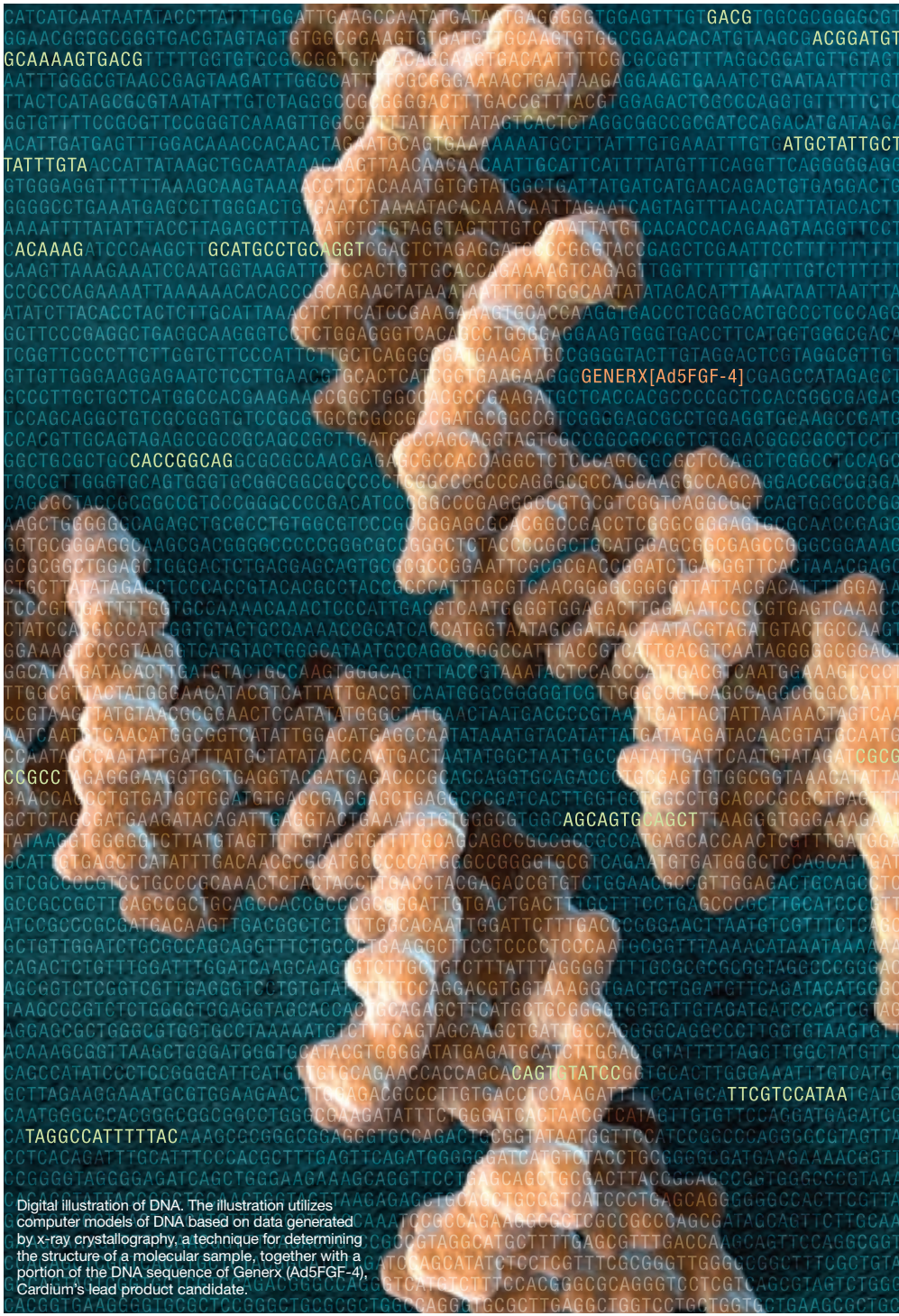
CARDIUMTHERAPEUTICS

ANNUAL REPORT 2007

THE BEAUTY OF BIOLOGY AND

THE POWER OF REGENERATIVE MEDICINE

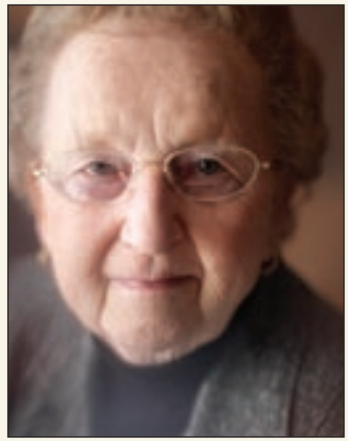


Digital illustration of DNA. The illustration utilizes computer models of DNA based on data generated by x-ray crystallography, a technique for determining the structure of a molecular sample, together with a portion of the DNA sequence of Generx (Ad5FGF-4), Cardium's lead product candidate.

TISSUE REPAIR COMPANY

Excellarate Patient

In 2006, Robert S. received treatments of Excellarate, our DNA-based topical gel for the potential treatment of patients with neuropathic diabetic foot ulcers. Before treatment, his chronic foot ulcer had remained open and unhealed for over 24 weeks despite receiving standard wound care by his physicians. Following Excellarate applications in our Phase 1/2 clinical study, his wound was completely healed.



CARDIUM™ BIOLOGICS

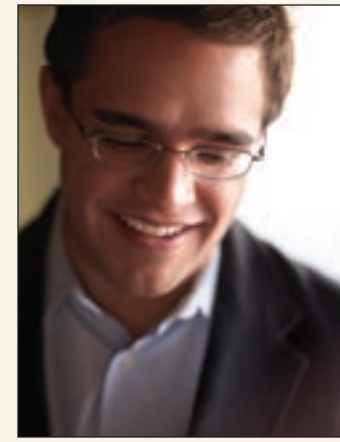
Generx Patient

In 2002, Marilyn L. participated in our AGENT-3 clinical trial, and received a one-time treatment of Generx, our DNA-based angiogenic therapy for patients with recurrent angina due to coronary artery disease. After almost five years following therapy, now in her 70's, she leads an active and productive life.

INNERCOOL therapies®

Celsius Control System Patient

While a student at Stanford Law School, Steven J. suddenly dropped dead due to a cardiac arrest during a jog on campus. After resuscitation and a fast trip to the Stanford Medical Center, following guidelines issued by the American Heart Association, physicians used InnerCool's Celsius Control endovascular cooling system to lower his body temperature to help prevent tissue injury. Today, Steven is leading a full and active life and pursuing his career in law.



Excellarate and Generx are the focus of ongoing clinical studies as described at http://clinicaltrials.gov/ct/show/NCT00493051 and http://www.clinicaltrials.gov/ct/show/NCT00438867.

TISSUE REPAIR COMPANY

The Tissue Repair Company (TRC) is focused on the development of growth factor therapeutics for the treatment of chronic wounds. TRC's lead product candidate, Excellarate™, is a DNA-activated collagen gel for topical treatment formulated with an adenovector delivery carrier encoding human platelet-derived growth factor-BB (PDGF-BB). Excellarate is initially being developed to be administered once or twice for the potential treatment of non-healing diabetic foot ulcers.

Cardium Biologics' portfolio of interventional cardiology growth factor therapeutics includes two product candidates: (1) Generx™ (alferminogene tadenovec), a late-stage DNA-based growth factor therapeutic that is being developed as a one-time treatment to promote and stimulate the growth of collateral circulation in the hearts of patients with ischemic conditions such as recurrent angina; and (2) Corgentin, a pre-clinical, DNA-based growth factor therapeutic that encodes insulin-like growth factor-I, to potentially enhance myocardial repair and restoration for heart attack patients immediately following emergency percutaneous coronary intervention.

InnerCool Therapies is a medical technology company in the emerging field of patient temperature modulation, which is designed to rapidly and controllably cool the body in order to reduce cell death and damage following acute ischemic events such as cardiac arrest or stroke, and to potentially lessen or prevent associated injuries such as adverse neurological outcomes. InnerCool is believed to be the only company worldwide developing, marketing and selling cost-effective surface and high-performance endovascular patient temperature systems and solutions for hospitals and medical centers.

TO OUR STOCKHOLDERS:

Cardium's business is focused on the acquisition and strategic development of late-stage product opportunities that have the potential to address major unmet medical needs and readily defined pathways to commercialization or partnering. Following that approach, we now have a portfolio of regenerative medicine biologics and medical devices that are each being positioned as novel best-of-class products. To facilitate the acquisition and development of these opportunities, as well as their potential sale or partnering, they have been managed as separate business units; however, each business also benefits from the collective product development skills and other resources brought together by Cardium. We currently have three operating units: (1) Cardium Biologics, (2) Tissue Repair Company and (3) InnerCool Therapies.

As a group, we have highly innovative product candidates in mid- to late-stage clinical development for heart disease and for the repair of non-healing diabetic tissue wounds, as well as a fully-integrated medical device business with FDA-cleared products. Our business model is designed to create multiple opportunities for success while avoiding reliance on any single technology platform or product type, and to leverage Cardium's skills in late-stage product development in order to bridge the critical gap between promising new technologies and product opportunities that are ready for commercialization.

Consistent with our long-term strategy, we intend to continue to pursue cost-effective acquisitions with strong value enhancement potential. At the same time, as product candidates are advanced and corresponding valuations established, we may consider various corporate development transactions designed to realize corresponding gains, such as the sale or partnering of a particular asset, or a corporate spin-out transaction and equity distribution.

All three of our businesses have been advanced substantially in the year to two following their acquisition. In the case of Cardium Biologics, its key product candidate for heart disease is now in Phase 3 clinical development. For Tissue Repair Company, we expect to complete a key study of its wound repair product candidate this year. And in the case of InnerCool Therapies, we are now approaching the completion of its strategic repositioning and product build out, having launched an additional product line to expand its business to surface-based patient temperature modulation, and completed development of an improved endovascular system.

Highlights and recent corporate development activities include the following:

- Initiation of Phase 2b MATRIX clinical trial to evaluate the safety and efficacy of Excellarate™ for the potential treatment of non-healing diabetic foot ulcers. Excellarate is a DNA-based topical gel that is being developed to be administered once or twice to stimulate wound healing. The MATRIX study, a randomized, double-blind, placebo-controlled, comparator

arm clinical trial is expected to enroll approximately 210 patients at about 30 U.S. sites. Top line safety and efficacy data from the trial is expected to be announced in late 2008.

- Initiation of Phase 3 AWARE trial for Generx™, a randomized, placebo-controlled, double-blind clinical trial that is expected to enroll approximately 300 women at an estimated 50 U.S. medical centers. Generx is being evaluated as a potential treatment for myocardial ischemia (insufficient blood flow within the heart muscle) which gives rise to angina associated with coronary heart disease. The U.S. Food and Drug Administration (FDA) has granted Fast Track designation to Generx for the treatment of myocardial ischemia in view of the large unmet medical need for effective new therapies to treat coronary heart disease.

- Launch of InnerCool's new CoolBlue™ surface temperature modulation system, which is designed to provide effective patient temperature control in less acute patients or in clinical settings best suited to prolonged temperature management.

- Completion of development of InnerCool's next-generation RapidBlue™ endovascular cooling system, including an enhanced console and disposable catheter, which is designed to cool patients rapidly and controllably, and provide effective rewarming as well as cooling.

- Publication in the Journal of American College of Cardiology of positive findings from a pooled by-patient analysis of the AGENT-3 and AGENT-4 Phase 2b/3 clinical trials for Generx. Among the findings reported, a pre-specified analysis showed significant improvements in multiple clinical measures of heart disease among women who received Generx™ as compared to women in the placebo control group.

- Initiation of pre-clinical studies supported by a National Institutes of Health Small Business Innovation Research (SBIR) grant, which are designed to further establish the therapeutic potential of Corgentin™ (Ad5IGF-I) to preserve heart tissue and cardiac function following a heart attack (acute myocardial infarction).

- Completion of a $21.5 million equity financing with institutional and other accredited investors and listing on the American Stock Exchange under the new trading symbol CXM.

In the upcoming year, we plan to build upon our core products and product candidates and continue to develop a portfolio of medical products at various stages of development designed to increase our market opportunity and build stockholder value. Key strategic goals for 2008 include the following:

- Complete our Phase 2b MATRIX clinical study and announce top line safety and efficacy data for Excellarate™.

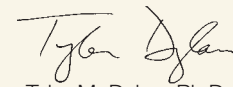
- Continue patient recruitment in our Phase 3 AWARE clinical study for Generx™, which is expected to be completed in 2009.
- Secure FDA clearance for InnerCool's next-generation RapidBlue™ endovascular cooling system.
- Accelerate the commercialization of InnerCool's surface and endovascular temperature modulation systems in the U.S. and initiate European market launch of both the RapidBlue™ and CoolBlue™ systems.
- Conduct additional pre-clinical studies supported by Tissue Repair's SBIR grant to evaluate Corgentin™ as a potential one-time biologic treatment for heart attack patients.
- Continue to consider opportunistic acquisitions of innovative product candidates, and evaluate potential sales or strategic partnering opportunities for existing products and candidates.

We accomplished significant advances in 2007 and look forward to building on those this year. We believe our technologies have unrealized value and have the potential for significant future growth and partnering prospects. Consistent with our overall business strategy, we are asking stockholders this year to approve a name change of the Company from "Cardium Therapeutics" to the "Cardium Group" to reflect our current organizational structure, long-term business strategy and economic value thesis. The enclosed Annual Report on Form 10-K provides more detailed information about our businesses and financial position, and our proxy statement for the upcoming annual meeting provides additional information regarding the proposed name change and other matters for consideration.

