party to monitor our financial reporting process, internal control system and disclosure control system;
- reviewing and appraising the audit efforts of our independent accountants;
- assuming direct responsibility for the appointment, compensation, retention and oversight of the work of the outside auditors and for the resolution of disputes between the outside auditors and our management regarding financial reporting issues;
- providing an open avenue of communication among the independent accountants, financial and senior management and the Board; and
- reviewing and approving all related party transactions.

Compensation Committee

Our Compensation Committee consists of three directors: Mssrs. Berman (chairman), Myers and Bernstein. Each such member of the Compensation Committee is independent applying the definition of independence under the listing standards of the NYSE MKT and SEC regulations. The Compensation Committee meets at least two times during each year.

Each member of our Compensation Committee must (i) be one of our independent directors satisfying the independence requirements of the NYSE MKT and other applicable regulatory requirements; (ii) qualify as an "outside director" under Section 162(m) of the Internal Revenue Code, as amended; and (iii) meet the requirements of a "non-employee director" for purposes of Section 16 of the Securities Exchange Act of 1934, as amended.

The Compensation Committee oversees the determination of all matters relating to employee compensation and benefits and specifically reviews and approves salaries, bonuses and equity-based compensation for our executive officers.

We have adopted a Compensation Committee charter which outlines the Compensation Committee's primary duties which are to:

- evaluate the performance of the Chief Executive Officer in light of our goals and objectives and determine the Chief Executive Officer's compensation based on this evaluation and such other factors as the Committee shall deem appropriate;
- approve all salary, bonus, and long-term incentive awards for executive officers;
- approve the aggregate amounts and methodology for determination of all salary, bonus, and long-term incentive awards for all employees other than executive officers;
- review and recommend equity-based compensation plans to the full Board of Directors and approve all grants and awards thereunder;
- review and approve changes to our equity-based compensation plans other than those changes that require stockholder approval under the plans, the requirements of the NYSE MKT or any exchange on which our securities may be listed and/or any applicable law;
- review and recommend to the full Board changes to our equity-based compensation plans that require stockholder approval under the plans, the requirements of the NYSE MKT or any exchange on which our securities may be listed and/or any applicable law;
- review and approve changes in our retirement, health, welfare and other benefit programs that result in a material change in costs or the benefit levels provided;
- administer our equity-based compensation plans; and
- approve, as required by applicable law, the annual Committee report on executive compensation (if required) for inclusion in our proxy statement.

A current copy of the Compensation Committee charter is available to stockholders on our website,*www.neostem.com*.

The Compensation Committee may form and delegate its authority to subcommittees as appropriate. Additionally, the Chief Executive Officer may make recommendations to the Compensation Committee relating to executive and director compensation.

Nominating and Governance Committee

Our Nominating and Governance Committee consists of three directors: Mssrs. Myers (chairman) , Greenacre and Mr. Potter. The Nominating and Governance Committee is empowered by the Board of Directors to recommend to the Board of Directors qualified individuals to serve on our Board of Directors and to identify the manner in which the Nominating and Governance Committee evaluates nominees recommended for the Board. All members of the Nominating and Governance Committee of the Board of Directors have been determined to be “independent directors” pursuant to the definition contained in the rules of the NYSE MKT and SEC regulations. Our Board of Directors has adopted a Nominating and Governance Committee charter to govern the Nominating and Governance Committee, a current copy of which is available to stockholders on our website, *www.neostem.com*.

Other Board Committees

The Board also maintains the following additional committees:

Finance Committee: The Finance Committee is authorized to make determinations from time to time with respect to the Company's financial matters, including with respect to the Company's operating budget, capital raising activities, the Company's 7% Convertible Series E Preferred Stock Warrant Holders and related matters.

Mergers and Acquisitions Committee: The Mergers and Acquisitions Committee is authorized to make determinations from time to time with respect to the Company's M&A and strategic activities and related matters.

Qualifications for Board Membership

The charter and guidelines developed by the Nominating and Governance Committee describe the minimum qualifications

for nominees and the qualities or skills that are necessary for directors to possess. Each nominee, among other factors listed in the Committee's guidelines:

- should possess the highest personal and professional standards of integrity and ethical values;
- must be committed to promoting and enhancing the long term value of our Company for our stockholders;
- should not have any interests that would materially impair his or her ability to (i) exercise independent judgment or (ii) otherwise discharge the fiduciary duties owed as a director to our Company and our stockholders;
- must have demonstrated achievement in one of more fields of business, professional, governmental, community, scientific or educational endeavor, and possess mature and objective business judgment and expertise;
- must have a general appreciation regarding major issues facing public companies of a size and operational scope similar to ours;
- must have adequate time to devote to the Board of Directors and its committees; and
- is expected to have sound judgment, derived from management or policy-making experience that demonstrates an ability to function effectively in an oversight role.

Diversity Considerations in Director Nominations

We do not have a formal diversity policy. We believe our Board of Directors represents a collection of individuals with a variety of complementary skills which, as a group, possess the appropriate skills and experience to oversee our Company's business. Our directors come from diverse backgrounds including medicine, accounting, private equity, and management of pharmaceutical and healthcare-related companies, including cell therapy.

The charter of our Nominating and Governance Committee provides that “[e]ach nominee will be considered both on his or her individual merits and in relation to existing or other potential members of the Board, with a view to establishing a well-rounded, diverse, knowledgeable, and experienced Board.” In accordance with the mission set out in its charter, our Nominating and Governance Committee considers a wide variety of qualifications, attributes and other factors and recognizes that a diversity of viewpoints and practical experiences can enhance the effectiveness of our Board. As part of its evaluation of each candidate, our Nominating and Governance Committee takes into account how that candidate's background, experience, qualifications, attributes and skills may complement, supplement or duplicate those of other prospective candidates.

Nominating and Governance Committee Procedures

Our Board of Directors believes we are well-served by our current directors. In the ordinary course, absent special circumstances or a material change in the criteria for Board of Directors membership, the Board of Directors will re-nominate incumbent directors who continue to be qualified for Board service and are willing to continue as directors. If an incumbent director is not standing for re-election, if a vacancy on the Board of Directors occurs between annual stockholder meetings or if our Board of Directors believes it is in our best interests to expand its size, the Board of Directors may seek out potential candidates for Board appointment who meet the criteria for selection as a nominee and have the specific qualities or skills being sought. Nominees for director must be discussed by the full Board of Directors and approved for nomination by the affirmative vote of a majority of our Board of Directors, including the affirmative vote of a majority of the independent directors. Three of our directors, Dr. Smith, Mr. Berman and Mr. Wei, were originally nominated in 2006, 2006 and 2009 respectively, pursuant to certain contractual rights. In addition, the appointment of to our Board was required pursuant to the terms of the PCT Merger Agreement.

The Nominating and Governance Committee assists the Board of Directors by identifying qualified candidates for director and recommends to the Board of Directors the director nominees for the annual meeting of stockholders. The Board of Directors will conduct a process of making a preliminary assessment of each proposed nominee based upon the resume and biographical information, an indication of the individual's willingness to serve and other background information. This information is evaluated against the criteria set forth above and our specific needs at that time. Based upon a preliminary assessment of the candidate(s), those who appear best suited to meet our needs may be invited to participate in a series of interviews, which are used as a further means of evaluating potential candidates. On the basis of information learned during this process, the Board of Directors will determine which nominee(s) to include in the slate of candidates that the Board of Directors recommends for election at each annual meeting of our stockholders.

Procedures for Considering Nominations Made by Stockholders

The Nominating and Governance Committee's charter and guidelines describe procedures for nominations to be submitted by stockholders, other than candidates who have previously served on the Board of Directors or who are recommended by the Board of Directors. The guidelines state that a nomination must be delivered to our Secretary at our principal executive offices not later than the 120th day prior to the date of the proxy statement for the preceding year's annual meeting; *provided, however* , that if the date of the annual meeting is more than 30 days after the anniversary date of the annual meeting, notice to be timely must be so delivered a reasonable time in advance of the mailing of our proxy statement for the annual meeting for the current year. The guidelines require a nomination notice to set forth as to each person whom the proponent proposes to nominate for election as a director, among other things: (a) all information relating to such person that is required to be disclosed in solicitations of proxies for election of directors pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended (including such person's written consent to being named in the proxy statement as a nominee and to serving as a director it elected) and (b) information that will enable the Nominating and Governance Committee to determine whether the candidate or candidates satisfy the criteria established pursuant to the charter and the guidelines for director candidates.

There will be no differences in the manner in which our Board of Directors evaluates nominees recommended by stockholders and nominees recommended by the Board of Directors or management, except that no specific process shall be mandated with respect to the nomination of any individuals who have previously served on the Board of Directors.

Stockholder Communications

Our Board of Directors has established a procedure that enables stockholders to communicate in writing with members of the Board of Directors. Any such communication should be addressed to our Secretary and should be sent to such individual c/o NeoStem, Inc. Any such communication must state, in a conspicuous manner, that it is intended for distribution to the entire Board of Directors. Under the procedures established by the Board of Directors, upon our Secretary's receipt of such a communication, a copy of such communication will be sent to each member of the Board of Directors, identifying it as a communication received from a stockholder. Absent unusual circumstances, at the next regularly scheduled meeting of the Board of Directors held more than two days after such communication has been distributed, the Board of Directors will consider the substance of any such communication.

Board and Committee Meeting Attendance

During the year ended December 31, 2012, our Board of Directors held five meetings, our Audit Committee held five meetings; our Compensation Committee formally held one meeting and our Nominating and Governance Committee formally held one meeting. our Board of Directors, our Audit Committee, our Compensation Committee and our Nominating and Governance Committee each took additional actions by written consent. Each director (except our former director, Mr. Shi) attended (or participated by telephone in) at least 75% of the total number of meetings of the Board and committees on which he or she served.

SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16(a) of the Securities and Exchange Act of 1934, as amended (the “Exchange Act”), requires the Company's directors, certain officers of the Company, and persons who beneficially own more than 10% of a registered class of the Company's equity securities, to file initial reports of ownership and reports of changes in ownership with the Securities and Exchange Commission. These persons are required by the Securities and Exchange Commission to furnish the Company with copies of all Section 16(a) reports that they file.

Based solely on a review of (i) Forms 3 and 4 and amendments thereto furnished to the Company during 2012, (ii) any Forms 5 and amendments thereto furnished to the Company with respect to 2012, and (iii) any written representations that no Form 5 was required, the Company believes that all such parties subject to the reporting requirements of Section 16(a) filed on a timely basis all such reports required during and with respect to the fiscal year ended December 31, 2012, except that Andrew Pecora and Richard Berman each inadvertently filed one late Form 4.

CODE OF ETHICS

We have adopted a code of ethics that applies to our directors, officers and employees, except to our Chief Executive Officer, Chief Financial Officer, and any principal accounting officer, controller, or persons performing similar functions (“Senior Financial Officers”), who are subject to a separate code of ethics. Both codes of ethics are available on our website, *www.neostem.com.* Our Code of Ethics for Senior Financial Officers is filed as Exhibit 14.1 to our Annual Report on Form 10-K for the year ended December 31, 2010.

ITEM 11. EXECUTIVE COMPENSATION.

Independent Compensation Consultant

The Compensation Committee retained an independent compensation consultant, Markson HRC, LLC (“Markson”), to provide comparative data on compensation practices in our industry for executive officers, Board members and Board committee members. This included compensation review for our Chief Executive Officer, senior executive officers (including the named executive officers in the table below) and for our directors with no committee assignments, as well as members of each of our Audit, Compensation and Nominating and Governance Committees. Their report provided competitive benchmarks for base salaries, bonuses, equity, perquisites and benefits, their observations and their broad recommendations. Although the Compensation Committee considers Markson's advice and recommendations about our executive and director compensation program together with input from management, the Compensation Committee ultimately makes its own decisions about these matters.

2012 Option Program - Description

On April 26, 2012, the Compensation Committee of the Board of Directors adopted a program (the “2012 Option Program”) whereby each participating officer was issued on April 26, 2012, an option (the “Option”) to purchase that number of shares of Common Stock equal to that portion of the participating officer's gross salary (the “Participating Salary”) for the period May 1, 2012 - July 31, 2012 (the “Election Period”) elected by the participating officer divided by $.25, the Black-Scholes value of an Option issued under the 2012 Option Program. The Option, the issuance of which is in lieu of payment of the Participating Salary, vests at the end of the month in which the Participating Salary to which it relates would have been paid and has a term of ten years despite any termination of employment of the Participating Officer. The per share exercise price is $.36, the closing price of the Common Stock on the date of the issuance of the Options. The gross Participating Salary for all Participating Officers is $181,309 and the total number of Options granted under the 2012 Option Program was 725,235. The Options were issued under the Company's 2009 Plan.

Summary Compensation Table

The following table sets forth certain summary compensation information with respect to NeoStem's Chief Executive Officer and NeoStem's two other most highly compensated executive officers, for services as executive officers for the last two fiscal years.