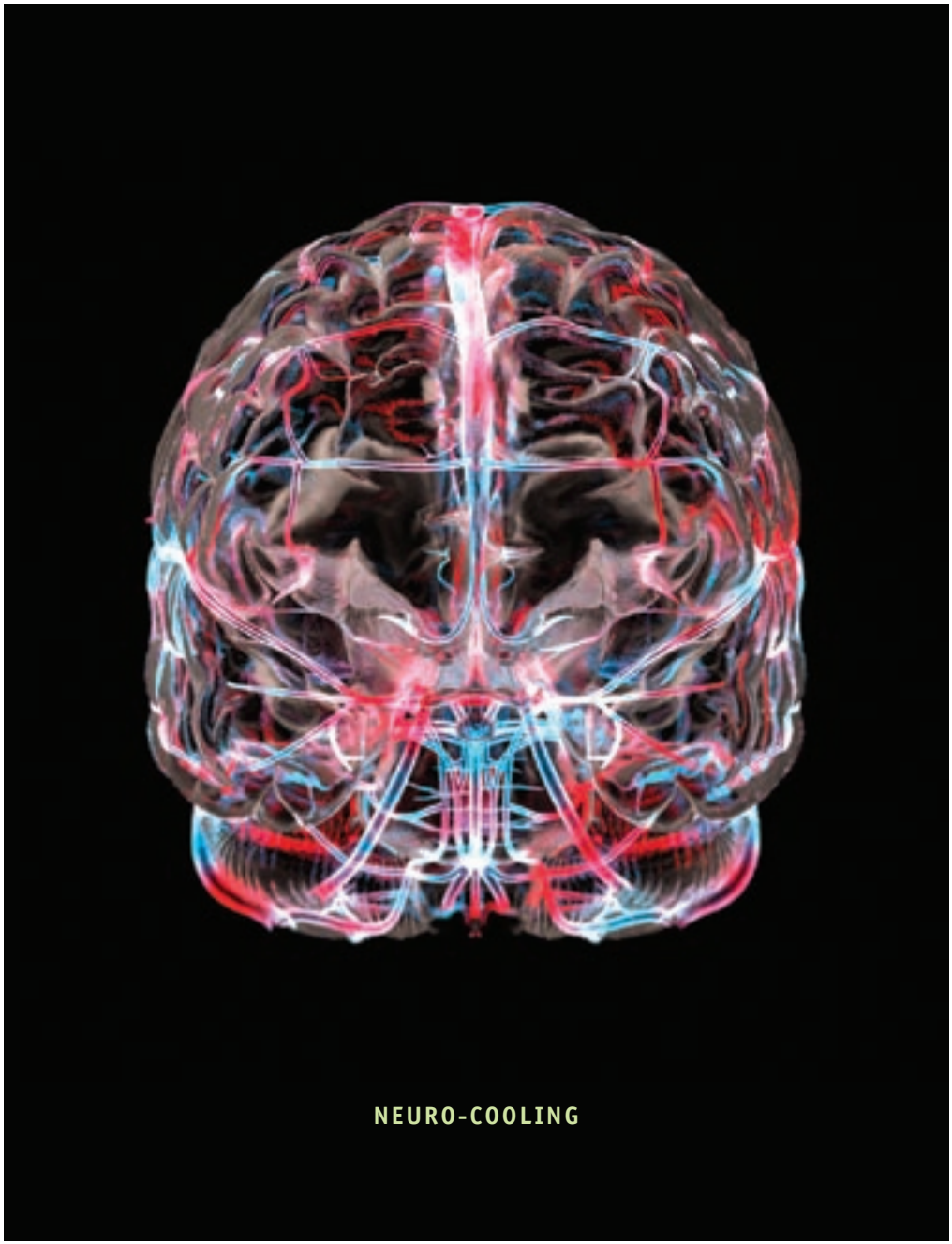
We are pleased to introduce in this year's annual report three exceptional individuals who participated in our breakthrough technologies and have potentially helped to advance the frontiers of medicine for generations to come. We thank them and our other patients for their involvement and wish them continued success. We also thank our Board of Directors for their continued guidance, and each of our business teams for their commitment and many contributions. Finally, we take this opportunity to thank you – our stockholders – for your investment and continued support.

Sincerely,

Christopher J. Reinhard
Chairman & Chief Executive Officer



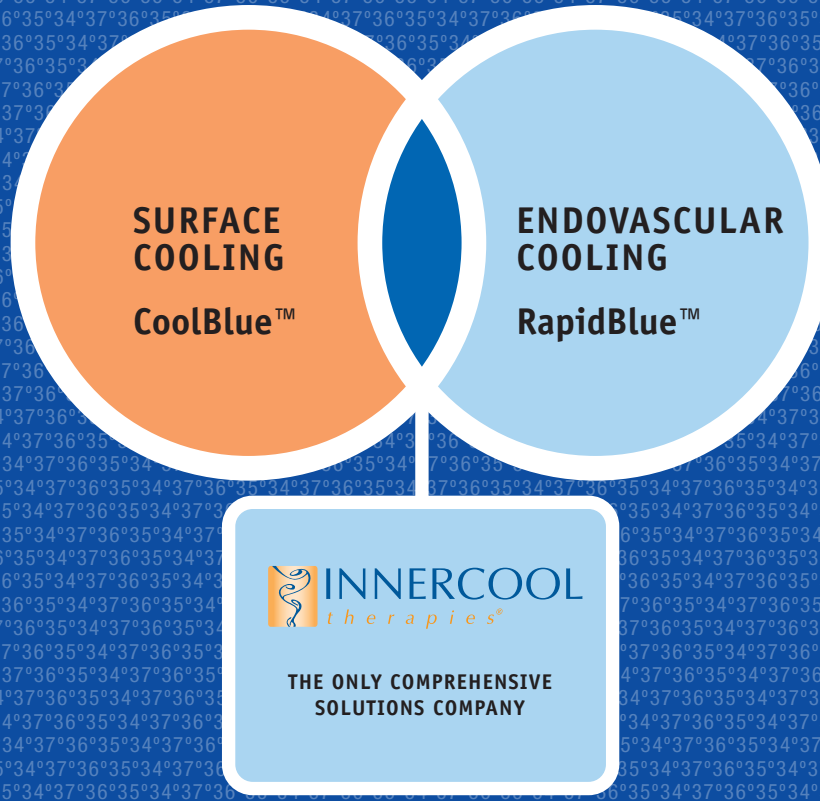
Tyler M. Dylan, Ph.D., J.D.
Chief Business Officer & General Counsel



Normal body temperature or normothermia is 37° Celsius (C). Therapeutic cooling, or induced hypothermia, is proactive cooling of a patient to below normal body temperature, in the range of 32° to 34°C, in order to protect organs and cells from ischemic or inflammatory damage. Cardium's InnerCool operating unit has FDA clearance to market its products in the U.S. in certain neuro-intensive care patients as well as applications in neurologic and cardiac surgery.

STEVEN J. – MEDICAL PIONEER
CARDIAC ARREST PATIENT COOLED
IN 2005, FOLLOWING RESUSCITATION,
BY INNERCOOL'S ENDOVASCULAR
CELSIUS CONTROL SYSTEM

COMPETITIVE POSITIONING

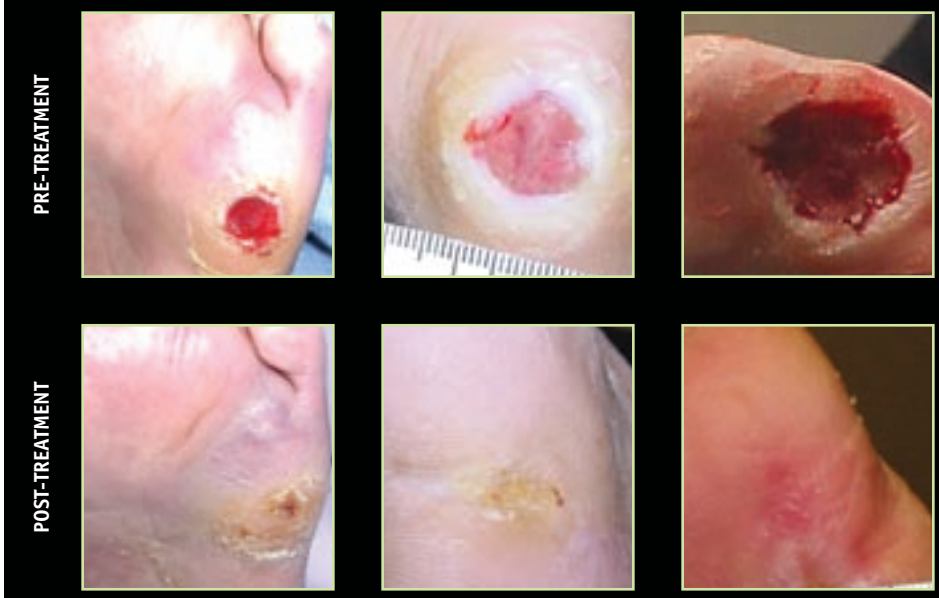



TEMPERATURE MODULATION THERAPY
ACCUTROL™
CATHETER
COOLBLUE™
SURFACE SYSTEM
RAPIDBLUE™
ENDOVASCULAR SYSTEM

InnerCool's CoolBlue™ surface temperature modulation system, which includes a console and a disposable CoolBlue vest with upper thigh pads, is designed for use in less acute patients or in clinical settings best suited to prolonged temperature management. InnerCool's CoolBlue vest and thigh pads wrap the body without requiring any adhesives to stick to the skin.

InnerCool's next-generation RapidBlue™ system, for high-performance endovascular temperature modulation, includes a programmable console with an enhanced user interface and a catheter designed to quickly modulate patient temperature in association with surgery or other medical procedures. The RapidBlue system powers InnerCool's Accutrol™ catheter, which has a flexible metallic temperature control element and a built-in temperature feedback sensor to provide fast and precise patient temperature control.

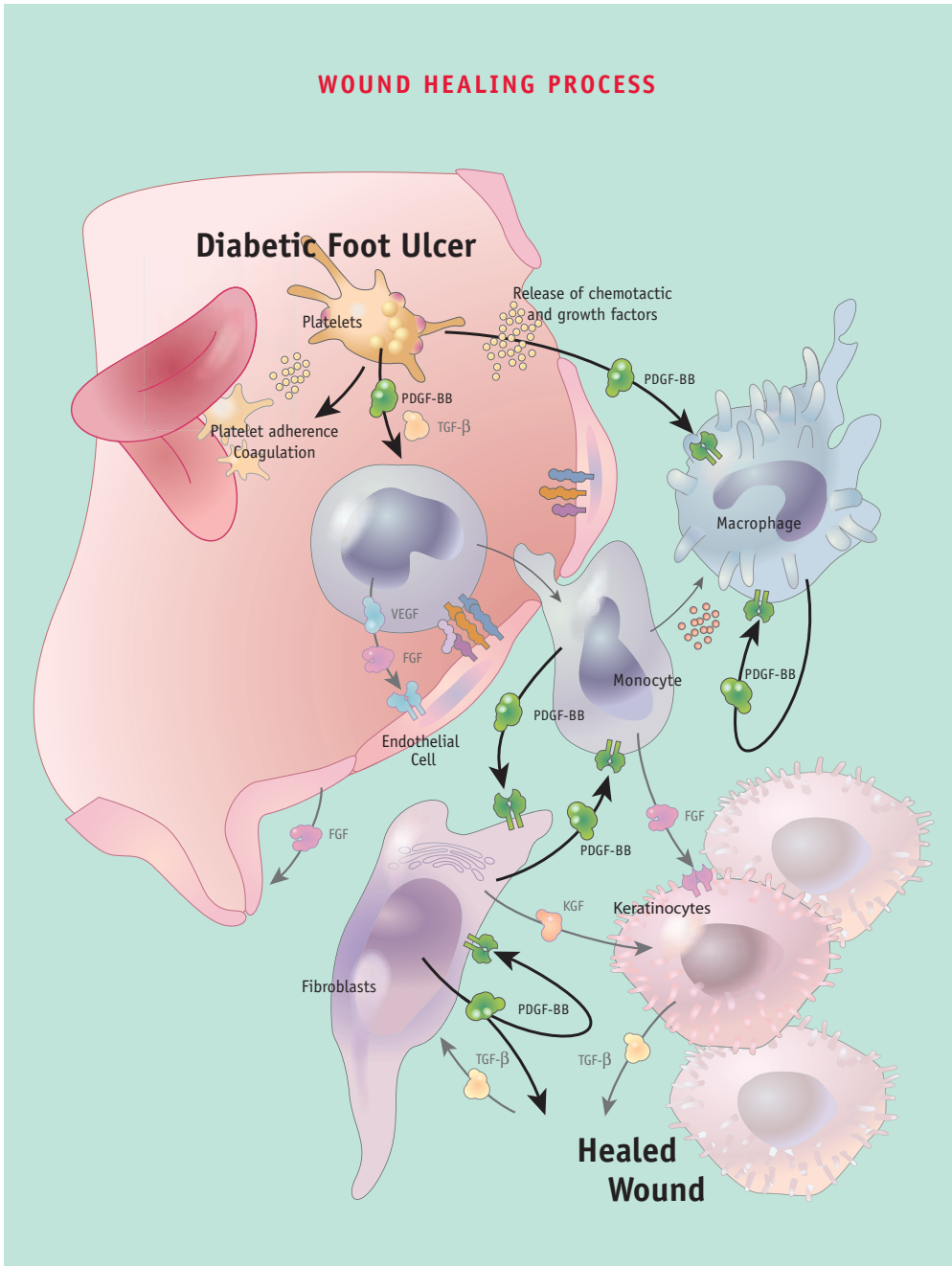
EXCELLARATE SUBJECTS
PHASE 1/2 CLINICAL STUDY



MATRIX
Clinical Study: Diabetic Wounds

Results of the Phase 1/2 study indicated that Excellarate™ was well tolerated and there were no dose-limiting toxicity effects due to the product candidate. In addition, most of the patients (93%) had a positive response to Excellarate, with 67% of the patients with small to large ulcers achieving complete wound closure. The Phase 2b MATRIX study is a randomized, double-blind, placebo-controlled, comparator arm clinical trial and will enroll approximately 210 patients at approximately 30 U.S.-based medical centers.

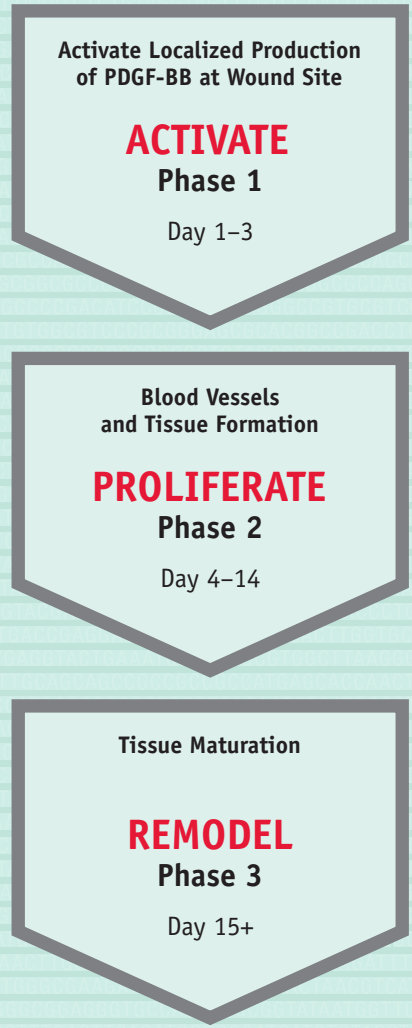
ROBERT S. – MEDICAL PIONEER
PARTICIPANT IN 2003 EXCELLARATE
PHASE 1/2 CLINICAL TRIAL FOR TREATMENT
OF NEUROPATHIC DIABETIC FOOT ULCERS



This illustration shows biological wound healing through an ordered sequence of events including the initial control of hemorrhage, activation of inflammatory cells, proliferation of tissue repair cells and subsequent remodeling of the newly formed tissue, and highlights the important role that PDGF-BB protein plays in the wound healing process.

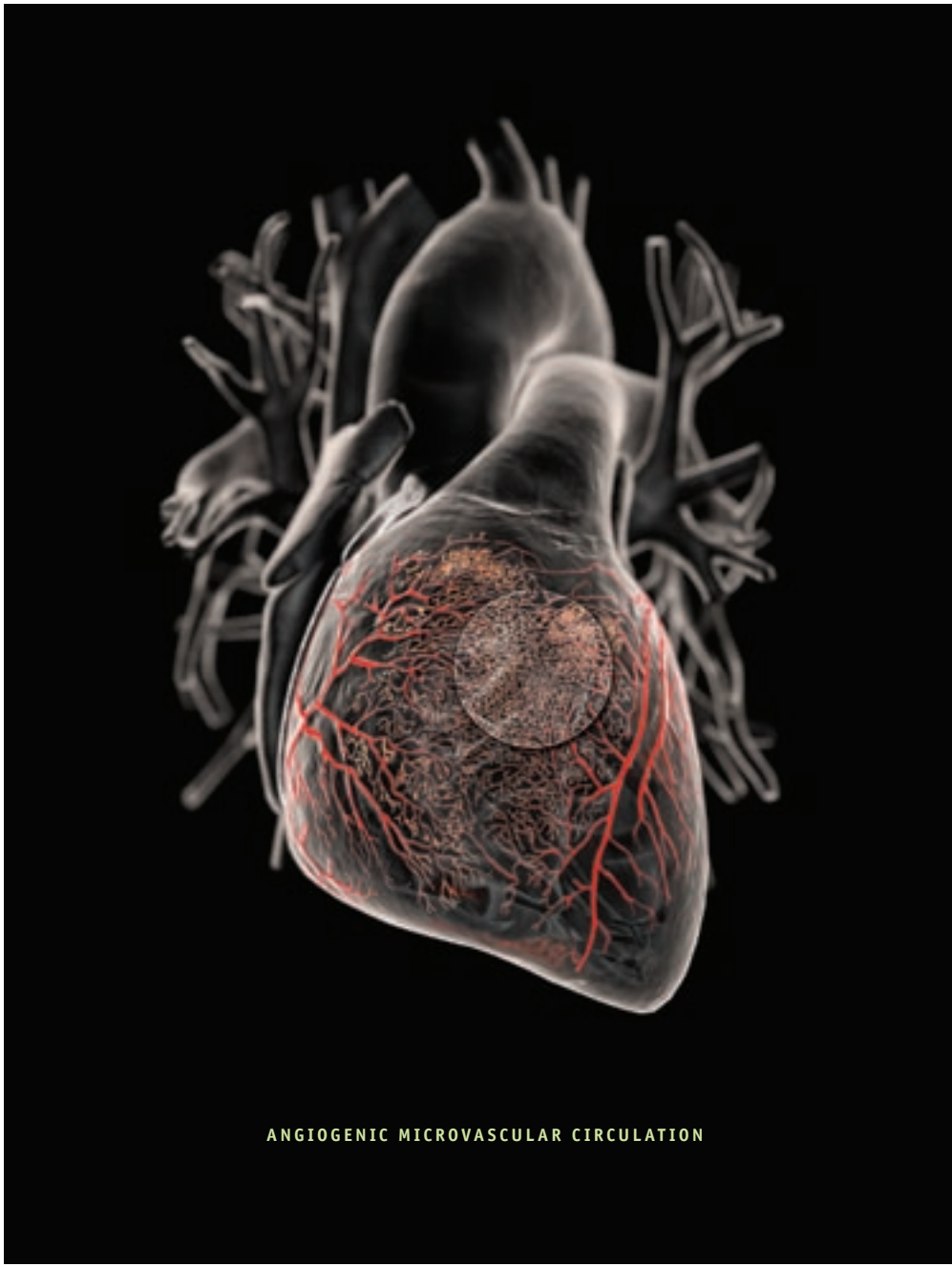
EXCELLARATE

GENE ACTIVATED MATRIX TECHNOLOGY FOR NEUROPATHIC DIABETIC FOOT ULCERS



REGENERATIVE MEDICINE

DESIGNED TO BE A ONE-TIME PHYSICIAN-ADMINISTERED TREATMENT

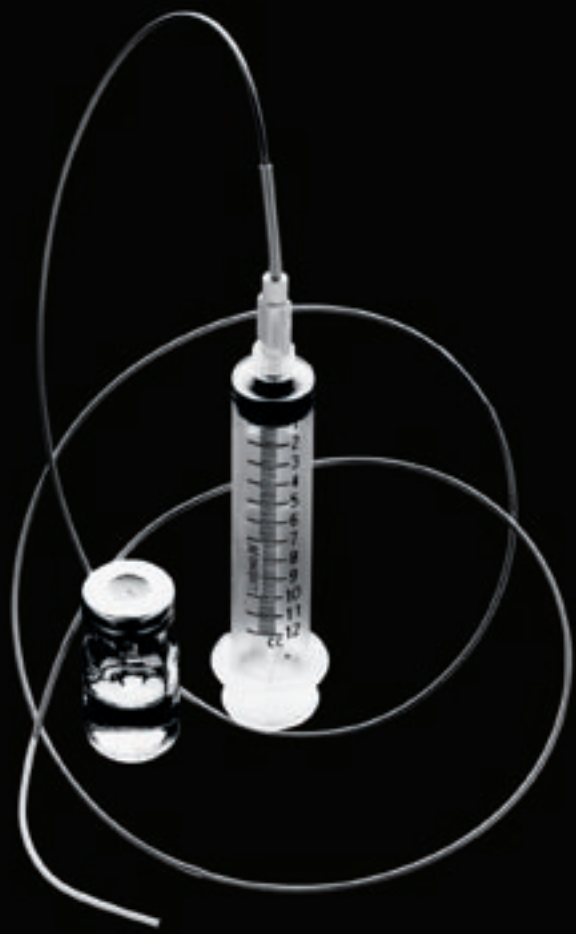


ANGIOGENIC MICROVASCULAR CIRCULATION

Generx™ (alferminogene tadenovec, Ad5FGF-4), Cardium's lead product candidate, is being developed for the potential treatment of myocardial ischemia in patients with recurrent angina symptoms associated with coronary heart disease. Generx represents a new therapeutic class of biologics designed to promote angiogenesis, a natural process of blood vessel growth within the heart muscle, following a one-time intracoronary administration from a standard cardiac infusion catheter. Generx is considered to be the most clinically advanced DNA-based angiogenic therapy in the world, having already been evaluated in four clinical studies, collectively known as the AGENT trials.

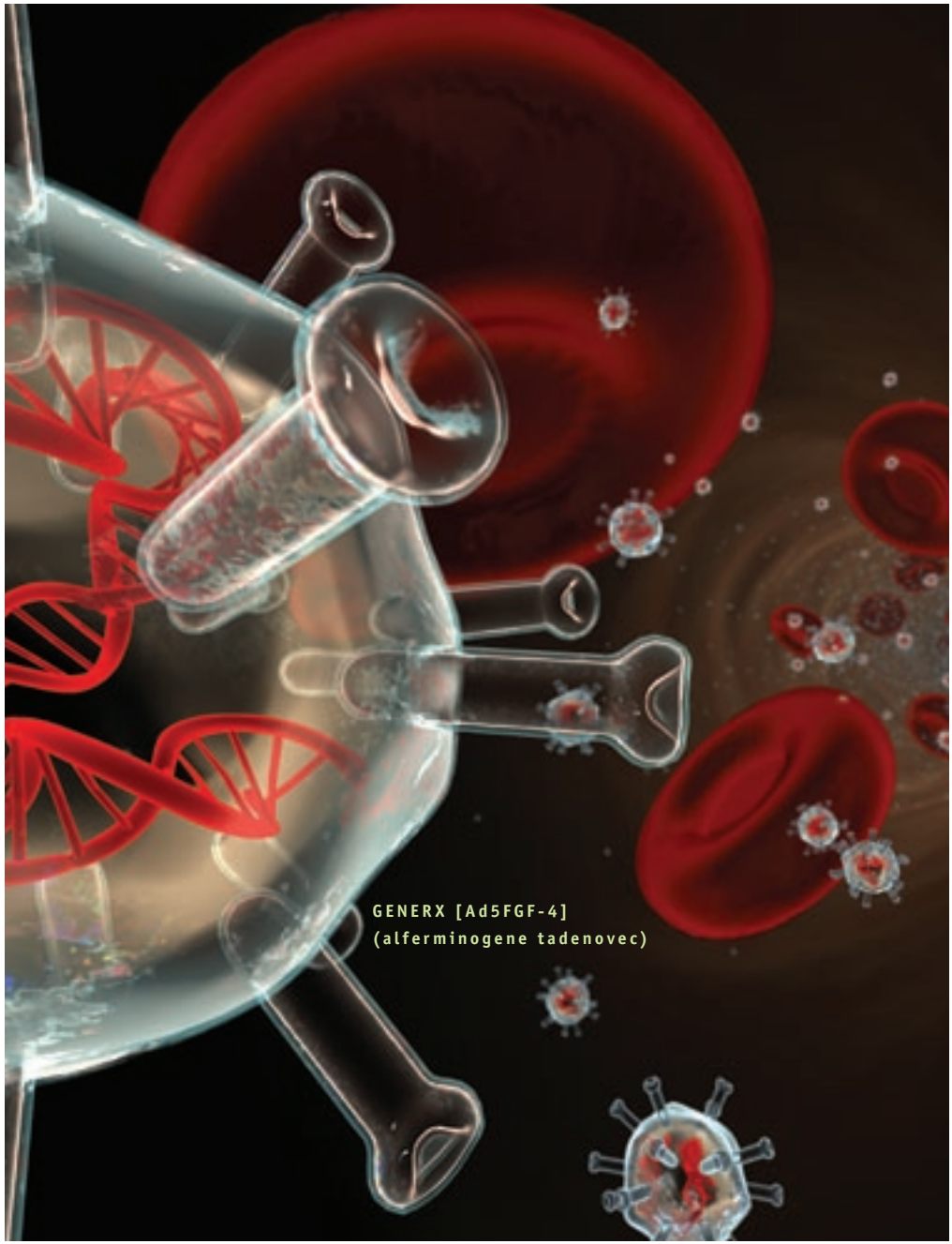
MARILYN L. – MEDICAL PIONEER
PARTICIPANT IN GENERX PHASE 2b/3
CARDIOVASCULAR ANGIOGENESIS
CLINICAL TRIAL IN 2002

CARDIAC MICROVASCULAR ANGIOGENESIS



ENHANCING A NATURAL HEALING PROCESS

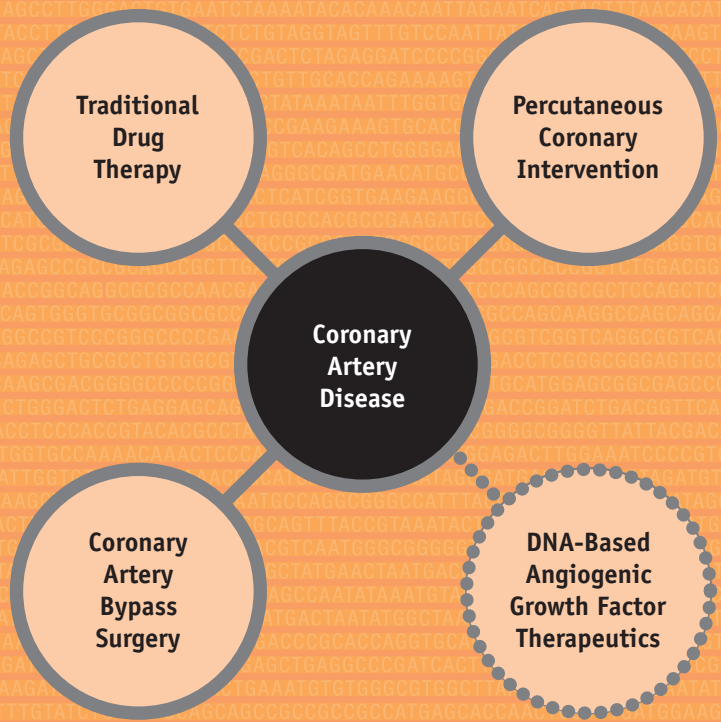
Cardium's non-surgical method of intracoronary infusion is employed for direct product delivery into the heart's extensive coronary microcirculation. Intracoronary infusion, which is performed routinely in catheterization laboratories by interventional cardiologists, uses a standard diagnostic cardiac catheter for delivery of Generx throughout the entire coronary arterial circulation. This delivery approach has the significant advantage of accessing all of the coronary arteries without complications associated with direct myocardial needle injection (multiple sticks).