Name and Principal Function	Year	Salary	Bonus	Stock Awards(1)	Option Awards(1)	All Other Compensation	Total Compensation
Robin Smith, Chief Executive Officer	2012	$ 412,694 (2)	$ 363,000 (3)	$ 183,840	$ 638,941	$ 44,927 (4)	$ 1,643,403
	2011	$ 375,176 (5)	$ 330,000 (6)	$ —	$ 2,912,100 (7)	$ 30,496 (8)	$ 3,647,772
Robert Preti, President and Chief Scientific Officer of PCT	2012	$ 309,880 (9)	$ —	$ —	$ 97,578	$ —	$ 407,457
	2011	$ 300,808 (10)	$ —	$ —	$ 439,002	$ 6,359 (11)	$ 746,169
Catherine M. Vaczy, Vice President and General Counsel	2012	$ 255,350 (12)	$ —	$ 6,365	$ 123,480	$ 17,875 (13)	$ 403,070
	2011	$ 221,286	$ 60,000 (14)	$ —	$ 293,507	$ 16,325 (15)	$ 591,118

(1) Amounts shown under “Stock Awards” and “Option Awards” represent the aggregate grant date fair value computed in accordance with FASB ASC Topic 718, in accordance with SEC rules. See Note 9 to the Notes to the Consolidated Financial Statements for a discussion of assumptions made in such valuations. All stock awards, option awards and other shares discussed in this table were issued under the Company's Amended & Restated 2009 Equity Compensation Plan (the "Plan"), with a per share price generally equal to the fair market value of a share of common stock on the date of grant.

(2) Pursuant to an arrangement approved by the Compensation Committee, Dr. Smith elected to receive an aggregate of $218,090 of her 2012 salary in shares of Common Stock and Options issued under the Plan in lieu of cash.

(3) On March 6, 2013, Dr. Smith elected to receive a portion of her 2012 bonus in shares of NeoStem, Inc.'s common stock(the “Shares”), $.001 par value. Dr. Smith received 100,000 Shares based on a per share purchase price of $0.53, the fair market value at the time of election.

(4) Consisted of (i) a car allowance of $12,000, (ii) approximately $1,903 health insurance reimbursement, (iii) approximately $14,942 paid by us on behalf of Dr. Smith for life and disability insurance; and (iv) $16,083 for club membership dues.

(5) Pursuant to an arrangement approved by the Compensation Committee, Dr. Smith elected to receive an aggregate of $172,761 of her 2011 salary, in shares of Common Stock of the Company issued under our 2009 Amended & Restated Equity Compensation Plan at the then-market price.

(6) In 2011, Dr. Smith elected to accept her entire bonus in shares of Common Stock of the Company.

(7) Includes $722,900 attributable to the incremental compensation cost recognized for the acceleration of certain of Dr. Smith's stock options on April 4, 2011 in connection with an amendment to her employment agreement.

(8) Consisted of (i) a car allowance of $12,000, (ii) approximately $15,946 paid by us on behalf of Dr. Smith for life and disability insurance, and (iii) approximately $2,550 for club membership dues.

(9) Pursuant to an arrangement approved by the Compensation Committee, Dr. Preti elected to receive an aggregate of $32,761 of his 2012 salary in shares of Common Stock and Options issued under the Plan in lieu of cash.

(10) As a result of the PCT Merger and Dr. Preti's employment as President of PCT effective upon the PCT Merger, Dr. Preti is considered to be an executive officer of the Company effective January 19, 2011. Salary reflected in this table is pursuant to an employment agreement effective on such date.

(11) This amount consists of PCT's contribution to Dr. Preti's 401(k).

(12) Pursuant to an arrangement approved by the Compensation Committee, Ms. Vaczy elected to receive an aggregate of $37,756 of her 2012 salary in Options issued under the Plan.

(13) Consisted of (i) a car allowance of $12,000, (ii) approximately $875 health insurance reimbursement; and (iii) $5,000 for club membership dues.

(14) Pursuant to a letter agreement dated January 6, 2012, Ms. Vaczy agreed to accept $10,000 of her bonus in shares of common stock issued under the Plan.

(15) Consisted of (i) a car allowance of $12,000; and (ii) $4,325 for club membership dues.

NEOSTEM EMPLOYMENT AGREEMENTS AND EQUITY GRANTS

Employment Agreements

This section contains a description of the employment agreements NeoStem has (or had during the years ended December 31, 2011 and 2012) with the officers named in the Summary Compensation Table. All descriptions are qualified in their entirety by reference to such agreements. The descriptions to follow provide further information about the compensation that is shown in the Summary Compensation Table for these officers. They also give you information about payments that could be received by these officers under certain circumstances at such time as their employment with NeoStem ends, for example, certain severance arrangements.

Robin L. Smith - Chief Executive Officer and Chairman of the Board

On May 26, 2006, we entered into an employment agreement with Dr. Robin L. Smith, pursuant to which Dr. Smith serves as our Chief Executive Officer, which agreement has been subsequently amended from time to time. Under this agreement, as amended through July 29, 2009 (as so amended, the "Agreement"), Dr. Smith was employed through December 31, 2011 and as of September 27, 2009 was entitled to receive a base salary of $332,750 per year (increasing by 10% on each annual anniversary of September 27), an annual bonus determined by the Board of at least $275,000, and certain other perquisites including a car allowance, variable life insurance, and reimbursement for fees for a New York club to be used for business entertaining and meetings. To help conserve cash, Dr. Smith elects from time to time to receive her net salary (and bonus) in shares of the Company's common stock, pursuant to an arrangement approved by the Compensation Committee. Pursuant to an arrangement approved by the Compensation Committee, Dr. Smith elected to receive an aggregate of $172,761 of her 2011 salary, and has continued in 2012 to receive a significant portion of her salary, in shares of Common Stock of the Company issued under our 2009 Equity Compensation Plan at the then-market price. In 2011, Dr. Smith elected to accept her entire bonus in shares of Common Stock of the Company. Dr. Smith's Participating Salary in the 2012 Option Program is $100,656, her full gross salary for the Election Period. As of October 29, 2009, the Compensation Committee of the Board approved the reimbursement to Dr. Smith of premiums, up to $4,000 annually, for disability insurance covering Dr. Smith. We maintain key-man life insurance on Dr. Smith in the amount of $3,000,000.

On April 4, 2011, the Company entered into an amendment of the Agreement. Pursuant to the amendment, (i) the term of the Agreement was extended from December 31, 2011 to December 31, 2012; (ii) Dr. Smith will receive cash bonuses on October 1, 2011 and 2012 in the minimum amount of 110% of the prior year's bonus; (iii) a failure to renew the Agreement at the end of the term regardless of reason shall be treated as a termination by the Company without cause; (iv) the Company shall pay Dr. Smith her base salary and COBRA premiums (a) for one year in the event of a termination of the agreement by Dr. Smith for other than good reason and (b) during any period during which she is bound by non-competition, non-solicitation or similar covenants with the Company (such payments shall not be made during the time Dr. Smith is also receiving payments under (iii) or (iv)(a)); (v) Dr. Smith was granted an option to purchase 1,500,000 shares of Common Stock at a per share exercise price equal to the closing price of the Common Stock on the date of the amendment, vesting as to 500,000 shares on each of the date of grant, December 31, 2011 and December 31, 2012; (vi) all other unvested options held by Dr. Smith were immediately vested; (vii) any vested options previously or hereafter granted to Dr. Smith during the remainder of the term shall remain exercisable following termination of employment for the full option term until the expiration date; (viii) the Company agreed that, with the exception of the period of time during which Dr. Smith is a Company affiliate and for 90 days thereafter (during which time any shares owned by or issued to Dr. Smith will bear the Company's standard affiliate legend), the Company will not place legends on shares on Common Stock owned by Dr. Smith restricting the transfer of such shares so long as such shares are sold under an effective registration statement, pursuant to Rule 144 or are eligible for sale under Rule 144 without volume limitations; and (ix) if Dr. Smith ceases to be employed by the Company and for so long as she continues to own shares of Common Stock the sale of which would require that the current public information requirement of Rule 144 be met, the Company will use its reasonable best efforts to timely meet those requirements or obtain appropriate extensions or otherwise make available such information as is required. Except as set forth in the amendment, the Agreement remains unchanged.

On November 13, 2012, the Company entered into an amendment of its employment agreement with Dr. Robin L. Smith, pursuant to which, as previously amended (the "Agreement"), Dr. Smith serves as Chairman of the Board and Chief Executive Officer of the Company. Pursuant to the amendment, (i) the term of the Agreement was extended for two years to December 31, 2014; (ii) Dr. Smith's annual base salary was increased to $495,000; (iii) Dr. Smith will be eligible to receive a cash bonus for each of 2013 and 2014, based on a target amount of 50% of annual base salary assuming good progress toward the accomplishment of objectives set for Dr. Smith and the Company by the Compensation Committee, and which may be awarded in an amount up to 100% of annual base salary for extraordinary performance, all as determined by the Compensation Committee; (iv) all unvested options held by Dr. Smith as of the date of the amendment were immediately vested; (v) a failure to renew the Agreement at the end of the term regardless of reason shall be treated as a termination by the Company without cause; (vi) upon the Company's termination of Dr. Smith's employment without cause or by Dr. Smith with good reason, (a) the Company is to pay Dr. Smith her base salary and COBRA premiums for one year following the termination plus the previous year's annual bonus payment, and (b) all of Dr. Smith's stock options which are vested as of the termination date plus any additional options that would have vested by the passage of time during the 12 month period following such date (which additional options shall become immediately and fully vested as of the termination date) shall remain exercisable for the balance of their 10 year term; (vii) in the event the Company terminates Dr. Smith's employment with cause or Dr. Smith resigns, the Company is to pay Dr. Smith her then current base salary and COBRA premiums for one year; and (viii) any vested options previously or hereafter granted to Dr. Smith during the remainder of the term shall remain exercisable notwithstanding any termination of employment for the full option term until the expiration date. Except as set forth in the amendment, the Agreement remains unchanged.

Robert Preti - President of Progenitor Cell Therapy, LLC

On September 23, 2010 we entered into a four year employment agreement with Dr. Preti (the "Preti Employment Agreement") which became effective on January 19, 2011, upon the closing of the PCT Merger (the "Commencement Date"). Pursuant to the Preti Employment Agreement, Dr. Preti

serves as President of PCT. The Preti Employment Agreement provides for, among other things, (i) an initial annual base salary of $330,000, which was increased to $350,000 on January 19, 2012, and (ii) an option to purchase 400,000 shares of NeoStem Common Stock under the NeoStem, Inc. 2009 Equity Compensation Plan at a per share exercise price of $1.50, vesting as to 100,000 shares on each of the first, second, third and fourth annual anniversaries of the Commencement Date, and (iii) eligibility for cash bonuses as determined by the compensation committee of NeoStem's Board of Directors. The Preti Employment Agreement further provides that upon Termination without Cause (as defined) or Resignation for Good Reason (as defined), Dr. Preti will be entitled to certain post-termination benefits in consideration of executing a release and a confidentiality, non-compete, non-solicitation and inventions assignment agreement and compliance therewith, including (i) continuation of his base salary for up to twelve (12) months in accordance with customary payroll practices, (ii) reimbursement of COBRA healthcare premiums for up to twelve (12) months, and (iii) the accelerated vesting for all unvested option shares that would have vested during the twelve (12) months following termination of employment had Dr. Preti remained in the employ of PCT. The Preti Employment Agreement also gives PCT the option, in its sole discretion, to continue Dr. Preti's base salary for an additional twelve (12) months (for a total of twenty-four (24) months) in consideration for a twelve month extension of the non-competition restrictive covenants to which Dr. Preti is subject. Additionally, we maintain key-man life insurance on Dr. Preti in the amount of $3,000,000. On April 26, 2012, Dr. Preti elected to participate in the Company's 2012 Option Program with a Participating Salary equal to $13,750. An additional $20,000 of his annual salary is paid on a quarterly basis through the issuance of shares of our Common Stock.

Catherine Vaczy-Vice President and General Counsel

Catherine M. Vaczy serves as our Vice President and General Counsel pursuant to a letter agreement dated January 26, 2007, which agreement has been subsequently amended and extended from time to time. This agreement, as amended through July 7, 2010 (as so amended, the “Agreement”), had a term running through December 31, 2011 and provided for (i) a base salary of $211,000 per annum (which pursuant to the terms of the Agreement increased by 10% to $232,100 effective July 7, 2011); (ii) a bonus of $50,000, half of which was payable on July 7, 2010 and half of which became payable upon the achievement of a business milestone (our acquisition of PCT); (iii) a minimum bonus of $60,000 during the second year of the term; (iv) an option granted on July 7, 2010 under the 2009 Plan to purchase 350,000 shares of common stock , which vested as to 100,000 shares on the one year anniversary of the grant date, as to 50,000 shares on December 31, 2011, and as to the remaining 200,000 shares upon the achievement of business milestones, all of which have since been achieved and therefore vested; and (v) business club dues not to exceed $5,000 annually. The Compensation Committee awarded Ms. Vaczy a bonus of $60,000 for 2011, which was paid as to $30,000 in cash in 2011 and as to the remainder as described in the following paragraph.

On January 6, 2012, we entered into a letter agreement (the "January 2012 Extension") pursuant to which Ms. Vaczy's Agreement was amended as follows: (i) her term was extended through December 31, 2012; (ii) her base salary was increased by 10% to $255,350 effective July 7, 2012 (the full increase was paid through the issuance of an option with an exercise price equal to the fair market value on the date of the January 2012 Extension, vesting ratably through July 6, 2013); (iii) she was granted an option to purchase 150,000 shares of common stock, with a per share purchase price of $.52 which vested on December 31, 2012 and a previously milestone-based option grant amount of 50,000 vested immediately; and (iv) the Company agreed to pay dues to a private club of Ms. Vaczy's choosing (not to exceed $5,000 annually). Additionally, Ms. Vaczy agreed to accept $10,000 of her 2011 cash bonus in shares of the Company's common stock and the remaining $20,000 that was due and owing her was paid. On November 13, 2012, the Company entered into a letter agreement (the "November 2012 Extension") whereby Ms. Vaczy's term of employment as the Company's Vice President and General Counsel was extended through July 8, 2013.