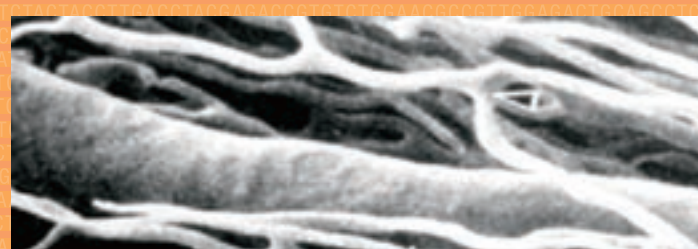


DNA-based therapy enables a patient's own cells to produce a desired therapeutic protein directly where it is needed in the body. Cardium's Generx product candidate induces cardiovascular growth factor production for several weeks following its one-time delivery to the heart muscle, where it can stimulate the development of new blood vessels capable of supplying additional blood to the heart. Generx has been studied in human clinical trials involving more than 650 patients affected by coronary heart disease.

GENERX

THERAPEUTIC POSITIONING





High Magnification Image of Cardiac Microvascular Circulation

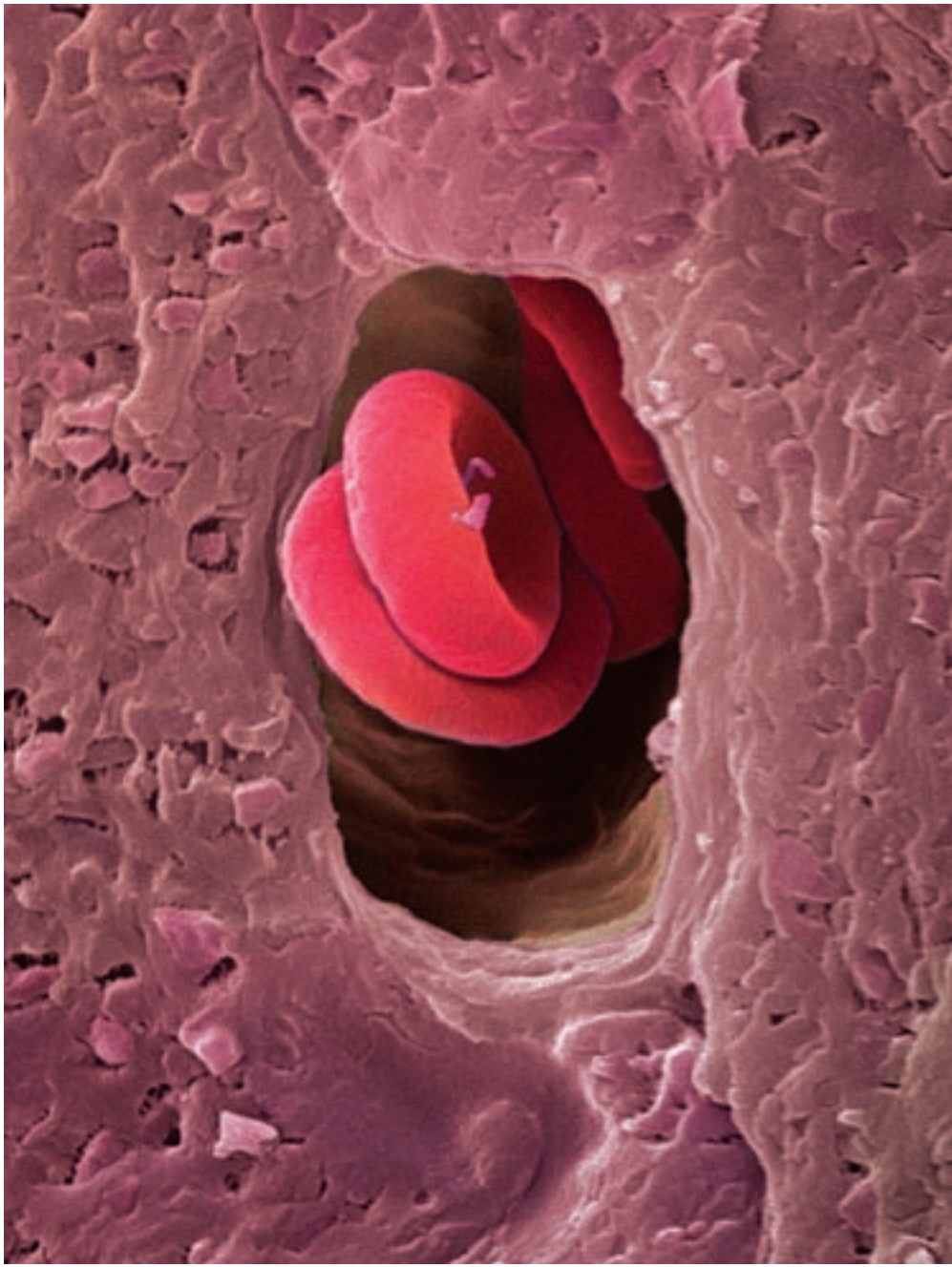
Generx represents a new therapeutic class of biologics to promote a disease-modifying physiological response and is believed to work by stimulating the growth of new microvascular blood vessels (angiogenesis) in the heart.

AWARE
Cardiovascular Clinical Study

PHASE 3 CLINICAL STUDY

FDA FAST TRACK STATUS

Cardium's current AWARE clinical study was started in 2007 and is expected to enroll approximately 300 women at up to 50 U.S. Medical centers. The AWARE (Angiogenesis in Women with Angina pectoris who are not candidates for REvascularization) study is a Phase 3 clinical trial to evaluate the therapeutic effects of Generx for the potential treatment of myocardial ischemia. With the completion of the AWARE study, nearly 1,000 patients will have participated in Generx clinical studies involving approximately 60% men and 40% women.



Scanning electron micrograph of a section through a freeze-fractured coronary microvascular blood vessel. Red blood cells (erythrocytes) are seen in the capillary. The coronary capillaries supply the heart muscle with oxygen that is transported from the lungs by the erythrocytes. When Generx is infused into the coronary arteries, it travels through the coronary circulation into the small caliber capillaries where it is taken up in the myocardium. Colored magnification: x3000 at 6x7cm size.

GENERX: A DNA-BASED ANGIOGENIC GROWTH FACTOR THERAPY FOR PATIENTS WITH RECURRENT ANGINA

INSIGHTS INTO GENERX AND ITS POTENTIAL AS A DISEASE-MODIFYING AGENT TO ADDRESS AN UNMET MEDICAL NEED

Generx™ (alferminogene tadenovec, Ad5FGF-4), Cardium's lead product candidate, is being developed for the potential treatment of myocardial ischemia in patients with recurrent angina symptoms associated with coronary heart disease. Generx represents a new therapeutic class of biologics designed to promote angiogenesis, a natural process of blood vessel growth within the heart muscle, following a one-time intracoronary administration from a standard cardiac infusion catheter. Generx is considered to be the most clinically advanced DNA-based angiogenic therapy in the world, having already been evaluated in four clinical studies, collectively known as the AGENT trials. The AGENT trials enrolled more than 650 patients with coronary heart disease at over 100 medical centers in the U.S. and internationally and represents the largest safety database for a cardiovascular DNA-based therapeutic. In these studies, Generx was administered to 450 patients and appeared to be safe and well-tolerated.

In 2007, Cardium announced the initiation of the Phase 3 AWARE clinical trial to evaluate the therapeutic effects of Generx in women who have recurrent angina, despite being treated with maximally tolerated medications, and who are not candidates for a revascularization procedure such as coronary artery bypass surgery or angioplasty and/or stent placement. The AWARE trial follows the AGENT trials and represents an important next step in the Generx clinical and commercial development process. Also in 2007, the results from the AGENT-3 and AGENT-4 clinical studies were published in the Journal of the American College of Cardiology (JACC). The data from a pre-specified analysis showed significant and durable improvements in multiple important measures of coronary heart disease among women who received Generx, compared to women who received placebo. These findings served as the basis of the AWARE study. In addition, the FDA granted Fast Track designation to the Generx development program, acknowledging the potential of Generx to address the unmet medical needs of these patients whose disease is serious and affects their daily quality of life. The Generx product candidate is now the first and only DNA-based angiogenic approach in Phase 3 clinical development designed to treat the large and growing population with this medical condition.

Generx holds the potential to promote a disease-modifying improvement in patients with recurrent angina by leveraging the body's natural healing processes in response to myocardial ischemia (insufficient blood flow and oxygen supply to the heart muscle). Angiogenesis is a biologic response to repeated myocardial ischemia. The resulting newly-formed vessels provide alternate routes of blood flow and oxygen delivery to the patient's heart downstream from blockages in the coronary arteries. In many patients however, including those with recurrent angina, coronary collateral vessel formation is insufficient to meet the heart's needs during stress. Angina (chest pain) is a clinical symptom of myocardial ischemia and usually occurs during exertion, either physical or emotional. Currently available anti-anginal drugs are generally designed to be taken daily to provide symptomatic relief through blood vessel dilation or reduced myocardial oxygen demand. Generx is designed to promote the heart's natural response of collateral vessel growth and increase blood flow in the microcirculation and thus

relieve myocardial ischemia. There are currently no approved agents that are believed to promote a disease-modifying effect for the treatment of ischemic heart disease.

GENERX CLINICAL DEVELOPMENT

Generx has been the focus of the most widely-conducted clinical studies for a DNA-based angiogenic therapy (AGENT-1 through AGENT-4), which to date have involved more than 650 patients with heart disease in four double-blinded, placebo-controlled clinical studies at more than one hundred U.S., European and other international medical centers.[1,2,3] Results from these studies indicate that a one-time intracoronary infusion of Generx appears to be safe and well-tolerated when administered to patients (over 450 to date) with heart disease. Generx is designed to treat the underlying condition of coronary heart disease, myocardial ischemia, rather than simply the symptoms of angina. The clinical benefits from a one-time treatment with Generx may include an increase in exercise capacity, decrease in severity of angina and relief of underlying cardiac ischemia for patients with coronary heart disease.

Generx represents the first and only DNA-based cardiovascular therapeutic to be advanced to Phase 3, and Cardium believes it to be the only current Phase 3 product candidate for the potential treatment of patients with stable angina, a chronic medical condition affecting millions of patients in the U.S. and worldwide. This advanced clinical program includes

- The largest safety database for a cardiovascular DNA-based therapeutic;
- A mechanism of action study confirming angiogenic response, as measured by myocardial perfusion, in men and women;
- Evidence suggestive of a dose response;
- A measurable and durable treatment effect;
- A concordance of positive results across multiple important measures of treatment effects in women with coronary heart disease; and
- Fast track designation granted by the FDA, acknowledging the potential of Generx to address the serious unmet medical need of patients with recurrent angina.

AGENT-3 and AGENT-4 Pooled Analysis

The results from the AGENT-3 and AGENT-4 Phase 2b/3 clinical trials, two concurrent and nearly identical double-blind, placebo-controlled clinical studies, were published in 2007 in JACC[3] (article available on Cardium's web site). These two large-scale clinical trials enrolled 532 patients at approximately 100 medical centers throughout the United States (AGENT-3) and internationally (AGENT-4). The pooled by-patient analysis of original patient data from the two studies that randomized angina patients to either placebo, low dose or high dose of Generx, reported statistically significant positive treatment effects in a number of different measures of heart disease among women, gender being a pre-specified subgroup in the two studies. Concordance of multiple significant improvements in women was observed with the high dose of Generx, effects that were maintained even six months after the one-time intracoronary infusion. These positive findings included: (1) an increase in overall time on the exercise treadmill test

or ETT, which is a measure of exercise capacity; (2) relief of underlying myocardial ischemia, which is measured by an increase in exercise time to 1 mm ST-segment depression on electrocardiogram or ECG; and (3) a decrease in severity of angina (Canadian Cardiovascular Society or CCS Class). Moreover, a significant decrease in the severity of angina was maintained at one year following dosing. Also, the studies showed that over several years of patient follow-up for safety, there was a statistically significant lower incidence of worsening angina among all patients (including both men and women) who had received Generx as compared to patients who had received placebo.

Additional analyses of the AGENT-3 and AGENT-4 studies showed that among a subgroup of patients, particularly men who were younger and more capable of exercise, there was a substantial placebo response observed on ETT. Among women, the observed placebo response was substantially less and the observed treatment effect was correspondingly greater. It should be noted that both men and women showed a similar improvement in total exercise time on ETT in the two studies; however, the occurrence of such a large placebo response may limit or mask potential drug effects among more exercise-competent subgroups when using tests such as the exercise treadmill. More study is needed to establish the reason for the gender differences observed. The women randomized in the AGENT-3 and AGENT-4 studies appeared to have more severe angina and were on significantly more anti-anginal medications at the study outset, both suggestive of more severe disease. The women's disease severity may have limited the extent of exercise training, preventing them from having a placebo response based on increased physiologic exercise training of skeletal muscle and vasculature. It is also possible that angiogenic therapy works in the hearts of men, but that a physiologically real placebo effect of peripheral training makes the effect of angiogenesis in the heart harder to detect by methods that use exercise.

AGENT-2 Mechanism of Action Study

In 2003, positive results from the AGENT-2 clinical study were published in JACC[2] (article available on Cardium's web site). AGENT-2 was a mechanism of action study designed to evaluate the potential for Generx to stimulate a therapeutic angiogenic effect as measured by myocardial blood flow using single-photon emission computed tomography (SPECT) to determine adenosine stress-induced left ventricular reversible perfusion defect size. Generx was well-tolerated in this study that enrolled 52 patients (men and women) with reversible ischemia. As noted in the publication, the mean change observed in the reversible perfusion defect size from baseline at eight weeks in Generx-treated patients was statistically significant, while the placebo group showed no significant change. The observed treatment effect for men and women receiving Generx in the AGENT-2 clinical study was similar in magnitude to the improvement reported in the literature for patients one year after undergoing mechanical revascularization procedures, such as coronary bypass graft surgery or angioplasty.

Generx Clinical Safety Data

More than 650 patients have been enrolled in the four AGENT clinical trials and the safety data collected in these trials represent the largest safety database for a cardiovascular DNA-based therapeutic. In these studies, Generx was administered to 450 patients and appeared to be safe and well-tolerated. Although more patients were reported to have a transient fever in the first few days after receiving Generx than with placebo, the majority resolved with no treatment or with antipyretic medication such as aspirin. This

infrequent but expected side effect, the only one apparently related to Generx administration, has been reported in other trials using adenovectors. Adverse event data for patients followed for approximately two to four years showed that the incidence of angina/worsening angina was significantly lower in the Generx treated patients compared to patients who received placebo. Results from the pooled data analysis from AGENT-3 and AGENT-4, which included over 500 patients and more than 350 patients who received Generx, showed no differences between Generx and placebo-treated patients for serious adverse events or other adverse events, hemodynamic readings or laboratory findings. Importantly, there have been no reports in any study of clinical myocarditis, evidence of an increase in heart failure, or reports of unwanted angiogenesis at extra-cardiac sites following the one-time intracoronary administration of Generx.

AWARE Study

Findings from the AGENT studies served as the basis for Cardium's current AWARE clinical study that was started in 2007 and is expected to enroll approximately 300 women at up to 50 U.S. medical centers. The AWARE (Angiogenesis in Women with Angina pectoris who are not candidates for REvascularization) study is a Phase 3 clinical trial to evaluate the therapeutic effects of Generx for the potential treatment of myocardial ischemia. The randomized, placebo-controlled, double-blind trial is enrolling women with recurrent stable angina who are not candidates for revascularization procedures (such as coronary artery bypass surgery or angioplasty and/or stent placement) and who are receiving optimal drug therapy. The primary endpoint is the improvement in time to onset of electrocardiogram (ECG) changes diagnostic of myocardial ischemia during exercise treadmill testing at six months following administration. As agreed by the FDA, the use of time to ST-segment depression measured on ECG is a more direct and objective measure of underlying myocardial ischemia and can measure a disease modifying effect. The secondary endpoints include an additional objective measure of improved myocardial blood flow within the affected heart muscle measured by adenosine SPECT imaging (single photon emission computed tomography), which was the subject of the AGENT-2 study, as well as improvements in other measures of angina. With the completion of the AWARE study, nearly 1,000 patients will have participated in Generx clinical studies involving approximately 60 percent men and 40 percent women.

Plans to Evaluate Generx in Men

Cardium is also planning to initiate a Phase 2b clinical study of Generx treatment effects in men. This additional study is designed to confirm results from the AGENT-2 mechanism of action study, which showed substantial improvements in myocardial blood flow as measured by SPECT imaging in Generx-treated patients compared to the control group following a single treatment, and to correlate the improved blood flow with one or more other clinically relevant endpoints. The study design and selection criteria for the study in men will be, in most respects, identical to that for the AWARE study. The only difference is the use of SPECT as the primary endpoint. If positive, results from the study in men may provide the rationale to validate a meaningful change in SPECT as a surrogate endpoint for improvement in myocardial ischemia.

CORONARY HEART DISEASE AND RECURRENT ANGINA

The heart requires a steady supply of oxygenated blood delivered by the coronary arteries to the heart muscle (myocardium) in order for the heart to effectively pump blood to the rest of the body. Symptomatic coronary heart disease results when one or more of the coronary arteries becomes partially or wholly blocked and cannot supply enough blood to the heart for a given level of work. The insufficient blood flow (and thus oxygen) for the work level is known as myocardial ischemia. In most cases, coronary heart disease is caused by atherosclerosis or the build up of fatty deposits, composed mostly of cholesterol plaque, on the inside walls of the coronary arteries so that they become narrowed or occluded, restricting normal blood flow. The severity of coronary heart disease may range from no symptoms or mild intermittent chest pain (angina) to severe disease that makes it very difficult to carry on any ordinary physical activity without discomfort. Stable angina is predictable chest discomfort such as that associated with physical exertion or mental or emotional stress. Left untreated, these conditions may result in worsening angina or lead to a heart attack (myocardial infarction), resulting in death of the heart muscle cells in the area affected by the blockage. Since heart muscle does not regenerate to any significant degree, damage from a myocardial infarction can lead to heart failure or death.

Coronary heart disease is the leading cause of death in the United States, with the American Heart Association (AHA) estimating that in 2004 more than 600,000 deaths were due to coronary heart disease.[5] Nearly 16 million Americans have coronary heart disease, the etiologic basis of ischemic heart disease. Ischemic heart disease results in approximately one million new or recurrent myocardial infarctions in the U.S. annually. Over 9 million adults in the U.S. experience chest pain or angina pectoris, a clinical symptom of myocardial ischemia, and an estimated additional 500,000 new cases of angina are diagnosed each year. Evidence of the growing population of angina patients comes from the AHA's most recently published estimate for new cases of angina in which there was a 25% increase in angina cases over that published in the previous year's statistical report. In women, the statistics are particularly striking. An estimated 7.3 million women in the U.S. are currently living with coronary heart disease. Of these, approximately 4.6 million American women have angina and it is estimated that approximately 300,000 women will die annually from coronary heart disease. While the number of deaths due to heart disease has dropped steadily for men over the last 30 years, the number of deaths for women has remained essentially unchanged during this time.

Although there are a large number of drugs designed to treat angina pectoris by altering the oxygen demand of the heart muscle or dilating vessels, these drugs must be administered daily, do not physiologically modify the underlying disease and many patients remain symptomatic. Patients who undergo revascularization procedures (such as coronary artery bypass surgery or angioplasty and/or stent placement) to relieve their angina frequently experience recurrent angina. Many patients who need revascularization are not optimal candidates for either of these procedures, and frequently not all obstructed arteries can be completely revascularized. Even while on optimal medical therapy, many patients continue to experience a worsening of symptoms that can dramatically impact their lifestyle and quality of life. As a result, patients often must limit their activities in order to avoid an angina attack. Thus there is a clinical need for additional treatment approaches for these patients with underlying myocardial ischemia. Generx offers the potential to promote a disease-modifying effect by stimulating the growth of collateral blood vessels to improve myocardial blood flow.

Women and Heart Disease

Since 1984 more women than men have died each year from cardiovascular disease, and each year the gap between the two genders' survival continues to widen.[6] The AHA reports that more women's lives are claimed annually by cardiovascular disease than by the next five leading causes of death combined (all cancers, chronic respiratory diseases, Alzheimer's disease, accidents and diabetes). More than 10 times as many women die of heart disease each year as die of breast cancer. Approximately 1 in 3 women are living with cardiovascular disease while the likelihood of a woman being diagnosed with breast cancer some time during her life is about 1 in 8. Despite these stark statistics, most people still think of heart disease as a "man's disease". In fact, surveys indicate that nearly half of women are not aware that heart disease is the leading cause of death among women, and only 20 percent are aware that heart disease is the greatest health problem facing women today. Forty percent of women do not survive their first heart attack; and for women under the age of 50, a heart attack is twice as likely to be fatal as a similar event in men. In general, women have been under-represented in clinical trials for heart disease. With the exception of more recently conducted women-only studies, women usually account for less than one-third of the participants in most clinical trials.[7] Information gaps related to gender differences in the development of heart disease, its diagnosis and treatment may help to explain this gap between men and women with heart disease.

A woman's heart is physiologically different from a man's heart. A woman's heart is typically smaller both in size and its blood flow capacity through the arteries and smaller blood vessels. A woman's heart tends to beat faster than a man's, but may take slightly longer to relax between heart beats. Until she reaches menopause, a woman's heart is protected to some extent by her estrogen hormone. As a result, an average woman develops heart disease about 10 to 15 years later than an average man. Among patients with cardiovascular disease who are over the age of 55, the prevalence is higher in women than in men.[5,8,9] Estimates of the prevalence of angina in the aging population reveal it is slightly more common in females than in males beyond the age of 55, and in older women who are on optimal therapy, angina is associated with worse cardiovascular outcomes. In women aged 55-64 with confirmed angina (ECG changes or on angiography), the coronary-standardized mortality ratios are twice that of men.[8] A recently published prospective analysis of angina in women from the NHLBI-sponsored Women's Ischemic Syndrome Evaluation (WISE) study provides compelling data indicating that women with documented heart disease (2-vessel or 3-vessel stenosis) and persistent angina symptoms had the lowest cardiovascular survival.[10] This patient population is typified by CCS Class III or IV angina, as is the population being enrolled in the AWARE study. In the WISE cohort, one in three women died or had a heart attack in the ensuing five years of follow-up.

Women with documented coronary heart disease frequently report different symptoms than men. Only 30% of women with documented coronary heart disease report their major symptom as the typical sub-sternal chest pain that most men experience. Women are more likely to report unusual fatigue, sleep disturbance, gastro-intestinal symptoms or shortness of breath.[11] Because women's symptoms may be different from the classic signs that men experience, women may not recognize the urgency of the situation and put off seeking medical care. Even when a woman does reach the emergency room, heart

disease may not be the first diagnosis made by a physician based on her presenting symptoms. Although the causes for the observed gender differences are not fully understood, women's hormonal changes may play a role in increasing their risk for heart disease after age 55, in part because estrogen levels drop significantly after menopause.[12] Additionally, atherosclerotic fat deposits in men often accumulate in the coronary vasculature as discrete lesions that block blood flow whereas in women these plaques are more commonly evenly distributed throughout the arterial walls and smaller blood vessels of the heart.

These differences between men and women in symptoms and coronary vasculature frequently result in angiographic studies from women being misinterpreted as normal or with non-critical stenoses. In 2003 the American College of Cardiology reported that nearly 7 million angiograms were performed, with normal or <50 percent stenosis being reported in 20 percent of men and 60 percent of women.[13] This observation has lead many clinicians to propose that microvascular disease, a complex and poorly understood syndrome that is characterized by a narrowing or stiffening of the smaller arteries that supply the heart, may be more prevalent in women than in men, and may be a principal cause of symptoms in women. Under physical or emotional stress the vessels are unable to dilate and provide increased blood flow. Overall heart function becomes diminished due to the reduced blood flow. In addition, myocardial ischemia in these patients may not be treatable by revascularization (coronary artery bypass graft surgery or angioplasty) because neither procedure is designed to address diffuse lesions or narrowing of the smaller arteries within the myocardium. This lack of identifiable obstructive coronary lesions to account for anginal symptoms commits women to a greater lifetime need for chronic anti-ischemic medications for control of their anginal symptoms and an increased risk of co-morbid outcomes.

Prior studies suggest that men and women do not utilize healthcare resources in a similar manner, and that women represent a group that has been underestimated in terms of risk.[14,15] Diagnostic cardiac catheterizations rank as the sixth most commonly performed healthcare procedure and are estimated to be utilized in more than half a million women.[10] Yet, cardiac catheterizations are less likely to be performed in women even when they present with symptoms suggestive of coronary heart disease. In addition, among patients who undergo initial percutaneous interventions for control of their angina, female gender is one of the leading risk factors for return of angina symptoms within the first year.[16] Results from a recently published multinational study to evaluate gender differences in the diagnosis, management and clinical outcomes at one year of patients with chronic stable angina indicated that (a) women were less likely to undergo an exercise ECG to diagnose coronary heart disease (due to atypical anginal symptoms), (b) women were less likely to be prescribed typical drugs such as aspirin, beta-blockers, ACE-inhibitors, calcium channel blockers and statins at diagnosis, (c) women with symptoms suggestive of cardiovascular disease were less likely to be referred for an invasive diagnostic evaluation by coronary angiography even if a non-invasive test was positive for coronary heart disease, (d) women with confirmed coronary heart disease were less likely to be referred for revascularization procedures (coronary artery bypass surgery or angioplasty/stent) even when significant coronary heart disease was diagnosed by angiography, and (e) women were twice as likely to suffer death or nonfatal myocardial infarction in the one-year follow-up period.[17]

Potential Gender-Specific Effects

The positive treatment differences for women compared to men from the pooled data analysis of AGENT-3 and AGENT-4 is the first clinical report of an observed gender-specific effect associated with angiogenesis.[3] Gender was a pre-specified subgroup analysis in both protocols. The combined data for women revealed statistically significant and clinically meaningful changes from baseline for multiple clinical endpoints at multiple time points, and remained significant for many of these (including the primary ETT endpoint) after applying a statistical adjustment for subgroup analyses. Given that there was a striking concordance on four separate measures used to assess coronary heart disease, this observation is very compelling. In addition, the results were suggestive of a dose response and the treatment effect was durable out to one year.

The reasons for the apparent difference between women and men are unknown, but could involve clinical, hormonal and/or genetic differences between the genders. In the AGENT-3 and AGENT-4 studies both men and women showed a similar improvement in total exercise time during a treadmill test. However, there was a high placebo response observed in the men and an unexpectedly low placebo response observed in the women. At the clinical level, the difference in the placebo response observed between men and women may be due to differences in the severity of their disease. The women enrolled in the AGENT-3 and AGENT-4 studies appeared to be sicker and had more clinical symptoms, as evidenced by their angina classification, than the men who were enrolled in the trials. Sicker patients would generally be expected to exhibit less of a placebo response rate on treadmill tests. The women also tended to be on more medications than the men and a relationship between higher medication use and relative lack of a placebo response on the treadmill test cannot be ruled out. As a result, it was easier to measure a difference among patients with more pronounced angina symptoms. It is much more difficult to measure a significant response in patients with milder angina due to placebo response. Outside of the exercise testing while on the clinical study, the female cohort likely had reduced daily physical activity levels. A recently published study in nearly 800 patients following hospitalization for coronary heart disease indicated that women were 2 and a half times less likely to follow physical exercise programs in the months following hospitalization than men.[18]

Microvascular disease is more prevalent in women than in men, and may be a principal cause of angina symptoms in women. The angiogenic response is a microvascular phenomenon, so the formation of collateral vessels in response to treatment with Generx must start at the microvascular level. Gender-specific differences in coronary microvascular physiology and pathophysiology may help to explain different responses to angiogenic stimuli in women. Experimental studies indicate that these differences may be due to the effects of estrogen, which, among other actions, promotes angiogenesis.[19]

Genetic differences may also be involved in the gender-specific effects observed. Recently published experimental studies have demonstrated that there are a large number of sexually dimorphic genes that have tissue-specific expression and regulation differences.[20] Gender-specific differences in fat metabolism, formation of atherosclerotic lesions and vascular function are well recognized and could be the result of differential gene expression.

BENEFICIAL EFFECTS OF COLLATERAL BLOOD FLOW IN THE HEART

The healthy human heart generally lacks native collateral vessels, small arteries that develop when a coronary artery is blocked, to provide alternate routes to supply blood to the affected area of the heart. In response to myocardial ischemia, angiogenesis may occur. However, for unknown reasons, the angiogenic process eventually switches off. In most cases, these collateral vessels can provide adequate perfusion when a person is at rest but they are often insufficient to meet increased blood flow demand during exercise or stress, causing patients to experience repeated episodes of ischemia.