Upon Ms. Vaczy's termination of employment, pursuant to the November 2012 Extension, the Company shall pay Ms. Vaczy severance equal to three months of her compensation, including insurance, contingent upon the Company receiving a release as contemplated in her original Agreement. In addition, pursuant to Ms. Vaczy's Agreement, options granted or to be granted to Ms. Vaczy shall remain exercisable despite any termination of employment for a period of not less than two years from the date of termination of employment.

Indemnification Agreements

As of October 2, 2009, we entered into indemnification agreements with our Chief Executive Officer, Chief Financial Officer, General Counsel, certain other employees and each of its directors pursuant to which we have agreed to indemnify such party to the full extent permitted by law, subject to certain exceptions, if such party becomes subject to an action because such party is our director, officer, employee, agent or fiduciary.

OUTSTANDING EQUITY AWARDS AT FISCAL YEAR-END

The following table sets forth information on option awards outstanding at December 31, 2012 for NeoStem's named Executive Officers.

Name	Number of Securities Underlying Unexercised Options # Exercisable	Number of Securities Underlying Unexercised Options # Unexercisable	Equity Incentive Plan Awards: Number of Securities Underlying Unexercised Unearned Options	Option Exercise Price***	Option Expiration Date
Robin L. Smith	15,000 (1)	—	—	$ 1.90	12/4/2016
	55,000 (2)	—	—	$ 1.90	1/17/2017
	250,000 (3)	—	—	$ 1.90	9/26/2017
	120,000 (4)	—	—	$ 1.63	2/26/2018
	5,000 (5)	—	—	$ 1.13	10/30/2018
	100,000 (6)	—	—	$ 1.95	5/20/2019
	500,000 (7)	—	—	$ 1.71	7/6/2019
	750,000 (8)	—	—	$ 2.04	10/28/2019
	229,678 (9)	—	—	$ 1.90	10/29/2016
	200,000 (10)	—	—	$ 1.66	11/3/2019
	1,500,000 (11)	—	—	$ 1.74	4/3/2021
	790,000 (12)	—	—	$ 0.52	1/3/2022

	402,627 [13]	—	—	$ 0.36	4/25/2022
	700,000 [14]	—	—	$ 0.52	7/4/2022
Catherine M. Vaczy	1,500 [15]	—	—	$ 1.90	4/19/2015
	10,000 [16]	—	—	$ 1.90	6/1/2016
	15,000 [17]	—	—	$ 1.90	12/4/2016
	35,000 [18]	—	—	$ 1.90	9/26/2017
	12,000 [19]	—	—	$ 1.70	12/18/2017
	36,000 [20]	—	—	$ 1.63	2/26/2018
	5,000 [21]	—	—	$ 1.13	10/30/2018
	75,000 [22]	—	—	$ 1.95	5/20/2019
	200,000 [23]	—	—	$ 1.71	7/7/2019
	100,000 [24]	—	—	$ 2.04	10/28/2019
	53,955 [25]	—	—	$ 1.90	10/29/2016
	100,000 [26]	—	—	$ 1.66	11/3/2019
	350,000 [27]	—	—	$ 1.75	7/6/2020
	250,000 [28]	—	—	$ 1.74	4/3/2021
	66,666 [29]	133,334 [29]	—	$ 0.52	1/3/2022
	150,000 [30]	—	—	$ 0.52	1/5/2022
	58,025 [31]	—	—	$ 0.36	4/25/2022
	32,234 [32]	32,238	—	$ 0.44	6/24/2022
Robert Preti	100,000 [33]	300,000 [33]	—	$ 1.50	1/18/2021
	92,133 [34]	184,267 [34]	—	$ 0.52	1/3/2022
	55,000 [35]	— [35]	—	$ 0.36	4/25/2022

** All option awards were made under and are governed by the terms of NeoStem's 2009 Amended & Restated Equity Compensation Plan which was approved by our stockholders at our 2012 annual stockholder meeting on October 5, 2012 . the 2009 Amended & Restated Plan (i) merged the 5,700,000 shares reserved for issuance under the Company's 2009 Non-U.S. Based Equity Compensation Plan (the "Non-U.S. Plan") with and into the 2009 Equity Plan, and (ii) increased by 4,500,000 the aggregate number of shares authorized for issuance under the 2009 Equity Plan.

(1) Consists of options granted to Dr. Smith by the Compensation Committee on December 5, 2006, which vested as to 10,000 options upon grant and as to 5,000 options on August 9, 2007 upon our Common Stock being listed for trading on the American Stock Exchange (now known as the NYSE Amex).

(2) This option was granted to Dr. Smith in connection with her entering into an amendment to her employment agreement on January 26, 2007, and vested as to (i) 25,000 options upon the first closings in NeoStem's January 2007 private placement, (ii) 15,000 options on June 30, 2007 and (iii) 15,000 options on December 31, 2007.

(3) Consists of options granted to Dr. Smith by the Compensation Committee September 27, 2007, which vested as to 150,000 options on the date of grant and as to 100,000 options upon consummation of the Erye Merger on October 30, 2009.

(4) Consists of options granted to Dr. Smith by the Compensation Committee on February 27, 2008, which vested (i) as to 40,000 options on the date of grant, (ii) as to 30,000 options upon consummation of the Erye Merger on October 30, 2009, (iii) as to 30,000 options on September 2, 2008 upon the achievement of a business milestone, and (iv) as to 20,000 options on October 31, 2008 upon the achievement of a business milestone.

(5) This option was granted to Dr. Smith by the Compensation Committee on October 31, 2008 and vested on November 2, 2008 upon the achievement of a business milestone.

(6) This option was granted to Dr. Smith by the Compensation Committee on May 8, 2009 and was vested in its entirety on the date of grant.

(7) This option was granted to Dr. Smith by the Compensation Committee on July 8, 2009 and vested as to 250,000 options on the date of grant and as to an additional 250,000 options upon consummation of the Erye Merger on October 30, 2009.

(8) An option was granted to Dr. Smith by the Compensation Committee effective October 29, 2009 upon approval of the Erye Merger and the increase in shares under the 2009 Equity Compensation Plan consisting of an aggregate of 750,000 option shares, and was scheduled to vest as to 250,000 upon the achievement of a specific business milestone, 250,000 on July 8, 2010 and 250,000 on July 8, 2011. On July 7, 2010, the Compensation Committee accelerated the vesting of the 250,000 options originally scheduled to vest upon achievement of a business milestone and the 250,000 options originally scheduled to vest on July 8, 2011. As a result, as of July 8, 2010, this option was fully vested.

(9) This option was granted to Dr. Smith by the Compensation Committee on October 30, 2009 and was vested in its entirety on the date of grant.

(10) This option was granted to Dr. Smith by the Compensation Committee on November 4, 2009 and originally scheduled to vest as to one-third of option shares on each one year anniversary of the date of grant. Pursuant to Dr. Smith's April 4, 2011 Employment Agreement amendment, the vesting of this option was accelerated and as of that date the option was fully vested.

(11) Consists of options granted to Dr. Smith pursuant to the terms of her April 4, 2011 Employment Agreement Amendment which vested as to 500,000 shares on each of the date of grant and December 31, 2011 and and was scheduled to vest as to 500,000 shares on December 31, 2012. The vesting of

this option was accelerated pursuant to Dr. Smith's November 13, 2012 Employment Agreement Amendment.

(12) Consists of options granted to Dr. Smith by the Compensation Committee on January 4, 2012 which vested as to 263,333 options on the date of grant, and was scheduled to vest as to (i) 263,333 options on January 4, 2013, and (ii) 263,334 options on January 4, 2014. The vesting of this option was accelerated pursuant to Dr. Smith's November 13, 2012 Employment Agreement Amendment.

(13) On April 26, 2012, the Compensation Committee adopted a program (the "2012 Option Program") whereby each participating officer was issued on April 26, 2012 an option (the "Option") to purchase that number of shares of Common Stock equal to that portion of each Participating Officer's gross salary (the "Participating Salary") for the period May 1, 2012 - July 31, 2012 (the "Election Period"). The Option, the issuance of which is in lieu of payment of the Participating Salary vests at the end of the month in which the Participating Salary to which it relates would have been paid and has a term of ten years despite any termination of employment of the Participating Officer. Dr. Smith's Participating Salary for the Election Period was her full salary. Accordingly the options vested as to 134,209 on May 31, 2012, 134,209 on June 30, 2012 and 134,209 on July 31, 2012.

(14) This option was granted to Dr. Smith by the Compensation Committee on July 5, 2012 and was vested in its entirety on the date of grant.

(15) This option was granted to Ms. Vaczy pursuant to the terms of her employment agreement dated April 20, 2005 and was originally scheduled to vest as to 500 shares on April 20, 2006; as to an additional 500 shares on April 20, 2007 and as to the remaining 500 shares on April 20, 2008. As a condition of the closing of the June 2006 private placement, Ms. Vaczy entered into a letter agreement with NeoStem pursuant to which she agreed to convert $44,711 in accrued salary into shares of Common Stock at a per share price equal to $4.40 (the price of the shares being sold in the June 2006 private placement) and further agreed to a reduction in her base salary by 25% until the achievement by NeoStem of certain milestones, in partial consideration for which the vesting of this option was accelerated such that it became fully vested as of June 2, 2006, the date of the closing of the June 2006 private placement. This was not considered a material change in the terms of such option and accordingly the fair value was not adjusted.

(16) This option was granted to Ms. Vaczy pursuant to the letter agreement described in footnote 15, above, and was scheduled to vest as to 33% of the shares upon NeoStem reaching $1,000,000 in cumulative revenues; as to an additional 33% of the shares upon NeoStem reaching $2,000,000 in cumulative revenues; and as to the remaining 34% upon NeoStem reaching $3,000,000 in cumulative revenues. On October 31, 2008, this business milestone was modified pursuant to an action of the Compensation Committee of the Board of Directors and the option vested immediately. This was not considered a material change in the terms of such option and accordingly the fair value was not adjusted.

(17) This option was granted to Ms. Vaczy by the Compensation Committee on December 5, 2006 and was vested in its entirety in 2007.

(18) Consists of options granted to Ms. Vaczy by the Compensation Committee on September 27, 2009, which vested (i) as to 15,000 options on the date of grant, (ii) as to 10,000 options on November 13, 2007 upon the achievement of a specific business milestone, and (iii) as to 10,000 options upon consummation of the CBH Merger on October 30, 2009.

(19) This option was granted to Ms. Vaczy by the Compensation Committee on December 19, 2007 and vested in its entirety on January 1, 2008.

(20) Consists of options granted to Ms. Vaczy by the Compensation Committee on February 27, 2008, which vested (i) as to 10,000 options on the date of grant, (ii) as to 10,000 options upon consummation of the CBH Merger on October 30, 2009, and (iii) as to 16,000 options on September 2, 2008 upon the achievement of a business milestone.

(21) This option was granted to Ms. Vaczy by the Compensation Committee on October 31, 2008 and vested on November 2, 2008 upon the achievement of a business milestone.

(22) This option was granted to Ms. Vaczy by the Compensation Committee on May 21, 2009 and was fully vested on the date of grant.

(23) This option was granted to Ms. Vaczy by the Compensation Committee on July 8, 2009 and vested as to 100,000 options on July 8, 2009 and 100,000 options vested on October 29, 2009.

(24) This option was granted to Ms. Vaczy by the Compensation Committee on October 29, 2009 and was fully vested on July 8, 2010.

(25) This option was granted to Ms. Vaczy by the Compensation Committee on October 30, 2009 and was fully vested on October 30, 2009.

(26) This option was granted to Ms. Vaczy by the Compensation Committee on November 4, 2009 and vested as to: (i) 33,333 options on November 4, 2010; (ii) 33,333 on November 4, 2011; and (iii) 33,334 on November 4, 2012.

(27) This option was granted to Ms. Vaczy by the Compensation Committee on July 7, 2010 and vested as to 100,000 options on July 7, 2011, 50,000 options on December 31, 2011 and 200,000 shall vest upon achievement of a certain milestone.

(28) This option was granted to Ms. Vaczy by the Compensation Committee on April 4, 2011 and vested as to 125,000 options on the date of grant and 125,000 options on April 4, 2012.

(29) Consists of options granted to Ms. Vaczy by the Compensation Committee on January 4, 2012 which vested as to (i) 66,666 options on the date of grant, (ii) 66,667 options on January 4, 2013, and (iii) 66,667 options are scheduled to vest on January 4, 2014.

(30) This option was granted to Ms. Vaczy pursuant to a letter agreement dated January 6, 2012 and was fully vested on December 31, 2012.

(31) On April 26, 2012, the Compensation Committee adopted a program (the "2012 Option Program") whereby each participating officer was issued on April 26, 2012 an option (the "Option") to purchase that number of shares of Common Stock equal to that portion of each Participating Officer's gross salary (the "Participating Salary") for the period May 1, 2012 - July 31, 2012 (the "Election Period"). The Option, the issuance of which is in lieu of payment of the Participating Salary vests at the end of the month in which the Participating Salary to which it relates would have been paid and has a term of ten years despite any termination of employment of the Participating Officer. Ms. Vaczy's Participating Salary for the Election Period was her full salary. Accordingly the options vested as to 19,342 on May 31, 2012, 19,342 on June 30, 2012 and 19,341 on July 31, 2012.

(32) On July 25, 2012 pursuant to Compensation Committee consent, Ms. Vaczy agreed to accept this option in lieu of her previously agreed upon cash raise which vests as to one twelvth beginning on July 31, 2012 through July 31, 2013.

(33) Consists of options granted to Dr. Preti pursuant to the terms of his employment agreement dated as of September 23, 2010 and effective on January 19, 2011 upon the closing of the PCT Merger, which are scheduled to vest as to 100,000 shares on each of the first, second, third and fourth one year anniversaries of the effective date of his employment agreement.

(34) Consists of options granted to Dr. Preti by the Compensation Committee on January 4, 2012, which vested as to: (i) 92,133 on January 4, 2012, (ii) 92,133 on January 4, 2013 and, (iii) 92,334 on January 4, 2014.

(35) Consists of options granted to Dr. Preti pursuant to the 2012 Option Program which vested as to 27,500 on May 31, 2012 and 27,500 on June 30, 2012.

NEOSTEM DIRECTOR COMPENSATION

General Information

Directors who are employees of NeoStem or its wholly-owned subsidiaries do not receive additional cash compensation for serving as directors. NeoStem's non-employee directors are reimbursed for out-of-pocket travel expenses incurred in their capacity as NeoStem directors. Pursuant to NeoStem's 2009 Amended & Restated Equity Compensation Plan, all directors (including independent directors) are eligible to receive equity awards. There were no option awards granted during 2012 to NeoStem's directors, other than as reflected in the Summary Compensation Table or as reflected below. There were no stock awards granted during 2012 to any of NeoStem's directors.

The following table sets forth information on all compensation to NeoStem's directors (other than as reflected in the Summary Compensation Table) for the year ended December 31, 2012.

Name	Year	Fees Earned or Paid in Cash	Stock Awards[1]	Option Awards[1]	Total Compensation
Richard Berman[2]	2012	$ 22,500	$ 95,900	$ —	118,400
Steven S. Myers[3]	2012	$ 22,500	$ 95,900	$ —	118,400
Drew Bernstein [4]	2012	$ 22,500	$ —	$ 65,361	87,861
Edward C. Geehr, M.D.[5]	2012	$ 15,000	$ —	$ 48,344	63,344
Eric C. Wei[6]	2012	$ 22,500	$ 69,900	$ —	92,400
Shi Mingsheng[7]	2012	$ 15,000	$ —	$ 40,840	55,840
Martyn Greenacre[8]	2012	$ 22,500	$ 69,900	$ —	92,400

(1) Amounts shown under " Stock Awards" and "Option Awards" represent the aggregate grant date fair value computed in accordance with FASB ASC Topic 718, in accordance with SEC rules. See Note 14 for a discussion of assumptions made in such valuations. All stock awards, option awards and other shares discussed in this table were issued under the Company's 2003 Equity Participation Plan, 2009 Equity Compensation Plan or 2009 Non-U.S. Equity Compensation Plan, with a per share price generally equal to the fair market value of a share of common stock on the date of grant.

(2) At December 31, 2012, Mr. Berman had options to purchase 349,387 shares of NeoStem Common Stock outstanding, all of which were vested.

(3) At December 31, 2012, Mr. Myers had options to purchase 349,387 shares of NeoStem Common Stock outstanding, all of which were vested. At December 31, 2012, Mr. Myers had a total of 360,306 shares in stock awards outstanding, all of which were vested.

(4) At December 31, 2012, Mr. Bernstein had options to purchase 588,685 shares of NeoStem Common Stock outstanding, all of which were vested.

(5) At December 31, 2012, Dr. Geehr had options to purchase 403,685 shares of NeoStem Common Stock outstanding, all of which were vested. As previously disclosed, Dr. Geehr did not stand for re-election to our Board at the 2012 annual stockholder meeting.

(6) At December 31, 2012, Mr. Wei had options to purchase 150,000 shares of NeoStem Common Stock outstanding, 150,000 of which were vested.

(7) Mr. Shi did not participate in the equity portion of the 2009 Board of Directors Compensation Plan. At December 31, 2011, Mr. Shi had options to purchase 400,000 shares of NeoStem Common Stock, 300,000 of which were vested. An additional 100,000 options vested in January 2012 upon achievement of a specified milestone. As previously disclosed and in connection the Erye divestiture, Mr. Shi Mingsheng was not nominated for re-election to our Board of Directors at our 2012 Annual Shareholders meeting, and his options were canceled.

(8) Mr. Greenacre joined the Board on December 8, 2011. Mr. Greenacre's compensation as a Board member commenced under the 2012 Board of Directors Compensation Plan.

On November 4, 2009, the Compensation Committee of NeoStem's Board of Directors approved a compensation plan for the Board of Directors (the " 2009 Board of Directors Compensation Plan"). The 2009 Board of Directors Compensation Plan provided that each Board member was authorized to receive options to purchase 150,000 shares of our common stock for his or her service as a Board member. These options vest as to 50,000 shares on each of the first, second and third anniversaries of the date of grant. The 2009 Board of Directors Compensation Plan further provided that Chairs of the Board, Chairs of a Board Committee and members of the Board of Directors of any of NeoStem's subsidiaries were authorized to receive options to purchase 50,000 shares of Common Stock for his or her service as a Chair of the Board or a Committee of the Board or as a member of the Board of any of our subsidiaries. These options vest as to 16,667 shares of our common stock on each of the first and second anniversary of the date of grant and as to the remaining 16,666 shares of our common stock on the third anniversary of the date of grant. In each case, the exercise price of options authorized pursuant to the 2009 Board of Directors Compensation Plan is equal to the closing price of a share of our common stock on the date of grant. One of our directors, Mr. Shi, did not participate in the equity portion of the 2009 Board of Directors Compensation Plan. Under the Board of Directors Compensation Plan, commencing January 1, 2010, directors who are not employees of NeoStem, Inc. or its wholly owned subsidiaries were also entitled to quarterly cash fees equal to $15,000, payable in arrears.

On January 4, 2012 the Compensation Committee, after consultation with the Board, adopted the NeoStem 2012 Board of Directors Compensation Plan (the "Board of Directors Compensation Plan"), which provides that each Board member who is not an employee of NeoStem or one of its wholly-owned subsidiaries shall be authorized to receive, in such Board member's sole discretion, either (i) options to purchase 120,000 shares of the Company's common stock; or (ii) a stock award of 120,000 shares of our Common Stock, in either case issued under and subject to the terms of the 2009 Plan, for his or her service as a Board member. These options and shares shall vest fully on the date of grant. The Board of Directors Compensation Plan further provides that the Chair of each Board Committee who is not an employee of the Company or any of its wholly-owned subsidiaries shall be authorized to additionally receive, in such Committee Chair's sole discretion, either (i) options to purchase 50,000 shares of our Common Stock; or (ii) a stock award of 50,000 shares of our Common Stock, in either case issued under and subject to the terms of the 2009 Plan, for his or her service as a Committee Chair. These options and shares shall vest fully on the date of grant. In each case, the exercise price of options authorized pursuant to the Board of Directors Compensation Plan shall be equal to the closing price of a share of our Common Stock on the date of grant. The foregoing shall be issued on January 4th of each year during the term of the Board of Directors Compensation Plan, commencing January 4, 2012. Directors who are not employees of NeoStem or its wholly-owned subsidiaries are also entitled to cash fees equal to $7,500 per calendar quarter commencing with the quarterly period ending March 31, 2012. Notwithstanding the foregoing, the Compensation Committee shall have the discretion to renew or adjust, as appropriate, this Board of Directors Compensation Plan at the end of each calendar year, including with respect to whether to continue offering the choice under such plan between options and stock. In accordance with the above, on January 4, 2012 the Company issued an aggregate of 410,000 options to purchase shares of our Common Stock at a per share exercise price of $0.52 and 580,000 shares of our Common Stock (120,000 of which were granted under the Company's 2009 Non-U.S. Plan).

On January 3, 2013 the Compensation Committee, after consultation with the Board, amended the Board of Directors Compensation Plan which provides that for 2013 and thereafter: should a Board member who is not an employee of NeoStem or one of its wholly-owned subsidiaries elect, as their compensation, options to purchase the Company's common stock over a common stock award as referenced above, the option award shall now equal 187,000 options (the common stock award of 120,000 shall remain the same should the Board member elect to receive shares of common stock over options) and should the Chair of a Board Committee elect to receive options over common stock, the Committee Chair shall be granted 78,000 options (the common stock award of 50,000 shall remain the same. All other terms of the Board of Directors Compensation Plan remain the same.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS.

The following table sets forth information regarding the number of shares of NeoStem Common Stock beneficially owned as of February 20, 2013 by:

- each of NeoStem's named executive officers;
- each of NeoStem's current directors;
- all of NeoStem's current directors and executive officers as a group; and
- each person who is known by NeoStem to beneficially own 5% or more of the NeoStem Common Stock.

Beneficial ownership is determined in accordance with the rules of the SEC and generally includes any shares over which a person possesses sole or shared voting or investment power. Shares of NeoStem Common Stock that may be acquired upon exercise of stock options or warrants which are currently exercisable or which become exercisable within 60 days after the date indicated in the table are deemed beneficially owned by the optionees or warrant holders. Unless otherwise indicated, and subject to any applicable community property laws, to NeoStem's knowledge the persons or entities named in the table below have sole voting and investment power with respect to all shares indicated as beneficially owned by them.

Unless otherwise indicated, the address of the beneficial owner is c/o NeoStem, Inc., 420 Lexington Avenue, Suite 350, New York, NY 10170.

As of February 20, 2013, there were 168,216,262 shares of NeoStem Common Stock outstanding. As of such date, the current directors and executive officers of NeoStem collectively owned beneficially 47,372,996 shares, or approximately 25.7% of the outstanding shares.

Name and Address of Beneficial Holder	Number of Shares Beneficially Owned	Percentage of Common Stock Beneficially Owned
Robin L. Smith, M.D. Chief Executive Officer and Chairman of the Board	7,505,525 (1)	4.3%
Robert A. Preti, Ph.D. President and Chief Scientific Officer of PCT	2,670,444 (2)	1.6%
Catherine M. Vaczy Vice President and General Counsel	2,047,528 (3)	1.2%
Andrew L. Pecora Chief Medical Officer and Director of NeoStem, Chief Medical Officer of PCT and Chief Scientific Officer of Amorcyte	3,167,598 (4)	1.9%
Richard Berman Director	496,660 (5)	0.3%
Steven S. Myers Director	1,789,306 (6)	1.1%
Drew Bernstein Director	853,685 (7)	0.5%
Eric H.C. Wei Director	26,785,180 (8) (9)	15.5%
RimAsia Capital Partners, L.P. RimAsia Capital Partners GP, L.P. RimAsia Capital Partners GP, Ltd. RimAsia Capital Partners Manager, Ltd. 1807 Harbour Centre 25 Harbour Road Wanchai Hong Kong	26,635,180 (9)	15.5%
Martyn Greenacre Director	755,306 (10)	0.4%
Stephen Potter Director	153,500 (11)	0.1%
All Directors and Executive Officers as a group (twelve persons)	47,372,996 (12) (13)	25.7%

The address for each officer and director is c/o NeoStem, Inc., 420 Lexington Avenue, Suite 350, New York, NY 10170.

(1) Includes (i) options to purchase up to 5,717,305 shares of our common stock which are exercisable within 60 days of February 20, 2013 and (ii) warrants to purchase up to 38,667 shares of our common stock which are exercisable within 60 days of February 20, 2013.

(2) Includes (i) options to purchase up to 499,266 shares of our common stock which are exercisable within 60 days of February 20, 2013 and (ii) warrants to purchase up to 343,032 shares of our common stock which are exercisable within 60 days of February 20, 2013.

(3) Includes (i) options to purchase up to 1,683,166 shares of our common stock which are exercisable within 60 days of February 20, 2013 and (ii) warrants to purchase up to 9,500 shares of our common stock which are exercisable within 60 days of February 20, 2013.

(4) Includes (i) options to purchase up to 716,666 shares of our common stock which are exercisable within 60 days of February 20, 2013 and (ii) warrants to purchase up to 358,595 shares of our common stock which are exercisable within 60 days of February 20, 2013.

(5) Includes options to purchase up to 349,387 shares of our common stock which are exercisable within 60 days of February 20, 2013.

(6) Includes options to purchase up to 349,387 shares of common stock which are exercisable within 60 days of February 20, 2013.

(7) Includes options to purchase up to 853,685 shares of common stock which are exercisable within 60 days of February 20, 2013.

(8) Includes options to purchase up to 150,000 shares of common stock which are exercisable within 60 days of February 20,

2013.

(9) Includes (i) 22,379,874 shares of common stock held by RimAsia Capital Partners, L.P., a Cayman islands exempted limited partnership ("RimAsia"); (ii) 255,306 shares held by RimAsia Capital Partners Manager, Ltd., a Cayman Islands exempted company ("RimAsia Manager"); and (iii) warrants to purchase up to 4,000,000 which are exercisable within 60 days of February 20, 2013 which are held by RimAsia. RimAsia Capital Partners GP, L.P. ("RimAsia GP") is the general partner of RimAsia. RimAsia Capital Partners GP, Ltd. ("RimAsia Ltd.") is the general partner of RimAsia GP. RimAsia Manager is the fund manager of RimAsia GP and the manager of RimAsia. Mr. Wei is the managing partner of RimAsia, and indirect partner of RimAsia GP, a director of RimAsia Ltd. and a director of RimAsia Manager.