The extent of pre-existing collateral blood vessel development has long been known to influence survival after a heart attack by providing alternate routes for myocardial blood flow. Some studies have suggested that collateral blood flow may improve the prognosis of patients undergoing angioplasty or bypass surgery. Detectable collateral vessel function following angioplasty has been reported, even in patients without evidence of ischemia.[21] Recently published results from a 10-year study in 845 patients with chronic coronary artery disease provide further evidence for the importance of collateral circulation.[22] The authors found that the maximal extent of collateral vessel flow was a highly significant inverse determinant of both all-cause mortality and major cardiovascular events. Patients with extensive collateral formation were less likely to experience myocardial ischemia, myocardial infarction, or heart failure. The results of this study suggest that augmenting collateral formation may alleviate myocardial ischemia and the symptoms of angina as well as improve long term prognosis.

THE BIOLOGY OF GENERX

OPTIMIZING THE DESIGN OF A DNA-BASED THERAPEUTIC TO ACHIEVE AN EFFECTIVE THERAPY

Therapeutic myocardial angiogenesis, based on the concept that stimulating coronary collateral vessel development from the existing microvasculature may lead to improved blood flow and relieve myocardial ischemia, is a novel physiologic approach to the treatment of chronic ischemic heart disease. Cardium is the leader in the development of this pioneering technology and Generx is the most advanced DNA-based therapeutic under development. Generx incorporates three important features which may contribute to its successful application in patients with recurrent angina: (1) the use of an adenovector to deliver the angiogenic growth factor DNA, (2) a fibroblast growth factor (FGF-4) to stimulate cardiac angiogenesis, and (3) a non-surgical method of intracoronary administration used to provide one-time local delivery of the angiogenic growth factor gene into the myocardium using a standard diagnostic cardiac catheter during an angiogram procedure.

DNA-based therapy is a novel form of therapeutic delivery that uses a patient's own cells to produce a specific therapeutic protein. This therapeutic strategy induces localized and brief protein expression (for a few weeks) within the target cardiac tissue, compared to systemic protein delivery which persists for an hour or so. Although initial efforts by others working in the field of therapeutic myocardial angiogenesis were focused on systemic delivery of growth factor proteins, these approaches have not been successful. Because growth factor proteins are rapidly eliminated from the circulation (typically in less than an hour after administration) and have low retention by the heart, stimulation of myocardial

angiogenesis by administering a growth factor protein requires high doses infused systemically over a long period of time or injected directly into the heart muscle. In contrast, DNA-based angiogenic therapy involves the delivery of DNA that codes for protein expression of the specific growth factor directly within the ischemic myocardium, resulting in an intended therapeutic effect such as collateral vessel growth without unwanted side effects associated with systemic administration of proteins at high doses.

Generx (Ad5FGF-4) consists of a genetically-engineered replication-incompetent adenovector carrying the DNA for the angiogenic fibroblast growth factor (FGF-4) and is administered to the heart via a standard diagnostic cardiac catheter during cardiac catheterization. Delivery of the FGF-4 gene to the heart allows for a more sustained production of the angiogenic protein stimulus for the growth of new blood vessels. We believe that the biological attributes of Generx and its local delivery to the myocardium help explain its potential to provide an effective treatment for myocardial ischemia following a single intracoronary infusion.

Adenovector as a DNA Delivery System

Generx uses a recombinant adenoviral vector, human adenovirus serotype 5 (Ad5) that, although similar to the common cold virus, has been genetically engineered to be non-replicating through deletion of the E1 region, which encodes the necessary elements to initiate viral replication. The therapeutic DNA expression cassette for Generx, consisting of the FGF-4 transgene together with a strong promoter (derived from the cytomegalovirus, CMV), is inserted in place of the E1 region, allowing high expression of FGF-4 protein in the transfected target cells of the heart. The adenovector has many characteristics that are desirable for cardiovascular applications, including highly efficient DNA transfer (compared to naked plasmid DNA) to both dividing and non-dividing cells, such as those found in the heart, where it persists as an episome and does not integrate or become part of the target cell's chromosomal DNA. As a result, the transgene protein is expressed in the target cells for a limited period of time. Transient protein expression is believed to be an advantage for therapeutic angiogenesis since relatively sustained FGF-4 protein production by the target tissue for a period of several weeks is sufficient for the stimulation of new blood vessel growth, which once formed remain open due to shear forces of blood flow. Compared to proteins and other vector delivery approaches, adenovectors can be easily manufactured in high concentrations and purified for clinical use with favorable manufacturing costs. Of the human serotypes, Ad5 vectors are the most widely administered DNA delivery vector used and have an established safety profile.[23] Although high doses of adenovectors are considered immunogenic and neutralizing antibodies to the adenovirus usually form, the presence of antibodies does not appear to interfere with the efficacy of Generx.

FGF-4 and FGF Receptors Regulate Multiple Angiogenic Activities

The fibroblast growth factor (FGF) family consists of 23 members and were among the earliest angiogenesis molecules identified. Members of the FGF family bind to one of four FGF receptors. These cell membrane receptors function to transmit a complex cascade of intracellular signals that are known to regulate a host of cellular processes, including endothelial cell proliferation, migration and differentiation.[24] FGF-4 is abundantly expressed during embryonic development but is present only in very few tissues (such as hair follicle and testis) in human adults. However, FGF-4 contains a signal sequence that

allows for efficient protein release from cells. This property of FGF-4 is thought to provide an advantage in therapeutic angiogenesis by facilitating its distribution in the heart tissue following DNA delivery. After release from cells, FGF-4 binds in an active form to local extracellular matrix proteins, so the newly secreted FGF-4 protein is not "washed" out of the heart after its production. Its persistence prolongs its biological half-life (residence time) in the heart and limits its bioavailability at distant sites. An important feature of FGF-4 is that it can stimulate and regulate the production and release of other angiogenic factors, such as vascular endothelial growth factors (VEGF), hepatocyte growth factor (HGH) and nitric oxide.[25,26,27,28] FGF-4 appears to be "upstream" in the angiogenic cascade and thus stimulates the production and release of other angiogenic factors, and this may explain why therapy with FGF-4 has effects beyond the single growth factor paradigm.

Intracoronary Administration for Targeted Delivery throughout the Heart

Cardium's proprietary method of intracoronary infusion is employed for direct product delivery into the heart's extensive coronary microcirculation. Intracoronary infusion, which is performed routinely in catheterization laboratories by interventional cardiologists, uses a standard diagnostic cardiac catheter for non-surgical delivery of the vector throughout the entire coronary arterial circulation. This delivery approach has the significant advantage of accessing all of the coronary arteries without complications associated with direct myocardial needle injection (multiple sticks). This targeted delivery method takes advantage first of the unique anatomy of the coronary circulation designed by nature for highly efficient oxygen and nutrient extraction, and second of the high concentration of cell surface receptors in the heart that are available for high-yield, first-pass adenovector uptake.

FROM DNA DELIVERY TO ANGIOGENESIS

DNA-based growth factor therapy consists of multiple biological steps and processes in the human body. Following intracoronary infusion of Generx, the following sequence of key events likely occurs in order to initiate angiogenesis and produce a potential therapeutic effect:[29]

- Adenovector attachment to endothelial cells lining the coronary microcirculation, potentially via Coxsackie-adenovirus receptors (CAR);
- Transport of the vector through the endothelial layer of the microvessels to the underlying myocytes;
- Adenovector "recognition" by receptors on myocytes and endothelial cells;
- Uptake of the vector by myocytes and endothelial cells, trafficking to the nucleus and delivery of the FGF-4 DNA into the nucleus ("transfection");
- Expression of the delivered DNA into mRNA in the nucleus ("transcription") and expression of the therapeutic FGF-4 protein in the cytoplasm ("translation");
- Secretion of the FGF-4 protein outside the cell; and
- Binding of FGF-4 protein to FGF receptors on endothelial cells to signal the initiation of the angiogenic process and the formation of new collateral vessels to potentially provide a therapeutic effect.

Effective "Capture" of the Adenovector in Coronary Microvessels

The effectiveness of our targeted delivery method has been demonstrated in a preclinical study in which there was a high clearance of the vector (about 98%) on the first passage through the coronary circulation following intracoronary infusion.[30] This preferential clearance by the heart was reproduced in the first clinical study with Generx (AGENT-1) where a high (median 87%) first-pass clearance of the product by the heart was observed.[1] The unique morphology of the coronary microcirculation and more importantly the presence of high affinity binding proteins in the heart may explain this process.

When Generx is infused into the proximal large coronary arteries, the adenovector is initially moving much too rapidly for significant cell surface adherence and DNA transfer to the large vessel arterial endothelium. As the coronary circulation subdivides in the myocardial capillary bed, the blood (and thus the vector) is flowing much more slowly. The morphometry of the coronary circulation is characterized by passage of all blood through small "caliber" capillaries. This requires the red blood cells, which have a diameter exceeding that of the capillaries, to pass through the microcirculation as bent and bullet-shaped cells in close contact with the endothelium. As this occurs, in a site where the largest volume of vector is exposed to abundant attachment sites, preferential cardiac "capture" of the adenovector occurs.

Other mechanisms may also contribute to the high first-pass clearance, namely the rapid binding and uptake of the adenovector by human blood cells,[31] especially in the coronary microcirculation, where the vector comes in close contact with these cells under slow flow conditions.

Transport from Capillaries to Myocytes

After its "capture" in the coronary microvessels, the adenovector likely migrates through the endothelium to the underlying myocytes via one of at least two distinct proposed mechanisms. At present, although there is no direct experimental evidence available for the proof of these mechanisms in the heart, indirect preclinical evidence of reporter gene expression in myocytes and endothelial cells after intracoronary injection of an adenovector carrying the reporter gene has been shown.[30] Similar to the transport mechanism for other large particles, the adenovector enters the cell within a small vesicle (endocytosis) and presumably "travels" within the cell until the vesicle reaches the opposite side, where the vesicle empties its content (the adenovector) to the interstitium between the endothelial and myocardial cells. Alternatively, the adenovector may reach the heart tissue via gaps between endothelial cells in the microcirculation under specific conditions such as myocardial ischemia/hypoxia in the presence of certain substances that act as vasodilators.[32,33] This preferential transfection in ischemic regions may be explained by upregulation of CAR in microvessel endothelium and cardiac myocytes, and also by the known increase of capillary permeability with hypoxia/ischemia.[34,35]

Transfection of Myocytes and Production of FGF-4 Protein in the Heart

Effective capture in the coronary microvessels, subsequent vector uptake and FGF-4 protein expression in the heart (preferentially myocytes and endothelial cells) is believed to be needed to achieve an effective therapeutic effect. In preclinical studies, the presence of FGF-4 protein was detectable in the mycocardium and not in any other extra-cardiac tissue, including circulating blood, following intracoronary administration of Generx.[36] The great advantage of engineered adenovectors is that they incorporate multiple

features gained over millions of years of evolution to effectively function as a vehicle to deliver DNA. After reaching the myocyte, the adenovector is believed to be "recognized" by CAR receptors and attaches to the cell while a second set of cell-surface receptors (integrins) serve to bind the adenovector and mediate its internalization. Once inside the cell, the adenovirus effectively and quickly (within 60 minutes) delivers its DNA "cargo" into the cell nucleus (transfection). The adenovector persists as an episome and is not integrated into the cell's own DNA but is able to use the cell's own machinery to generate messenger RNA (transcription) and express the therapeutic protein (translation).

Translating Biological Activity into a Therapeutic Treatment

The formation of new blood vessels (angiogenesis) and remodeling of existing collateral vessels (arteriogenesis) are the two main mechanisms contributing to the therapeutic effect of an angiogenic growth factor.[37] Both are complex biological adaptive processes in which a wide variety of growth factors participate by activating endothelial cells, recruiting monocytes, degrading the existing extracellular matrix, stimulating migration and division of endothelial and smooth muscle cells, and stabilizing the newly formed vessels or the enlarged collateral vessels. While angiogenesis is initiated by hypoxia/ischemia and both VEGF and FGF (among other factors) participate in the process, arteriogenesis is initiated by increased perfusion pressure and resultant increased flow/shear stress along the thin-walled capillary leading to "arterialization" of the vessel wall (i.e., recruiting smooth muscle cells) with FGFs playing a key role in consequent enlargement of the vessel diameter.[38]

After the FGF-4 protein is secreted or transported out of the myocyte, it acts via high affinity FGF receptors on neighboring endothelial cells to trigger the initiation of the angiogenic process and/or to contribute to arteriogenesis. FGF-4 stimulates the proliferation of smooth muscle cells and fibroblasts, in addition to endothelial cells.[39] The increased structure of the FGF-stimulated vessels may promote stability and produce more mature vessels, which, combined with appropriate blood flow through them, should contribute to the long term persistence of these newly-formed collateral vessels. Once the beneficial blood vessel growth or vascular remodeling has been accomplished, and provided there is sustained blood flow through the newly-formed vessels, continued FGF-4 growth factor secretion is no longer needed.

Once new collateral vessels are present, blood flow to the previously ischemic regions of the heart should increase. Increased blood flow and oxygen delivery will improve the contractile function of the heart so that the ventricles can pump blood more efficiently than before. Indeed, preclinical studies demonstrated that a single intracoronary infusion of Generx was capable of stimulating new vessel formation in the heart that was associated with improved blood flow and ventricular contractile function.[36] These results provided the proof of concept for the development of Generx for the treatment of ischemic heart disease.

The results from the AGENT-2 clinical trial, a mechanism of action study, showed improvements in myocardial perfusion (a measure of blood flow) in the ischemic region of the heart in both men and women following a single intracoronary infusion of Generx.[2] An increase in blood flow in the ischemic region under the conditions studied (i.e., adenosine stress) can generally only be accomplished by improving the underlying physiology such as through new collateral vessel formation. The observed treatment

effect for men and women receiving Generx in the AGENT-2 clinical study was similar in magnitude to the improvement reported in the literature for patients one year after undergoing mechanical revascularization procedures, such as coronary bypass surgery or angioplasty. The results from the pooled data analysis from AGENT-3 and AGENT-4 indicate that, following a single intracoronary administration, significant clinical benefits were observed in women who received Generx, including increased exercise capacity, relief of underlying myocardial ischemia, and a decrease in severity of angina. Despite the availability of anti-anginal drugs and other treatment options, including risk factor reduction, angioplasty and/or stent placement, and coronary artery bypass graft surgery, the consequences of ischemic heart disease result in unacceptable morbidity and mortality. Thus, there is an important need for new approaches for coronary revascularization to improve blood flow to ischemic myocardium in patients with refractory or recurrent angina that lead to better clinical outcomes. Cardium believes results from the planned clinical studies would serve to support the potential of Generx as a disease-modifying agent for the treatment of recurrent angina.