(10) Includes warrants to purchase up to 250,000 shares of common stock which are exercisable within 60 days of February 20, 2013.

(11) Includes options to purchase up to 93,500 shares of common stock which are exercisable within 60 days of February 20, 2013.

(12) See footnotes 1 - 10. Includes shares and exercisable rights owned by RimAsia Capital Partners as set forth in footnote 8.

(13) Includes options to purchase up to 1,083,595 shares of common stock which are exercisable within 60 days of February 20, 2013 held by executive officers not individually listed in this table of the Company and its subsidiaries.

EQUITY COMPENSATION PLAN INFORMATION

The following table gives information about our common stock that may be issued upon the exercise of options, warrants and rights under our equity compensation plans as of December 31, 2012. In the following table, the equity compensation plan approved by security holders includes the NeoStem, Inc. 2009 Amended & Restated Equity Compensation Plan. This plan was our only equity compensation plan approved by security holders in existence as of December 31, 2012.

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants, and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in columns (a)) (c)
Equity compensation plans approved by security holders	21,686,680	$ 1.29	9,169,399
Equity compensation plans not approved by security holders (1)	3,583,593	$ 1.12	—
Total	25,270,273	$ 1.26	9,169,399

(1) Consists of individual grants of warrants to seventeen service providers to the Company, no one of which is individually material.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE.

Pursuant to the PCT Merger Agreement, NeoStem agreed to pay off PCT's credit line with Northern New Jersey Cancer Associates (“NNJCA”), in an amount up to $3,000,000, shortly after the closing of the PCT Merger. On January 21, 2011, NeoStem paid NNJCA $3,000,000 in full satisfaction of all of borrower PCT's obligations to lender NNJCA arising from the underlying line of credit and security agreement. Dr. Andrew Pecora (who was PCT's Chairman and CEO prior to the PCT Merger, and who became PCT's Chief Medical Officer on January 19, 2011 pursuant to an employment agreement effective upon the closing of the PCT Merger), has served as Managing Partner of NNJCA since 1996.

In accordance with the PCT Merger Agreement, the stock consideration paid by NeoStem in exchange for the membership interests of PCT was deposited into an escrow account for eventual distribution to the former members of PCT. Dr. Pecora, Dr. Robert A. Preti (PCT's President and Chief Scientific Officer prior to the PCT Merger, and who following the PCT Merger serves as PCT's President pursuant to an employment agreement that became effective upon the PCT Merger closing) and George S. Goldberger (PCT's Chief Business and Financial Officer, Treasurer and Secretary prior to the PCT Merger, and who following the PCT Merger serves as PCT's Vice President - Business Development pursuant to an employment agreement that became effective upon the PCT Merger closing), beneficially owned approximately 17.2%, 17.0% and 2.5%, respectively, of the membership interests of PCT that were outstanding immediately prior to the closing of the PCT Merger. Certain of the shares of

NeoStem Common Stock issued to these three individuals have been released from escrow earlier than the first release of shares for other members of PCT for the purpose of enabling them to pay taxes that will be due as a result of the PCT Merger. As of April 20, 2012, Dr. Pecora, Dr. Preti and Mr. Goldberger beneficially own 2,677,577, 2,374,812 and 458,181 shares, respectively, of the outstanding NeoStem Common Stock, representing respectively 2.0%, 1.8% and 0.3% of the NeoStem Common Stock.

Dr. Pecora beneficially owned approximately 17.2% of the membership interests of PCT that were outstanding immediately prior to the closing of the PCT Merger. Pursuant to the PCT Merger, Dr. Pecora received the right to 1,844,527 shares of NeoStem Common Stock (with an aggregate value of $2,766,790 based on the closing price of the NeoStem Common Stock on the date of closing) and Warrants (with an aggregate estimated value of $342,000) to purchase an aggregate of 522,030 shares of NeoStem Common Stock, with one-third (174,010) of such Warrants each exercisable at a per share purchase price of $3.00, $5.00 and $7.00, respectively (the $7.00 warrants vesting only upon the achievement of a business milestone). Dr. Preti beneficially owned approximately 17.0% of the membership interests of PCT that were outstanding immediately prior to the closing of the PCT Merger. Pursuant to the PCT Merger, Dr. Preti received the right to 1,791,880 shares of NeoStem Common Stock (with an aggregate value of $2,687,820 based on the closing price of the NeoStem Common Stock on the date of closing) and Warrants (with an aggregate estimated value of $332,000) to purchase an aggregate of 507,129 shares of NeoStem Common Stock, with one-third (169,043) of such Warrants each exercisable at a per share purchase price of $3.00, $5.00 and $7.00, respectively (the $7.00 warrants vesting only upon the achievement of a business milestone).

The Company acquired Amorcyte, Inc. (the “Amorcyte Merger”) on October 17, 2011 in accordance with the terms of the Agreement and Plan of Merger, dated as of July 13, 2011 (the “Amorcyte Merger Agreement”). As a result of the consummation of the Amorcyte Merger, Amorcyte is now a wholly-owned subsidiary of NeoStem. Amorcyte had originally been incorporated as a subsidiary of PCT and was spun off to PCT's members prior to NeoStem's January 19, 2011 acquisition of PCT. At the time the Amorcyte Merger Agreement was entered into, Dr. Pecora and George Goldberger were officers of both PCT and Amorcyte. Dr. Pecora was Amorcyte's Chief Scientific Officer prior to the Amorcyte Merger and continues to serve in such capacity for no additional consideration. Mr. Goldberger was Vice President - Business Development of PCT and Chief Financial Officer of Amorcyte. Dr. Pecora, Mr. Goldberger and Dr. Preti were all stockholders of Amorcyte.

In accordance with the terms of the Amorcyte Merger Agreement, the stock consideration paid by NeoStem in exchange for the equity interests of Amorcyte was deposited into an escrow account for eventual distribution to the former security holders of Amorcyte. Dr. Pecora beneficially owned approximately 15.6 % of the common stock, and 0.6% of the Series A preferred stock, respectively, as well as certain options of Amorcyte, that were outstanding immediately prior to the closing of the Amorcyte Merger. Pursuant to the Amorcyte Merger, Dr. Pecora received the right to 32,852 shares of NeoStem Common Stock (with an aggregate value of $21,025 based on the closing price of the Company's Common Stock on the date of closing) and Series AMO Warrants (with an estimated aggregate value of $10,000) to purchase 10,575 shares of NeoStem Common Stock at a per share purchase price of $1.466. Dr. Preti beneficially owned approximately 15.6 % of the common stock, and 0.3% of the Series A preferred stock, respectively, as well as certain options of Amorcyte, that were outstanding immediately prior to the closing of the Amorcyte Merger. Pursuant to the Amorcyte Merger, Dr. Preti received the right to 15,364 shares of NeoStem Common Stock (with an aggregate value of $9,833 based on the closing price of the Company's Common Stock on the date of closing) and Series AMO Warrants (with an estimated aggregate value of $1,771) to purchase 4,946 shares of NeoStem Common Stock at a per share purchase price of $1.466. The Amorcyte Merger Agreement additionally provides that the former equity holders of Amorcyte have the right to receive additional shares of NeoStem's Common Stock, which will be issued only if certain business milestones specified in the Amorcyte Merger Agreement are accomplished, as well as certain earn-out payments upon the commercialization of AMR-001, Amorcyte's lead product candidate for the treatment of acute myocardial infarction.

In order to accelerate Amorcyte's commencement of its Phase 2 clinical trial of AMR-001, NeoStem agreed to provide loans to Amorcyte prior to the closing of the Amorcyte Merger to be used in connection with the Phase 2 trial. Pursuant to a Loan Agreement entered into on September 9, 2011, NeoStem loaned Amorcyte prior to the closing of the Merger an aggregate of $338,500 which was applied towards the commencement of the Phase 2 trial.

One investor in the Company's private placement offering in May 2012 was Martyn Greenacre, a member of the Company's Board of Directors, who purchased 250,000 units for a total subscription amount of $100,000.

In 2011, consistent with NeoStem's previously disclosed intention to provide support for The Stem for Life Foundation (the “Foundation”), a Pennsylvania nonprofit corporation classified as a tax-exempt organization under Section 501(c)(3) of the Internal Revenue Code of 1986, as amended (the “Code”), whose mission is to promote public awareness, fund research and development and subsidize stem cell collection and storage programs, NeoStem contributed to the Foundation 407,600 shares of previously issued restricted NeoStem Common Stock with a fair value of approximately $607,000. The contribution of such securities was subject to the approval of the NeoStem Board of Directors and the Audit Committee. In 2012, The Foundation paid

NeoStem approximately $150,000 for services associated with joint activities between the Foundation, NeoStem, the Pontifical Council for Culture and the Pontifical Council's foundation, Science, Theology and the Ontological Quest. NeoStem's CEO and Chairman is President and a Trustee of the Foundation, its General Counsel is Secretary and a Trustee of the Foundation and its Chief Accounting Officer is Treasurer of the Foundation.

Pursuant to the terms and conditions of the October 2009 Erye Joint Venture Agreement which had governed the respective rights and obligations with respect to NeoStem's former interest in Erye, dividend distributions to EET and the Company's subsidiary were to be made in proportion to their respective ownership interests in Erye; provided, however, that for the three-year period commencing on the first day of the first fiscal quarter after the Joint Venture Agreement became effective distributions were made as follows: for undistributed profits generated subsequent to the acquisition date: (i) the 49% of undistributed profits (after tax) of the joint venture due EET were to be distributed to EET and lent back to Erye to help finance costs in connection with its construction of and relocation to a new facility (which was to be repaid gradually after construction is completed); and (ii) of the net profit (after tax) of the joint venture due the Company, 45% was to be provided to Erye as part of the new facility construction fund and was to characterized as additional paid-in capital for the Company's 51% interest in Erye, and 6% was to be distributed to the Company. For undistributed profits generated prior to the acquisition date: (i) the 49% of undistributed profits (after tax) of the joint venture due EET was to be distributed to EET and lent back to Erye to help finance costs in connection with its construction of and relocation to a new facility (to be repaid gradually after construction is completed); and (ii) of the net profit (after tax) of the joint venture due the Company, 51% was to be provided to Erye as part of the new facility construction fund and was to be characterized as additional paid-in capital for the Company's 51% interest in Erye. It was contemplated by the Joint Venture Agreement that the construction would continue for three years. As such, 45% of the dividend we were entitled to by reason of our 51% ownership remained in Erye through 2012 to complete the construction while EET loaned back their dividend during the same period at a prevailing bank interest rate. Upon the liquidity event of Erye, as contemplated in the joint venture agreement, the Company was entitled to the return of its dividend reinvestments to the extent of the proceeds generated by the liquidity event. Repayment of such loans from EET was to occur gradually after the construction is completed. In January 2011, a dividend totaling approximately $13,671,100 based on earnings for Fiscal Year 2009 was declared and approximately $6,698,800 was distributed to EET and lent back to Erye and approximately $6,972,300 due the Company was reinvested and re-characterized as additional paid-in capital in the business. In April 2011, a dividend totaling $10,259,700 based on earnings for Fiscal Year 2010 was declared and approximately $5,027,300 was distributed to EET and lent back to Erye, and approximately $5,232,400 due the Company was reinvested and re-characterized as additional paid-in capital in the business. A 10% withholding tax was required on dividends payable to the Company. As a result, Erye withheld approximately $1,220,500 in taxes related to the Company's Fiscal Year 2009 and 2010 dividend amounts, and such amount has been paid to the local Chinese tax authorities as of December 31, 2011.

On November 13, 2012, we and our subsidiary, CBH, sold our 51% ownership interest in Erye to Fullbright and EET. EET was prior to the sale the holder of the minority 49% ownership interest in Erye, and was a party along with our subsidiary CBH to the Joint Venture Agreement which had governed the ownership of the respective interests in Erye. Fullbright is an affiliate of EET. Mr. Shi Mingsheng (a former member of our Board of Directors, and Chairman of the Board of Erye) and Madam Zhang Jian (the General Manager of Erye, and formerly our Vice President of Pharmaceutical Operations) are the principal equity holders of each of EET and Fullbright. Fullbright assigned all its rights and obligations under the Equity Purchase Agreement (except for its obligations in respect of the return of certain NeoStem securities held by it as part of the purchase price, and its obligations in respect of closing deliverables) to Highacheive Holdings Limited, a limited liability company organized under the laws of the British Virgin Islands and an affiliate of Fullbright ("Highacheive"). As a result of the assignment, the Purchasers of our Erye Interest were EET and Highacheive.

Director Independence

For information regarding director independence, please refer to the discussion set forth in Item 10 under the caption, "Corporate Governance-Director Independence."

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES.

Accounting Fees and Other Accounting Matters

Grant Thornton LLP (“Grant Thornton”) was engaged to serve as the Company's independent registered public accounting firm commencing with the interim period ending September 30, 2011, and accordingly, audited the Company's financial statements for the fiscal years ended December 31, 2012 and 2011. The following table sets forth a summary of the fees billed or expected to be billed to us (i) by Grant Thornton for professional services rendered for the fiscal year ended December 31, 2012 and 2011.

Fee Category	Fiscal 2012 Fees	Fiscal 2011 Fees
Audit Fees[1]	$ 606,037	$ 605,521
Audit-Related Fees[2]	$ —	$ —
Tax Fees[3]	$ —	$ —
All Other Fees[4]	$ —	$ 1,938
Total Fees	$ 606,037	$ 607,459

(1) Audit Fees consist of aggregate fees billed or expected to be billed for professional services rendered for the audit of the Company's annual consolidated financial statements included in the Company's Annual Reports on Form 10-K and review of the interim consolidated financial statements included in Quarterly Reports on Form 10-Q or services that are normally provided by the independent registered public accounting firm in connection with statutory and regulatory filings or engagements for the fiscal years ended December 31, 2012 and December 31, 2011, respectively.

(2) Audit-Related Fees consist of aggregate fees billed for assurance and related services that are reasonably related to the performance of the audit or review of the Company's consolidated financial statements and are not reported under “Audit Fees.”

(3) Tax Fees consist of aggregate fees billed or expected to be billed for professional services rendered for tax compliance, tax advice and tax planning. These fees related to preparation of the Company's federal and state income tax returns and other tax compliance activities.

(4) All Other Fees consist of aggregate fees billed for products and services provided by Grant Thornton (as applicable), other than those disclosed above.

The Audit Committee is responsible for the appointment, compensation and oversight of the work of the independent registered public accounting firm and approves in advance any services to be performed by the independent registered public accounting firm, whether audit-related or not. The Audit Committee reviews each proposed engagement to determine whether the provision of services is compatible with maintaining the independence of the independent registered public accounting firm. All of the fees shown above were pre-approved by the Audit Committee.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES.

The following documents are being filed as part of this Report:

(a)(1) FINANCIAL STATEMENTS:

Reference is made to the Index to Financial Statements and Financial Statement Schedule on Page

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(a)(2) FINANCIAL STATEMENT SCHEDULE:

Reference is made to the Index to Financial Statements and Financial Statement Schedule on Page

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All other schedules have been omitted because the required information is not present or is not present in amounts sufficient to require submission of the schedule, or because the information required is included in the Financial Statements or Notes thereto.

NEOSTEM, INC.
FORM 10K

(a)(3) EXHIBITS:

The following is a list of exhibits filed (or furnished, where specified) as part of this Annual Report on Form 10-K. Exhibits that were previously filed are described below and are incorporated by reference. For exhibits incorporated by reference, the location of the exhibit in the previous filing is indicated.

Exhibit	Description
2.1	Equity Purchase Agreement, dated as of June 18, 2012, by and among NeoStem, Inc., China Biopharmaceuticals Holdings, Inc., Fullbright Finance Limited, Suzhou Erye Economy & Trading Co., Ltd., and Suzhou Erye Pharmaceutical Co., Ltd. (filed as Exhibit 2.1 to the Company's Current Report on Form 8-K dated June 18, 2012).
2.2	Amendment to Equity Purchase Agreement, dated as of August 14, 2012, by and among NeoStem, Inc., China Biopharmaceuticals Holdings, Inc., Highacheive Holdings Limited, Fullbright Finance Limited, Suzhou Erye Economy & Trading Co., Ltd. and Suzhou Erye Pharmaceutical Co., Ltd. (filed as Exhibit 2.1 to the Company's Current Report on Form 8-K dated August 23, 2012).
2.3	Agreement and Plan of Merger, dated as of July 13, 2011, by and among NeoStem, Inc., Amo Acquisition Company I, Inc., Amo Acquisition Company II, LLC and Amorcyte, Inc. (filed as Exhibit 2.1 to the Company's Current Report on Form 8-K dated July 11, 2011).
2.4	Agreement and Plan of Merger, dated as of September 23, 2010, by and among NeoStem, Inc., NBS Acquisition Company LLC, and Progenitor Cell Therapy, LLC (filed as Exhibit 2.1 to the Company's Current Report on Form 8-K dated September 23, 2010).
3.1	Amended and Restated Certificate of Incorporation, as amended (as certified March 25, 2011) (filed as Exhibit 3.1 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2010 as filed with the SEC on April 6, 2011).
3.2	Certificate of Amendment to Amended and Restated Certificate of Incorporation, filed with the Secretary of State of the State of Delaware on October 14, 2011 (filed as Exhibit 3.2 to the Company's Current Report on Form 8-K dated October 14, 2011).
3.3	Certificate of Elimination of the Series E 7% Senior Convertible Preferred Stock of NeoStem, Inc., filed with the Secretary of State of the State of Delaware on October 25, 2012 (filed as Exhibit 3.1 to the Company's Current Report on Form 8-K dated October 25, 2012).
3.4	Amended and Restated By-Laws dated August 31, 2006 (filed as Exhibit 3.1 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2010 as filed with the SEC on April 6, 2011).
4.1	Form of Redeemable Warrant to Purchase Shares of Common Stock of NeoStem, Inc. from January/February 2007 (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K dated January 26, 2007).
4.2	Form of Non-Redeemable Warrant to Purchase Shares of Common Stock of NeoStem, Inc. from January/February 2007 (filed as Exhibit 10.3 to the Company's Current Report on Form 8-K dated January 26, 2007).
4.3	Form of Redeemable Warrant to Purchase Shares of Common Stock of NeoStem, Inc. issued to JFS Investments, Inc. (filed as Exhibit 4.15 to the Company's Registration Statement on Form S-3, File No. 333-173853, filed with the SEC on May 2, 2011).
4.4	Redeemable Warrant to Purchase Shares of Common Stock of NeoStem, Inc. issued to Solutions in Marketing, Inc. (filed as Exhibit 4.16 to the Company's Registration Statement on Form S-3, File No. 333-173853, filed with the SEC on May 2, 2011).
4.5	Warrant to Purchase Shares of Common Stock of NeoStem, Inc. issued to Wall Street Communications Group, Inc. (filed as Exhibit 4.17 to the Company's Registration Statement on Form S-3, File No. 333-173853, filed with the SEC on May 2, 2011).
4.6	Form of Redeemable Service Provider Warrant (filed as Exhibit 4.19 to the Company's Registration Statement on Form S-3/A, File No. 333.173853, filed with the SEC on September 16, 2011).
4.7	Form of 2011 Redeemable Service Provider Warrant (filed as Exhibit 4.20 to the Company's Registration Statement on Form S-3/A, File No. 333-173853, filed with the SEC on September 16, 2011).
4.8	Form of Redeemable Service Provider Warrant with cashless exercise rights (filed as Exhibit 4.21 to the Company's Registration Statement on Form S-3/A, File No. 333-173853, filed with the SEC on September 16, 2011).

4.9	Form of 2010/2011 Redeemable Service Provider Warrant with cashless exercise rights (filed as Exhibit 4.22 to the Company's Registration Statement on Form S-3/A, File No. 333-173853, filed with the SEC on September 16, 2011).
4.10	Form of Redeemable Warrant to Purchase Shares of Common Stock of NeoStem, Inc. from May 2008 (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K dated May 20, 2008).
4.11	Form of Redeemable Finder's Warrant to Purchase Shares of Common Stock of NeoStem, Inc. from May 2008 (filed as Exhibit 4.6 to the Company's Registration Statement on Form S-3, File No. 333-173853, filed with the SEC on May 2, 2011).
4.12	Form of Redeemable Warrant to Purchase Shares of Common Stock of NeoStem, Inc. issued to RimAsia Capital Partners L.P. in September 2008 (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K dated August 28, 2008).
4.13	Letter Agreement dated December 18, 2008 between NeoStem, Inc. and RimAsia Capital Partners, L.P. (filed as Exhibit 4.1 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2008 as filed with the SEC on March 31, 2009).
4.14	Form of Warrant to Purchase Shares of Common Stock of NeoStem, Inc. from October 2008 (filed as Exhibit 4.2 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2008 as filed with the SEC on March 31, 2009).
4.15	Form of Redeemable Warrant to Purchase Shares of Common Stock of NeoStem, Inc. from November 2008 (filed as Exhibit 4.3 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2008 as filed with the SEC on March 31, 2009).
4.16	Specimen Certificate for Common Stock (filed as Exhibit 4.1 to the Company's Registration Statement on Form S-3, File No. 333-145988, filed with the SEC on September 11, 2007).
4.17	Form of Warrant issued in connection with April and July 2009 private placements (filed as Exhibit 4.2 to the Company's Current Report on Form 8-K dated April 13, 2009).
4.18	Form of Common Stock Purchase Warrant from June 2010 (filed as Exhibit 4.1 to the Company's Current Report on Form 8-K dated June 25, 2010 and filed with the SEC on June 28, 2010).
4.19	Form of Placement Agent Warrant from June 2010 (filed as Exhibit 4.2 to the Company's Current Report on Form 8-K dated June 25, 2010 and filed with the SEC on June 28, 2010).
4.20	Amended and Restated Warrant, dated March 15, 2010, issued to RimAsia Capital Partners, L.P. (filed as Exhibit 4.1 to the Company's Current Report on Form 8-K dated March 15, 2010 and filed with the SEC on March 18, 2010).
4.21	Form of Warrant from the November 2010 Common Stock Offering (filed as Exhibit 4.1 to the Company's Current Report on Form 8-K dated and filed with the SEC on November 16, 2010).
4.22	Form of Warrant from the November 2010 Preferred Stock Offering (filed as Exhibit 4.2 to the Company's Current Report on Form 8-K dated and filed with the SEC on November 16, 2010).
4.23	Warrant Agreement, dated as of January 19, 2011, between NeoStem, Inc. and Continental Stock Transfer & Trust Company, with the forms of $3.00 Warrant, $5.00 Warrant and $7.00 Warrant attached thereto (filed as Exhibit 4.1 to the Company's Current Report on Form 8-K dated January 18, 2011 and filed with the SEC on January 24, 2011).
4.24	Warrant Agreement, dated as of July 22, 2011, between NeoStem, Inc. and Continental Stock Transfer & Trust Company, with the form of Series NA Warrant attached thereto (filed as Exhibit 4.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2011 as filed with the SEC on November 10, 2011).
4.25	Registration Rights Agreement, dated as of September 28, 2011, by and between NeoStem, Inc. and Aspire Capital Fund, LLC (filed as Exhibit 4.1 to the Company's Current Report on Form 8-K dated September 28, 2011).
4.26	Warrant Agreement, dated as of October 17, 2011, between NeoStem, Inc. and Continental Stock Transfer & Trust Company, with the form of Global Series AMO Warrant attached thereto (filed as Exhibit 4.1 to the Company's Current Report on Form 8-K dated October 14, 2011).
4.27	Form of Common Stock Purchase Warrant from the March 2012 Underwritten Offering (filed as Exhibit 4.1 to the Company's Current Report on Form 8-K dated March 29, 2012).
4.28	Form of Common Stock Purchase Warrant for the May-July 2012 private placement (filed as Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2012 as filed with the SEC on August 14, 2012).
4.29	Form of New Warrant from July 2012 (filed as Exhibit 10.6 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2012 as filed with the SEC on August 14, 2012).
4.30	Form of Warrant from August 2012 private placement (filed as Exhibit 4.6 to the Company's Registration Statement on Form S-3, File No. 333-183542, filed with the SEC on August 24, 2012).
4.31	Form of 2011/2012 Service Provider Warrant (filed as Exhibit 4.10 to the Company's Registration Statement on Form S-3, File No. 333-183542, filed with the SEC on August 24, 2012).

4.32	Warrant issued to Aspire Capital Fund, LLC in August 2012 (filed as Exhibit 4.9 to the Company's Registration Statement on Form S-3, File No. 333-183542, filed with the SEC on August 24, 2012).
4.33	Form of Warrant for November 2012 Unit private placement (filed as Exhibit 4.4 to the Company's Registration Statement on Form S-3, File No. 333-185346, filed with the SEC on December 7, 2012).
10.1	License Agreement between Stem Cell Technologies, Inc. and the University of Louisville Research Foundation, Inc. (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K dated November 13, 2007). (1)
10.2	Amendment No. 1 to Exclusive License Agreement between Stem Cell Technologies, Inc. and the University of Louisville Research Foundation, Inc. (filed as Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2009 as filed with the SEC on May 15, 2009).
10.3	Amendment No. 2 to Exclusive License Agreement between University of Louisville Research Foundation, Inc. and Stem Cell Technologies, Inc. (filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2010 as filed with the SEC on August 16, 2010).
10.4	Sponsored Research Agreement between NeoStem, Inc. and the University of Louisville Research Foundation, Inc. (filed as Exhibit 10.3 to the Company's Current Report on Form 8-K dated November 13, 2007). (1)
10.5	Amendment No. 1 to Sponsored Research Agreement between NeoStem, Inc. and the University of Louisville Research Foundation, Inc. (filed as Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2009 as filed with the SEC on May 15, 2009).
10.6	October 2009 English translation of Joint Venture Contract of Suzhou Erye Pharmaceutical Co., Ltd. (filed as Exhibit 10.www to the Company's Annual Report on Form 10-K for the year ended December 31, 2009 as filed with the SEC on March 31, 2010).
10.7	English Translation of Amendment Agreement to Joint Venture Contract of Suzhou Erye Pharmaceutical Co., Ltd. dated May 21, 2010 approved August 16, 2010 (filed as Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2010 as filed with the SEC on November 12, 2010).
10.08	Consulting Agreement, dated as of May 11, 2010 between NeoStem, Inc. and RimAsia Capital Partners, LP (filed as Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2010 as filed with the SEC on August 16, 2010).
10.09	Form of Subscription Agreement with respect to private placement consummated on April 5, 2011 (filed as Exhibit 4.13 to the Company's Registration Statement on Form S-3, File No. 333-173853, filed with the SEC on May 2, 2011).
10.10	Common Stock Purchase Agreement, dated as of September 28, 2011, by and between NeoStem, Inc. and Aspire Capital Fund, LLC (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated September 28, 2011).
10.11	Amendment dated as of August 23, 2012 to Common Stock Purchase Agreement dated as of September 28, 2011, by and between NeoStem, Inc. and Aspire Capital Fund, LLC (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated August 23, 2012).
10.12	Form of Subscription Agreement from February 2012 private placement (filed as Exhibit 10.46 to the Company's Annual Report on Form 10-K for the year ended December 31, 2011 as filed with the SEC on March 20, 2012).
10.13	Underwriting Agreement, dated March 29, 2012, by and among NeoStem, Inc. and the underwriters named on Schedule I thereto (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K dated March 29, 2012).
10.14	Form of Subscription Agreement for the May-July 2012 private placement (filed as Exhibit 10.7 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2012 as filed with the SEC on August 14, 2012).
10.15	Form of Subscription Agreement from the August 2012 private placement (filed as Exhibit 4.7 to the Company's Registration Statement on Form S-3, File No. 333-183542, filed with the SEC on August 24, 2012).
10.16	Form of Subscription Agreement from the October 2012 private placement (filed as Exhibit 10.10 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2012 as filed with the SEC on November 13, 2012).
10.17	Form of Subscription Agreement for November 8, 2012 private placement (filed as Exhibit 4.2 to the Company's Registration Statement on Form S-3, File No. 333-185346, filed with the SEC on December 7, 2012).
10.18	Form of Subscription Agreement for November 2012 Unit private placement (filed as Exhibit 4.3 to the Company's Registration Statement on Form S-3, File No. 333-185346, filed with the SEC on December 7, 2012).