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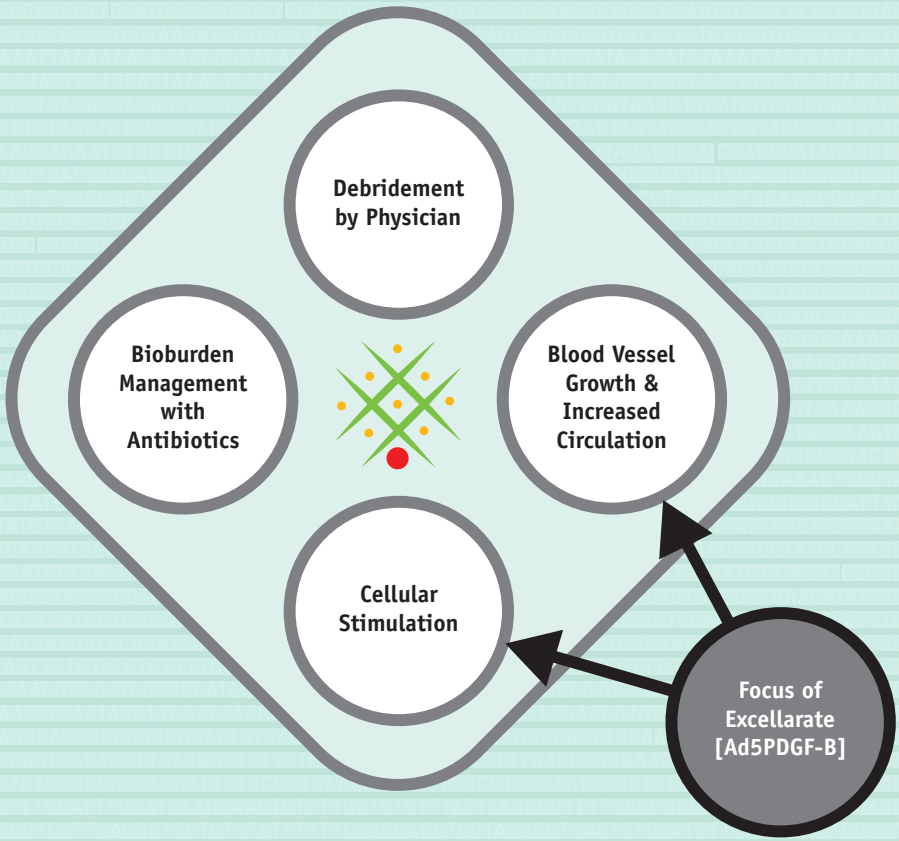
FOUR REQUIREMENTS OF CHRONIC WOUND HEALING



EXCELLARATE: A DNA-BASED TOPICAL GEL FOR THE TREATMENT OF NON-HEALING DIABETIC WOUNDS

INSIGHTS OF A ONE-TIME TREATMENT TO HEAL CHRONIC DIABETIC FOOT ULCERS

Cardium's Tissue Repair Company's lead product candidate, Excellarate™ is being developed as a potential treatment for chronic diabetic wounds of the lower extremities. Excellarate is a topical gel that uses TRC's Gene Activated Matrix™ (GAM™) technology to provide localized and sustained cellular release of platelet-derived growth factor-BB (PDGF-BB) protein directly within the wound site. Providing sustained delivery of PDGF-BB is believed to stimulate angiogenesis and granulation tissue formation through the recruitment and proliferation of chemotactic cells such as monocytes, endothelial cells and fibroblasts, which are necessary for the stimulation of a variety of wound healing processes. A Phase 2b clinical study is currently underway to further evaluate the safety and efficacy of Excellarate for the potential treatment of non-healing diabetic foot ulcers. The clinical study, which is called MATRIX (GAM501 for the Treatment of Diabetic Ulcers in the Lower Extremities), is scheduled to enroll approximately 210 patients at an estimated 30 U.S. medical clinics and is expected to be completed in late 2008.

Currently, approximately 20.8 million people in the U.S. (7% of the population) have diabetes. These numbers are expected to double by the year 2030. Every day approximately 2,200 new cases of diabetes are diagnosed, and an estimated 800,000 new cases are identified each year. As the geriatric and obese populations increase, these numbers are also expected to rise. Many of those with diabetes will suffer from diabetic peripheral neuropathy (loss of feeling in the hands and feet due to nerve damage). The incidence of diabetic peripheral neuropathy increases with the age of the patient and duration of diabetes. After 20 years with the disease, more than 40% of diabetics will have loss of sensation in the lower extremities. As more children and adolescents are diagnosed with Type 2 diabetes, the incidence of diabetic peripheral neuropathy cases will also increase over time.

Patients with diabetic peripheral neuropathy have an increased risk of developing a diabetic ulcer(s) in their lower extremity. Over 850,000 chronic (non-healing) diabetic ulcers are diagnosed in the U.S. each year. Ulcers that do not heal leave the patients susceptible to infection and may lead to amputation of the affected foot or leg. Approximately 15% of the current diabetic patient population, or roughly 3.1 million patients, will develop an ulcer; and of those that develop ulcers, one in four will eventually have a foot amputated. Today, more than 85% of lower extremity amputations in patients with diabetes are preceded by foot ulcers. The most significant complications of chronic ulcers are the development of osteomyelitis and/or gangrene, which lead to amputation as the only recourse. Individuals with lower-limb amputations are also at risk for developing a number of concomitant medical ailments, they generally have a diminished quality of life, and they are more likely to die than other individuals with diabetes. The 3-year survival rate following amputation is only 50%.

The cost to the U.S. healthcare system for treating chronic diabetic ulcers is estimated at greater than $10 billion per year, in addition to very substantial losses in workplace productivity. The annual treatment

costs for diabetic ulcer-related amputations are approximately $2 billion. These costs are expected to increase dramatically as the incidence of diabetes and the number of chronic wounds are both increasing.

The current standard of care for the treatment of diabetic foot ulcers consists of sharp surgical debridement (to remove necrotic soft tissue, bacterial burden, cellular debris, sinus tracts, fistulae, undermined borders and callus), followed by daily dressing changes with saline-moistened gauze and use of a weight off-loading device to remove pressure from the ulcer area. Clinical results have shown that only about 24% of diabetic ulcers attain complete healing after 12 weeks with this standardized care regime, and only about 31% of diabetic ulcers heal after 20 weeks. The remaining majority of treated patients, which fail to respond to such standardized care, remain susceptible to infections and many ultimately require additional treatments or an amputation. Clearly, new therapies designed to stimulate wound healing in patients with non-healing diabetic foot ulcers are needed to decrease the incidence of disability and amputation.

Excellarate is in a new class of wound healing products designed to take advantage of the body's own natural healing abilities. Normal wound healing proceeds in an ordered sequence of events that includes control of injury and inflammation, followed by repair and remodeling. These events are mediated by the complex interactions of specific growth factors and cytokines. In the diabetic patient, this wound healing process is impaired, in part due to a deficiency of growth factors.

Based on this underlying biology, significant prior efforts have been put into the development of protein growth factors as wound healing therapeutics. Recombinant platelet-derived growth factor–BB (PDGF-BB) has been commercialized for the treatment of diabetic ulcers. Unfortunately, while the applied protein is capable of stimulating the biological wound healing process, which led to its approval as a new treatment regimen, the protein is rapidly degraded and needs to be reapplied repeatedly, requiring an extended series of wound cleansings and reapplications. Not unexpectedly, poor patient compliance has been a major limitation affecting the use of such a product.

Placement of a gene encoding a therapeutic growth factor into the wound environment allows for sustained local production of the growth factor by the body's own cells within the wound site, resulting in improved therapeutic responses compared with protein-based approaches. To accomplish localized sustained production, Excellarate utilizes a technology in which an adenovector (a defective common cold virus) containing a gene encoding platelet-derived growth factor-BB, a known tissue promoting factor, is incorporated into a 3-dimensional biocompatible collagen matrix and applied topically to an ulcer site. Studies using Excellarate have shown that tissue repair cells such as macrophages, fibroblasts, endothelial cells and endothelial progenitor cells, which originate in viable tissue surrounding a wound site, naturally migrate into and proliferate within the gene-containing matrix. The biocompatible matrix of Excellarate is considered to have at least two key beneficial functions. First, the matrix holds the Ad5PDGF-B vector in place at the wound site until infiltrating wound-healing cells arrive. Second, the matrix acts as a biocompatible scaffolding that promotes migration and in-growth of cells that are responsible for accumulation of granulation tissue, a key part of the wound healing process.

Once in the matrix, cells that have taken up the PDGF-B gene act as local bioreactors that produce PDGF-BB protein. PDGF-BB is a known chemo-attractant and thus induces repair cells to migrate from the normal wound margins into the wound bed. In addition, PDGF-BB is also known for its ability to stimulate repair cell proliferation so those cells that have migrated into the wound bed and are exposed to the protein will increase in number leading to a greater amount of granulation tissue. Studies have shown that the PDGF-B gene is expressed in tissue repair cells as early as 1 day following drug application and for as long as 7 days. The PDGF-BB protein that is expressed contains a collagen-binding domain and is thus retained in the wound bed environment where it is needed most. As new cells migrate into the gene-containing matrix, they are exposed to the PDGF-BB protein for a sustained period (approximately seven days). Although the protein is synthesized by wound repair cells only for as long as the gene is expressed, the duration of its availability is substantially prolonged relative to topical protein therapy, which must be re-applied daily. The sustained presence of the PDGF-BB protein at the precise location where it can be effective is believed to lead to the acceleration of a normal wound healing response. Based on preclinical studies and Phase 1/2 clinical studies in humans, it is believed that only a single application of Excellarate can bring about complete wound closures in previously non-healing wounds. The ease of use also contrasts with protein therapeutics which, even if patients were fully compliant, can require daily applications for weeks to months in order to achieve wound closure.

The Excellarate product candidate differs markedly from other wound healing products that are either on the market or are in development. Practitioners have expressed considerable frustration with their lack of success in treating chronic wounds, with the time-consuming nature of the treatment regimens they must employ, and with the resultant patient non-compliance. Excellarate offers several key advantages over these competitors. First, Excellarate utilizes standard wound care procedures (including wound debridement, off-loading devices and wound care dressings) all of which are familiar to and routinely employed by wound care specialists. Second, Excellarate is designed to be a one-time treatment, while marketed products have demonstrated limited benefit over standard of care and their use requires frequent clinic visits, surgical debridement and dressing changes (often at least daily). Excellarate also offers the advantage of retaining the adenovector and the protein within the wound site, thus increasing its safety profile, prolonging the availability of the therapeutic protein, and increasing the amount of granulation tissue within the wound bed. Therefore, Excellarate might fulfill the compelling medical need for a more practical, safe and effective therapy for non-healing diabetic ulcers of the lower extremities.

The safety and efficacy of Excellarate was evaluated in a Phase 1/2 clinical study. The Phase 1/2 study was a multi-center, open label, dose-escalation study. Fifteen patients with previously non-healing foot ulcers were enrolled into this initial study. Patients received either a single dose of Excellarate or four administrations of Excellarate at one-week intervals and were then evaluated for up to six months. In addition to the application of Excellarate, patients also followed a standard of care treatment regimen for the entire treatment and evaluation period. Results of the Phase 1/2 study indicated that Excellarate was well tolerated and there were no dose limiting toxicity effects due to the product candidate. In addition, most of the patients (93%) had a positive response to Excellarate, with 67% of the patients with small to large ulcers achieving complete wound closure.

A Phase 2b clinical study was recently initiated to evaluate the safety and efficacy of Excellarate for the potential treatment of non-healing diabetic foot ulcers. The MATRIX study, a randomized, double blind, placebo-controlled, comparator arm clinical trial is expected to enroll approximately 210 patients at approximately 30 U.S. sites. The study will enroll patients diagnosed with Type I or II diabetes with a non-healing foot ulcer present for at least six weeks and who have failed standard of care therapy. The five arms of the study will include standardized care (consisting of surgical debridement, dressing changes and weight off-loading devices), one or two applications of placebo, and one or two applications of Excellarate. The study's primary endpoint is complete ulcer closure at 12 weeks or earlier. Secondary endpoints will be time to complete ulcer closure, change in ulcer area, durability of wound closure, and safety and tolerance. Enrollment criteria, participating sites and other information about the MATRIX trial can be found at http://www.clinicaltrials.gov/ct/show/NCT00493051. Enrollment is anticipated to be completed in 2008 with trial results available by the end of the year.

Potential patient benefits from a single or double administration of Excellarate could one day offer medical practitioners and their diabetic patients with an important new treatment option having a higher degree of therapeutic efficacy, as well as enhanced patient compliance, which is believed to be a critical factor limiting overall treatment rates for this patient population. Such a new treatment option could thereby provide a better daily quality of life and avoid amputations for an increasing population of patients having diabetic foot ulcers.

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

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

FOR THE FISCAL YEAR ENDED DECEMBER 31, 2007

001-33635
(Commission file number)

CARDIUM THERAPEUTICS, INC.

(Exact name of registrant as specified in its charter)

Delaware	27-0075787
(State of incorporation)	(IRS Employer Identification No.)
3611 Valley Centre Drive, Suite 525 San Diego, California 92130	(858) 436-1000
(Address of principal executive offices)	(Issuer's telephone number)

Securities registered under Section 12(b) of the Exchange Act:

Title of each class	Name of exchange on which registered
Common Stock, $0.0001 par value per share	American Stock Exchange

Securities registered under Section 12(g) of the Exchange Act:

None

Indicate by check mark if Cardium Therapeutics, Inc. (Cardium) is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. ☐ Yes ☒ No

Indicate by check mark if Cardium is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. ☐ Yes ☒ No

Indicate by check mark whether Cardium (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 Cardium was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. ☒ Yes ☐ No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of Cardium'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. ☒

Indicate by check mark whether Cardium is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company.
Large accelerated filer ☐ Accelerated filer ☒ Non-accelerated filer ☐ Smaller reporting company ☐

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

The aggregate market value of Cardium's common stock held by non-affiliates of Cardium as of the last business day of Cardium's most recently completed second quarter (June 29, 2007) was approximately $83,085,340 (based on the closing sale price of $2.50 reported by AMEX on June 29, 2007). For this purpose, all of Cardium's officers and directors and their affiliates were assumed to be affiliates of Cardium.