10.19	Escrow Agreement, dated as of October 17, 2011, among NeoStem, Inc., Amorcyte, Inc., Paul J. Schmitt, as Amorcyte Representative, and Continental Stock Transfer & Trust Company, as Escrow Agent (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated October 14, 2011).
10.20	Lease dated September 1, 2005 between Vanni Business Park, LLC and Progenitor Cell Therapy, LLC, as amended by First Amendment of Lease effective as of July 1, 2006 (filed as Exhibit 10.48 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2010 as filed with the SEC on April 6, 2011).
10.21	Second Amendment of Lease, executed July 11, 2011 and effective July 1, 2011, by and between Vanni Business Park, LLC and Progenitor Cell Therapy, LLC (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated July 11, 2011).
10.22	Guaranty of Lease, executed July 11, 20911 and effective as of July 1, 2011, by NeoStem, Inc. for the benefit of Vanni Business Park, LLC (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K dated July 11, 2011).
10.23	Bond Agreement dated as of October 1, 2007 by and among the New Jersey Economic Development Authority, PCT Allendale, LLC and Commerce Bank/North (filed as Exhibit 10.49 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2010 as filed with the SEC on April 6, 2011).
10.24	Note dated October 31, 2007, made by PCT Allendale, LLC in favor of the New Jersey Economic Development Authority (filed as Exhibit 10.50 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2010 as filed with the SEC on April 6, 2011).
10.25	Mortgage and Security Agreement from PCT Allendale, LLC to New Jersey Economic Development Authority and Commerce Bank/North, dated October 31, 2007 (filed as Exhibit 10.51 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2010 as filed with the SEC on April 6, 2011).
10.26	Mortgage Loan Note dated November 30, 2010, made by PCT Allendale, LLC in favor of TD Bank, N.A. (filed as Exhibit 10.52 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2010 as filed with the SEC on April 6, 2011).
10.27	Mortgage, Security Agreement and Fixture Filing made as of the 30th day of November 2010, between PCT Allendale, LLC and TD Bank, N.A. (filed as Exhibit 10.53 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2010 as filed with the SEC on April 6, 2011).
10.28	Stock Purchase and Assignment Agreement dated March 28, 2011, by and among Progenitor Cell Therapy, LLC, Athelos Corporation and Becton Dickinson and Company (filed as Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2011 as filed with the SEC on May 17, 2011).
10.29	Stockholders' Agreement dated March 28, 2011, by and among Progenitor Cell Therapy, LLC, Athelos Corporation and Becton Dickinson and Company (filed as Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2011 as filed with the SEC on May 17, 2011).
10.30	NeoStem, Inc. 2003 Equity Participation Plan, as amended (filed as Exhibit 10.2 to the Company's Registration Statement on Form S-1/A, File No. 333-137045, filed with the SEC on November 3, 2006). +
10.31	Form of Stock Option Agreement (filed as Exhibit 10.2 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2003 as filed with the SEC on March 30, 2004). +
10.32	Form of Option Agreement dated July 20, 2005 (filed as Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2005 as filed with the SEC on August 15, 2005). +
10.33	Amended and Restated NeoStem, Inc. 2009 Equity Compensation Plan (as amended and restated as of October 5, 2012) (filed as Appendix B to the Company's Definitive Proxy Statement on Schedule 14A for the 2012 Annual Meeting of Stockholders as filed with the SEC on September 7, 2012). +
10.34	Form of Stock Option Grant Agreement under NeoStem, Inc. 2009 Equity Compensation Plan (filed as Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2010 as filed with the SEC on August 16, 2010). +
10.35	Description of the NeoStem, Inc. Board of Directors Compensation Plan (incorporated by reference to the first paragraph of Item 5.02 contained within the Company's Current Report on Form 8-K dated January 4, 2012, and the last paragraph appearing under Item 11 of this Annual Report on Form 10-K for the fiscal year ended December 31, 2012). +
10.36	NeoStem, Inc. 2012 Employee Stock Purchase Plan (filed as Appendix A to the Company's Definitive Proxy Statement on Schedule 14A for the 2012 Annual Meeting of Stockholders as filed with the SEC on September 7, 2012). +
10.37	Employment Agreement between Phase III Medical, Inc. and Dr. Robin L. Smith, dated May 26, 2006 (filed as Exhibit 10.4 to the Company's Current Report on Form 8-K dated June 2, 2006). +

10.38	January 26, 2007 Amendment to Employment Agreement of Dr. Robin L. Smith (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated January 26, 2007). +
10.39	September 27, 2007 Amendment to Employment Agreement of Dr. Robin L. Smith (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated September 27, 2007). +
10.40	Letter agreement dated January 9, 2008 with Dr. Robin L. Smith (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated January 9, 2008). +
10.41	Amendment dated July 29, 2009 to Employment Agreement dated May 26, 2006 between NeoStem, Inc. and Dr. Robin L. Smith (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated July 29, 2009). +
10.42	Amendment dated April 4, 2011 to Employment Agreement dated May 26, 2006 between NeoStem, Inc. and Dr. Robin L. Smith (filed as Exhibit 10.66 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2010 as filed with the SEC on April 6, 2011). +
10.43†	Amendment dated November 13, 2012 to Employment Agreement dated May 26, 2006 between NeoStem, Inc. and Dr. Robin L. Smith. +
10.44	Employment Agreement between the Company and Larry A. May dated January 19, 2006 (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated January 19, 2006). +
10.45	Letter Agreement between Phase III Medical, Inc. and Larry A. May effective as of June 2, 2006 (filed as Exhibit 10.7 to the Company's Current Report on Form 8-K dated June 2, 2006). +
10.46	January 26, 2007 Amendment to Employment Agreement of Larry A. May (filed as Exhibit 10.3 to the Company's Current Report on Form 8-K dated January 26, 2007). +
10.47	Letter Agreement, dated April 20, 2005, between Phase III Medical, Inc. and Catherine M. Vaczy (filed as Exhibit 10.3 to the Company's Current Report on Form 8-K dated April 20, 2005). +
10.48	Letter Agreement dated August 12, 2005 with Catherine M. Vaczy (filed as Exhibit 10.7 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2005 as filed with the SEC on August 15, 2005). +
10.49	Letter Agreement dated December 22, 2005 between Phase III Medical, Inc. and Catherine M. Vaczy (filed as Exhibit 10(y) to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2005 as filed with the SEC on April 3, 2006). +
10.5	Letter Agreement dated January 30, 2006 between Phase III Medical, Inc. and Catherine M. Vaczy (filed as Exhibit 10(cc) to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2005 as filed with the SEC on April 3, 2006). +
10.51	Letter Agreement between Phase III Medical, Inc. and Catherine M. Vaczy effective as of June 2, 2006 (filed as Exhibit 10.6 to the Company's Current Report on Form 8-K dated June 2, 2006). +
10.52	January 26, 2007 Employment Agreement with Catherine M. Vaczy (filed as Exhibit 10.4 to the Company's Current Report on Form 8-K dated January 26, 2007). +
10.53	Letter agreement dated January 9, 2008 with Catherine M. Vaczy (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K dated January 9, 2008). +
10.54	Letter Agreement dated July 8, 2009 between NeoStem, Inc. and Catherine M. Vaczy, Esq. (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K dated July 6, 2009). +
10.55	Letter Agreement dated July 7, 2010 between NeoStem, Inc. and Catherine M. Vaczy, Esq. (filed as Exhibit 10(a) to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2010 as filed with the SEC on November 12, 2010). +
10.56	Letter Agreement dated January 6, 2012 between NeoStem, Inc. and Catherine M. Vaczy, Esq. (filed as Exhibit 10.92 to the Company's Annual Report on Form 10-K for the year ended December 31, 2011 as filed with the SEC on March 20, 2012). +
10.57†	Letter Agreement dated November 13, 2012 between NeoStem, Inc. and Catherine M. Vaczy, Esq. +
10.58	Employment Agreement, dated as of September 23, 2010 and effective on January 19, 2011, by and between Progenitor Cell Therapy, LLC, NeoStem, Inc. and Andrew L. Pecora (filed as Exhibit 10.1 to the Company's Current Report on Form 8-K dated January 18, 2011 and filed with the SEC on January 24, 2011). +
10.59	Amendment dated August 17, 2011 to Employment Agreement dated September 23, 2010 and effective January 19, 2011 between Progenitor Cell Therapy, LLC, NeoStem, Inc. and Andrew L. Pecora (filed as Exhibit 10.95 to the Company's Registration Statement on Form S-4, File No. 333-176673, filed with the SEC on September 2, 2011). +
10.6	Letter Agreement dated April 11, 2012 between NeoStem, Inc. and Andrew Pecora, M.D., F.A.C.P. (filed as Exhibit 10.107 to the Company's Annual Report on Form 10-K/A for the year ended December 31, 2011 as filed with the SEC on April 27, 2012). +

10.61	Employment Agreement, dated as of September 23, 2010 and effective on January 19, 2011, by and between Progenitor Cell Therapy, LLC, NeoStem, Inc. and Robert A. Preti (filed as Exhibit 10.2 to the Company's Current Report on Form 8-K dated January 18, 2011 and filed with the SEC on January 24, 2011). +
10.62	Consulting Agreement, effective March 8, 2011, by and between NeoStem, Inc. and Acute Care Partners (filed as Exhibit 10.87 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2010 as filed with the SEC on April 6, 2011). +
10.63	Form of Indemnification Agreement for directors, officers and certain other employees (filed as Exhibit 10.2 to the Company's Registration Statement on Form S-4/A, File No. 333-160578, filed with the SEC on October 6, 2009).
10.64	Letter Agreement dated June 28, 2011 between NeoStem, Inc. and Joseph Talamo (filed as Exhibit 10.10 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2011 as filed with the SEC on August 12, 2011). +
14.1	Code of Ethics for Senior Financial Officers (filed as Exhibit 14.1 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2010 as filed with the SEC on April 6, 2011).
21.1†	Subsidiaries of NeoStem, Inc.
23.1†	Consent of Grant Thornton LLP
31.1†	Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2†	Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1††	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2††	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101.INS	XBRL Instance Document***
101.SCH	XBRL Taxonomy Extension Schema***
101.CAL	XBRL Taxonomy Extension Calculation Linkbase***
101.DEF	XBRL Taxonomy Extension Definition Linkbase***
101.LAB	XBRL Taxonomy Extension Label Linkbase***
101.PRE	XBRL Taxonomy Extension Presentation Linkbase***

+ Management contract or compensatory plan, contract or arrangement required to be filed as an exhibit to this Form 10-K pursuant to Item 15(b) of Form 10-K.

*** Users of this interactive data file are advised pursuant to Rule 406T of Regulations S-T that this interactive data file is deemed not filed or part of a registration statement or prospectus for purposes of sections 11 or 12 of the Securities Act of 1933, is deemed not filed for purposes of section 18 of the Securities Exchange Act of 1934, and otherwise is not subject to liability under these sections.

† Filed herewith.

†† Furnished herewith.

(1) Certain portions of this exhibit were omitted based upon a request for confidential treatment, and the omitted portions were filed separately with the SEC on a confidential basis.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of New York, State of New York, on March 8, 2013.

NEOSTEM, INC.

By: /s/ Robin L. Smith, M.D.

Name: Robin L. Smith, M.D.
Title: Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Robin L. Smith, M.D. Robin L. Smith, M.D.	Director, Chief Executive Officer and Chairman of the Board (Principal Executive Officer)	March 8, 2013
/s/ Larry A. May Larry A. May	Chief Financial Officer (Principal Financial Officer)	March 8, 2013
/s/ Joseph Talamo Joseph Talamo	Vice President, Corporate Controller and Chief Accounting Officer (Principal Accounting Officer)	March 8, 2013
/s/ Richard Berman Richard Berman	Director	March 8, 2013
/s/ Steven S. Myers Steven S. Myers	Director	March 8, 2013
/s/ Drew Bernstein Drew Bernstein	Director	March 8, 2013
/s/ Eric Wei Eric Wei	Director	March 8, 2013
/s/ Stephen W. Potter Stephen W. Potter	Director	March 8, 2013
/s/ Andrew L. Pecora, M.D. Andrew L. Pecora, M.D.	Director	March 8, 2013
/s/ Martyn D. Greenacre Martyn D. Greenacre	Director	March 8, 2013

Exhibit 10.43

November 13, 2012

Dr. Robin L. Smith
930 Fifth Avenue
Suite 8H
New York, NY 10021

Dear Robin:

This letter is being written to serve as an amendment to the employment agreement between you and NeoStem, Inc. (the "Company") dated as of May 26,2006 (as amended on each of January 26,2007, September 27,2007, January 9, 2008, August 29,2008, July 29,2009 and April 4, 2011) pursuant to which you serve as the Company's Chairman of the Board and Chief Executive Officer (the "Agreement"). Except as set forth herein, the Agreement shall remain unchanged. Initially capitalized terms used herein but not defined herein shall have the meaning set forth in the Agreement.

1. Extension of Term.

The Term of the Agreement is hereby extended from December 31, 2012 to December 31,2014.

2. Base Salary.

On January 1, 2013 your annual Base Salary shall be increased to $495,000.00 and remain as such through December 31,2014.

3. Cash Bonus.

You shall be eligible to receive a cash bonus for each of 2013 and 2014 with the bonus payable on November 10 of each year. The target amount of each such bonus shall be 50% of your annual Base Salary assuming good progress toward the accomplishment of objectives set for you and the Company by the Compensation Committee, and with the potential of a higher annual bonus, up to 100% of your Base Salary, for extraordinary or exceptional progress and performance, as determined in the sole judgment and discretion of the Company's Compensation Committee. You also shall be eligible to receive stock grants and option awards as may be determined by the Company's Compensation Committee.

4. Effect of Non-Renewal.

Notwithstanding anything in the Agreement to the contrary, a failure to renew the Agreement at the end of the term (as extended by this amendment), regardless of the reason therefor, shall be treated for all purposes under the Agreement as a termination by the Company Without Cause (as defined below).

5. Severance.

Section 7(b) of the Agreement is hereby amended to read in its entirety as follows:

(b) Termination of Your Employment by the Company Without Cause or Voluntary Termination by You With Good Reason. If the Company terminates your employment without Cause or if you terminate your employment with Good Reason, the following shall apply:

(i) The Company shall pay you the Base Salary at the time of termination in regular installments for a period equal to one year following the date of such termination (the "Severance Period")

plus the previous year's annual Bonus Payment (the "Severance Payment"). Payment of the Severance Payment shall be made without regard to any subsequent employment you may obtain.

(ii) If you or your eligible spouse and dependents timely elect COBRA Coverage, the Company shall pay the monthly premiums for such coverage during the Severance Period; provided that, if you are entitled to coverage under a subsequent employer's group health insurance plan during the Severance Period, payment of such premiums shall cease.

(iii) All of your stock options which have vested as of the termination date plus any additional options that would have vested by the passage of time during the twelve (12) month period following such date (which additional options shall become immediately and fully vested as of the termination date) shall remain exercisable for the balance of the 10 year term of the options.

Section 7(c) of the Agreement is hereby amended to read in its entirety as follows:

Termination of Your Employment by the Company With Cause or Voluntary Termination by You Without Good Reason

The Company may terminate your employment with Cause or you 'may resign at any time. In such case, you shall be paid all amounts due for services rendered under this Agreement up until the termination date. Notwithstanding anything in the Agreement to the contrary, if you terminate the Agreement, other than for Good Reason, the Company shall pay you your then current Base Salary and your COBRA premiums for a period of one year. Payments can be paid in equal installments over a 12 month period to begin the day of termination. Payment of the Base Salary shall be made without regard to any subsequent employment you may obtain. All vested options as of the termination date shall remain exercisable for the balance of the 10 year term of the options.

Your receipt of any severance payments and or benefits under section 7 or otherwise is contingent upon your providing a release as provided in the Agreement.

6. Restrictive Covenants.

As a condition of enforcing any restnctrve covenants contained in the Employee Confidentiality, Invention Assignment and Non-Compete Agreement dated as July 6, 2006 you entered into with the Company, your Agreement or any other agreement that contains a non-competition, non-solicitation, non-raiding or similar covenant (collectively, "Restrictive Covenants"), the Company agrees to pay you your Base Salary and your COBRA premiums during any period in which you are bound by any Restrictive Covenant. To avoid double counting, no additional payment is required under this Section 6 if you are being paid your Base Salary under paragraphs 4 or 5 above.

7. Acceleration of Vesting of Existing Options.

Upon your agreement to this amendment to your Agreement, all unvested options that you hold as of the date hereof shall be deemed fully vested.

8. Extension of Time for Option Exercise.

Notwithstanding anything in the Agreement, or in any option grant agreement under the Company's 2003 Equity Participation Plan, the Company's 2009 Equity Compensation Plan, or any other plan under which you currently hold, or may receive after the date hereof, options during the Term, each vested option shall remain exercisable following the termination of your employment with the Company for the life of such option (Le. the expiration

date in effect for such option on the day immediately prior to the termination of your employment with the Company).

9. Covenant to Remove Legends.

The Company agrees that it shall not place a legend restricting transfer on certificates representing shares of Common Stock that you own (i) following any sale of such shares pursuant to an effective registration statement under the Securities Act of 1933, as amended (the "Securities Act"), (ii) following any sale of such shares pursuant to Rule 144 under the Securities Act or (iii) if such shares are eligible for sale by you under Rule 144 without volume limitation. If any option for Common Stock held by you is exercised at a time when the underlying shares may be sold under Rule 144 without volume limitation, then such shares shall be issued free of all restrictive legends. In addition, the Company shall instruct its counsel to issue a legal opinion to the Company's transfer agent to effect the removal of any restrictive legend then appearing on any certificate(s) representing shares of Common Stock that you own (i) following any sale of such shares pursuant to an effective registration statement under the Securities Act, (ii) following any sale of such shares pursuant to Rule 144 or (iii) if such shares are eligible for sale by you under Rule 144 without volume limitation. In such event, the Company will, no later than three business days following the delivery to the Company or the Company's transfer agent of the certificate or certificates representing such shares, deliver or cause to be delivered to you a certificate or certificates that are free from all restrictive or other legends. You shall be entitled to receive reimbursement from the Company for any costs and expenses (including attorney's fees) incurred by you in connection with the enforcement of your rights under this paragraph. Notwithstanding the foregoing, for so long as you are an "affiliate" of the Company and for ninety (90) days thereafter, it is understood and agreed that your certificates shall bear the Company's standard "affiliate legend" in accordance with the Company's policies.

10. Covenant to Furnish Information.

The Company agrees to use its reasonable best efforts once you cease to be employed by the Company and for so long as you own shares of Common Stock the sale of which would require that the current public information provision of Rule 144 be met, to (i) timely file (or obtain extensions in respect thereof and file within the applicable grace period) all reports required to be filed by the Company after the date hereof pursuant to the Securities Exchange Act of 1934, as amended (the "Exchange Act"), (ii) if the Company is not required to file reports pursuant to the Exchange Act, it will prepare and furnish to you and make publicly available in accordance with Rule 144(c) such information as is required for you to sell the Common Stock under Rule 144, and (iii) take such further action as you may reasonably request, to the extent required from time to time to enable you to sell your Common Stock without registration under the Securities Act within the requirements of the exemption provided by Rule 144.

The Company represents that this Amendment including each of its terms has been approved by the Company's Compensation Committee.

Very Truly Yours,

NeoStem, Inc.

By: /s/ Richard Berman

Name: Richard Berman

Title: Chairman of Compensation Committee

Accepted and Agreed:

/s/ Robin Smith
Robin Smith

Exhibit 10.57

November 13, 2012

Ms. Catherine M. Vaczy
140 East 28th Street
#llC
New York, NY 10021

Dear Catherine:

We are pleased to enter into this extension (the "Extension") of your employment agreement dated as of January 26, 2007 (the "2007 Agreement"), as thereafter amended by amendments on January 9, 2008, August 29, 2008, reinstated and extended on July 8, 2009, extended on July 7, 2010 and extended on January 6, 2012 (the 2007 Agreement as so amended and extended, the "Original Agreement") with respect to your service to the Company as its Vice President and General Counsel. This Extension shall become effective (the "Effective Date") on January 1, 2013 and shall modify the Original Agreement with respect to those different and additional terms as set forth below.

1. Your Base Salary shall remain unchanged.

2. You shall be eligible for annual cash and equity bonuses as determined by the Compensation Committee in its sole discretion.

3. The "Term" as extended shall begin as of the Effective Date and continue through July 8, 2013, the one year anniversary of your last Base Salary increase.

4. During the Term, the Company will continue to pay annual membership and dues for a club in New York of your choice that can be used for business entertainment, meetings, etc. in an amount not to exceed $5,000.

5. Upon termination or expiration of this Extension, the Company shall pay severance equal to three months of your compensation, including your insurance, contingent on the Company receiving a release as contemplated by the Original Agreement.

Terms not otherwise defined herein shall have the meaning ascribed to them in the Original Agreement. Except as set forth herein the terms of the Original Agreement shall remain unchanged.

Very Truly Yours,

NeoStem, Inc.

By: /s/ Robin L. Smith

Name: Robin L. Smith

Title: CEO

ACKNOWLEDGED AND AGREED:

/s/ Catherine M. Vaczy
Catherine M. Vaczy

Exhibit 21.1

Subsidiaries of NeoStem, Inc.

Entity	Percentage of Ownership	Location
NeoStem Therapies, Inc.	100%	United States of America
Stem Cell Technologies, Inc.	100%	United States of America
Amorcyte, LLC	100%	United States of America
CBH Acquisition LLC	100%	United States of America
China Biopharmaceuticals Holdings, Inc. (CBH)*	100% owned by CBH Acquisition LLC	United States of America
Progenitor Cell Therapy, LLC (PCT)	100%	United States of America
NeoStem Family Storage, LLC	100% owned by PCT	United States of America
Athelos Corporation	80.1% owned by PCT	United States of America
PCT Allendale, LLC	100% owned by PCT	United States of America

* The 51% interest in Erye formerly held by our subsidiary CBH was sold on November 13, 2012.

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We have issued our report dated March 8, 2013, with respect to the consolidated financial statements of NeoStem, Inc. and subsidiaries included in the Annual Report on Form 10-K of NeoStem, Inc. for the year ended December 31, 2012. We hereby consent to the incorporation by reference of said report in the Registration Statements of NeoStem, Inc. on Forms S-3 (File No. 333-145988, effective September 27, 2007; File No. 333-166169, effective May 11, 2010; File No. 333-173853, effective September 30, 2011; File No. 333-173855, effective June 13, 2011; File No. 333-183542, effective October 3, 2012; File No. 333-183543, effective October 3, 2012; File No. 333-176673, effective October 3, 2012; and File No. 333-185346, effective December 28, 2012) and on Forms S-8 (File No. 333-107438, effective May 24, 2007; File No. 333-144265, effective July 2, 2007; File No. 333-159282, effective October 29, 2009; File No. 333-162733, effective October 29, 2009; File No. 333-173854 effective May 2, 2011; File No. 333-181365, effective May 11, 2012; and File No. 333-184927, effective November 13, 2012).

/s/ GRANT THORNTON LLP

New York, New York
March 8, 2013

Exhibit 31.1

CERTIFICATION

I, Robin Smith, M.D., certify that:

1. I have reviewed this Annual Report on Form 10-K of NeoStem, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 8, 2013

/s/ Robin Smith, M.D.
Name: Robin Smith, M.D.
Title: Chief Executive Officer of NeoStem, Inc.

A signed original of this written statement required by Section 302 has been provided to NeoStem, Inc. and will be retained by NeoStem, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 31.2

CERTIFICATION

I, Larry A. May, certify that:

1. I have reviewed this Annual Report on Form 10-K of NeoStem, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d) Disclosed in this report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant’s internal control over financial reporting; and

5. The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 8, 2013

/s/ Larry A. May
Name: Larry A. May
Title: Chief Financial Officer of NeoStem, Inc.

A signed original of this written statement required by Section 302 has been provided to NeoStem, Inc. and will be retained by NeoStem, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of NeoStem, Inc. (the "Company") on Form 10-K for the year ended December 31, 2012 filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Robin Smith, M.D., Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to my knowledge that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 as amended; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition of the Company as of the dates presented and the results of operations of the Company for the periods presented.

Dated: March 8, 2013

/s/ Robin Smith, M.D.
Robin Smith, M.D.
Chief Executive Officer

The foregoing certification is being furnished solely pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code) and is not being filed as part of the Form 10-Q or as a separate disclosure document.

A signed original of this written statement required by Section 906 has been provided to NeoStem, Inc. and will be retained by NeoStem, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of NeoStem, Inc. (the "Company") on Form 10-K for the period ended December 31, 2012 filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Larry A. May, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, to my knowledge that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 as amended ; and

2. The information contained in the Report fairly presents, in all material respects, the financial condition of the Company as of the dates presented and the results of operations of the Company for the periods presented.

Dated: March 8, 2013

/s/ Larry A. May
Larry A. May
Chief Financial Officer

The foregoing certification is being furnished solely pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of Section 1350, Chapter 63 of Title 18, United States Code) and is not being filed as part of the Form 10-Q or as a separate disclosure document.

A signed original of this written statement required by Section 906 has been provided to NeoStem, Inc. and will be retained by NeoStem, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.