As of March 10, 2008, 43,615,291 shares of Cardium's common stock were outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Part III (Items 10, 11, 12, 13 and 14) of this Form 10-K incorporates by reference portions of Cardium's definitive proxy statement for its Annual Meeting of Stockholders to be held June 5, 2008, to be filed on or before April 29, 2008.

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SPECIAL NOTE ABOUT FORWARD-LOOKING STATEMENTS

Certain statements in this report, including information incorporated by reference, are "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, Section 21E of the Securities Exchange Act of 1934, and the Private Securities Litigation Reform Act of 1995. Forward-looking statements reflect current views about future events and financial performance based on certain assumptions. They include opinions, forecasts, intentions, plans, goals, projections, guidance, expectations, beliefs or other statements that are not statements of historical fact. Words such as "may," "will," "should," "could," "would," "expects," "plans," "believes," "anticipates," "intends," "estimates," "approximates," "predicts," or "projects," or the negative or other variation of such words, and similar expressions may identify a statement as a forward-looking statement. Any statements that refer to projections of our future financial performance, our anticipated growth and trends in our business, our goals, strategies, focus and plans, and other characterizations of future events or circumstances, including statements expressing general optimism about future operating results and the development of our products, are forward-looking statements. Forward-looking statements in this report may include statements about:

- future financial and operating results;
- our ability to fund operations and business plans;
- the timing, conduct and outcome of discussions with regulatory agencies, regulatory submissions and clinical trials;
- the performance of Generx™, Innercool Therapies' Celsius Control System™ and RapidBlue™ and CoolBlue™ systems, Excellarate™, and other product candidates and their potential to attract development partners and/or generate revenues;
- our beliefs and opinions about the safety and efficacy of our products and product candidates and the results of our clinical studies and trials;
- the development or commercialization of competitive products or medical procedures;
- our development of new products and product candidates;
- our growth, expansion and acquisition strategies, the success of such strategies, and the benefits we believe can be derived from such strategies;
- the outcome of litigation matters;
- our intellectual property rights and those of others, including actual or potential competitors;
- the ability to enter into acceptable relationships with one or more contract manufacturers or other service providers on which we may depend and the ability of such contract manufacturers or other service providers to manufacture biologics or devices or to provide services of an acceptable quality on a cost-effective basis;
- our personnel, consultants and collaborators;
- operations outside the United States;
- current and future economic and political conditions;
- overall industry and market performance;
- the impact of accounting pronouncements;
- management's goals and plans for future operations; and
- other assumptions described in this report underlying or relating to any forward-looking statements.

The forward-looking statements in this report speak only as of the date of this report and caution should be taken not to place undue reliance on any such forward-looking statements. Forward-looking statements are subject to certain events, risks, and uncertainties that may be outside of our control. When considering forward-looking statements, you should carefully review the risks, uncertainties and other cautionary statements in this report as they identify certain important factors that could cause actual results to differ materially from those expressed in or implied by the forward-looking statements. These factors include, among others, the risks described under Item 1A and elsewhere in this report, as well as in other reports and documents we file with the United States Securities and Exchange Commission (SEC).

Unless the context requires otherwise, all references in this report to the "Company," "Cardium," "we," "our," and "us" refer to Cardium Therapeutics, Inc. and, as applicable, Innercool Therapies, Inc. and Tissue Repair Company, each a wholly-owned subsidiary of Cardium.

PART I

ITEM 1. BUSINESS

Overview

Cardium Therapeutics, Inc. was organized as a Delaware corporation in December 2003. We are a medical technology company primarily focused on the development, manufacture and sale of innovative therapeutic products and devices for cardiovascular, ischemic and related indications. In October 2005, we acquired a portfolio of biologic growth factors and related delivery techniques from the Schering AG Group, Germany (now part of Bayer AG), which we plan to develop as cardiovascular-directed growth factor therapeutics for potential use by interventional cardiologists as a one-time treatment to promote and stimulate the growth of collateral circulation in the hearts of patients with ischemic conditions such as recurrent angina. In March 2006, we acquired the technologies and products of Innercool Therapies, Inc., a medical technology company in the emerging field of therapeutic hypothermia, or patient temperature modulation, whose systems and products are designed to rapidly and controllably cool the body to reduce cell death and damage following acute ischemic events such as cardiac arrest and stroke, and to potentially lessen or prevent associated injuries such as adverse neurologic outcomes. In August 2006, we acquired rights to the assets and technologies of Tissue Repair Company, a company focused on the development of growth factor therapeutics for the potential treatment of tissue wounds such as chronic diabetic wounds, and whose product candidate, Excellarate™, is initially being developed as a single administration for the treatment of non-healing, neuropathic diabetic foot ulcers. Innercool Therapies and Tissue Repair Company are each operated as a wholly-owned subsidiary of Cardium.

We are a development stage company in the initial stage of our operations. We have yet to generate positive cash flows from operations, and are essentially dependent on debt and equity funding to finance our operations. Before October 2005, cash requirements were funded by loans from executive officers. In October 2005, we sold 19,325,651 shares of our common stock in a private placement at a purchase price of $1.50 per share and received net proceeds of $25,542,389. In connection with the private placement, we completed a reverse merger, whereby Cardium merged with a wholly-owned subsidiary of Aries Ventures Inc. ("Aries"), a publicly-traded company. As a result of these transactions, the stockholders of Cardium became the controlling stockholders of Aries. Accordingly, the acquisition of Cardium by Aries was a reverse

merger. The historical financial results before the reverse merger on October 20, 2005, are those of Cardium. Aries' results of operations are included in Cardium's financial results beginning October 20, 2005.

In January 2006, Aries was merged with and into Cardium with Cardium as the surviving entity and successor issuer to Aries. As a result, we are now in our present form a publicly-traded, Delaware corporation named Cardium Therapeutics, Inc.

We intend to continue to pursue opportunistic acquisitions designed to enhance long-term stockholder value. At the same time, to the extent our technologies and product candidates are advanced and businesses are built-up, further developed and mature, we may consider various corporate development transactions to enhance and monetize stockholder value such as corporate partnerings, spin-out transactions and equity distributions.

Cardium Biologics—Non-Surgical Approaches to Treating Heart Disease

Schering Transaction

In October 2005, we acquired a portfolio of interventional cardiology growth factor therapeutics from Schering AG Group, Germany (Schering). This portfolio included the following three product candidates: (1) Generx (alferminogene tadenovec), a late-stage DNA-based growth factor therapeutic that is being developed as a one-time treatment to promote and stimulate the growth of collateral circulation in the hearts of patients with ischemic conditions such as recurrent angina; (2) Corgentin, a next-generation pre-clinical product candidate and DNA-based therapeutic based on myocardial produced insulin-like growth factor-I, which could be developed for administration in an acute care setting by interventional cardiologists as a treatment for heart attack patients immediately following percutaneous coronary intervention. Corgentin is designed to enhance myocardial healing in and around the infarct zone when used as an adjunct to existing vascular-directed pharmacologic and interventional therapies; and (3) Genvascor, a pre-clinical, DNA-based therapeutic, based on endothelial nitric oxide synthase (eNOS) intended to induce the localized and sustained production of nitric oxide directed at mediating the effects of multiple growth factors to enhance neovascularization and increased blood flow for the treatment of patients with critical limb ischemia due to advanced peripheral arterial occlusive disease.

Incidence of Heart Disease and Angina

- According to the World Heart Federation, heart disease is the world's leading cause of death.
- Over 13 million men and women in the United States suffer from heart disease.
- Angina, a serious and debilitating heart condition usually associated with heart disease, is a growing health problem with over 6 million Americans suffering from chronic angina and an additional 400,000 new diagnoses each year.
- The U.S. Census Bureau projects that the over 55 population, the group most at risk for angina, will increase by approximately 70% over the next 30 years.
- An estimated 2 million patients in the U.S. suffer from recurrent angina, a chronic condition in patients with heart disease who are receiving maximal drug therapy and have already undergone one or more mechanical interventions.

Current Treatments for Heart Disease and Angina

Based on the current practice of medicine, angina due to heart disease is treated using one or more of three approaches: (1) chronic drug therapy; (2) percutaneous coronary intervention (angioplasty and stenting); and (3) coronary artery bypass graft surgery.

Currently available drugs to treat angina include beta-blockers, calcium channel blockers, long-acting nitrates, and metabolic modulators. These drugs increase cardiovascular blood flow by vasodilation and decrease the heart's demand for oxygen by reducing the metabolic load. This reduced cardiac workload is achieved by lowering heart rate, blood pressure and/or the strength of the heart's contraction. Hemodynamic and other side effects can limit or prevent the use of currently available drugs in patients whose blood pressure or cardiac function is already decreased. These limiting effects can be particularly pronounced when anti-anginal drugs are used in combination. In addition, co-morbidities such as reactive airway disease, congestive heart failure and diabetes also complicate treatment with existing anti-anginal drugs because these conditions may cause patients to be more vulnerable to known side effects of these therapies. Adverse effects include lower extremity edema associated with calcium channel blockers, impotence and depression associated with beta-blockers, and headaches associated with nitrates. Consequently, for some patients and physicians, presently available medical treatments may not relieve angina and have unacceptable side effects. Importantly, for many chronic angina patients, currently available therapies may provide variable or incomplete relief. Despite the widespread use of these therapies, up to three-fourths of symptomatic patients have recurrent or persistent anginal symptoms. Many patients, even those on multiple drugs, continue to experience angina attacks.

Of the major interventions performed for treating severe heart disease in the United States, namely percutaneous coronary intervention (PCI or angioplasty) and coronary artery bypass graft (CABG) surgeries, more than one million procedures are performed annually and more than two-thirds of these are performed on men. While angioplasty and stenting or CABG surgeries can be used to mechanically open or surgically bypass blockages of the large epicardial blood vessels that surround the myocardium, neither angioplasty nor CABG are believed to be capable of also addressing blockages or flow limitations affecting the mid-sized to smaller blood vessels that are located deeper within the heart muscle. These deeper blood vessels, which form the underlying coronary "microcirculation," are directly responsible for conveying oxygenated blood into close proximity with the adjacent heart tissue. In addition, microcirculatory impedance or resistance to flow at the downstream level can contribute substantially to reducing overall blood flow through the myocardium, which may be a contributory cause of ischemia in patients with heart disease. In that regard, many patients continue to experience angina even after surgical and other interventions have been performed to mechanically open or bypass accessible portions of the large upstream blood vessels that initially conduct blood flow into the heart.

Cardiovascular-Directed Growth Factors—Generx™

Generx (alferminogene tadenovec, Ad5FGF-4) is the lead product candidate in a new class of cardiovascular biologics being developed to leverage the body's natural healing processes in response to repeated ischemic stress (insufficient blood flow and myocardial oxygen supply due to coronary heart disease). The natural biologic response to repeated transient ischemia is angiogenesis, the growth of new collateral blood vessels, which is orchestrated by a complex and not fully understood cascade involving many myocardial-derived growth factors. These newly formed vessels can effectively augment blood flow and oxygen delivery to parts of the patient's heart downstream from a blockage in a coronary artery. In

many patients however, including those with recurrent angina, coronary collateral vessel formation is insufficient to meet the heart's needs during stress. Currently available anti-anginal drugs, which may provide symptomatic relief, are generally designed to alter the oxygen demand of the heart muscle or dilate vessels to temporarily relieve angina. Generx is an angiogenic therapeutic that is designed to promote the heart's natural response of collateral growth and to increase blood flow in the microcirculation.

The Technology and Science of Generx

Our intracoronary approach to deliver Generx to the heart relies on a cellular receptor-driven adenovector system to carry DNA into heart cells to stimulate the localized production of FGF-4 angiogenic proteins intended to promote the growth of microvascular circulation in ischemic regions of the heart to improve blood flow and correspondingly relieve anginal pain due to coronary artery disease. Our technique of intracoronary infusion of the adenovector encoding the FGF-4 gene results in direct delivery into the heart's extensive internal network of coronary circulation. This delivery method takes advantage first of the unique anatomy of the coronary circulation designed by nature for highly efficient oxygen and nutrient extraction, and second of the high concentration of cell surface receptors in the heart that are available for high-yield, first pass adenovector uptake. Our approach thus allows for the targeted and selective delivery of the biologic product throughout the heart. Growth factors like FGF-4 are normally secreted locally and are effective only in the local microenvironment, only a fraction of a millimeter from where they are secreted, in response to ischemia or stress. Delivery of Generx throughout the heart using our intra-coronary method therefore allows for the stimulation of collateral blood vessel growth throughout ischemic areas of the heart.

Targeted delivery of the adenovector containing the DNA encoding FGF-4 throughout the heart muscle is believed to efficiently and safely program the heart to produce and secrete angiogenic FGF-4 proteins, which stimulate the natural angiogenic healing process. Compared with other methods for DNA transfer, the adenovector encoding FGF-4 is taken up with high efficiency by cells in the heart. The transfected heart cells then transcribe the FGF-4 gene into messenger RNA, and translate that RNA into FGF-4 protein, with a signal sequence to cause its secretion. The adenovector DNA encoding growth FGF-4 expresses FGF-4 protein for a period of several weeks. This limited production is beneficial for therapeutic angiogenesis since new blood vessels, once initiated, tend to develop and remain in areas of need such as ischemic areas of the heart muscle. The adenovector encoding FGF-4 is not incorporated into the transfected cell's chromosomes; therefore it does not integrate or cause any disruption in the cell's own DNA-encoded genes. Generx, in combination with ischemic stress (angina), is therefore designed to promote collateral vessel growth precisely when and where it is needed. Generx is being developed as a one-time intracoronary administration to improve the underlying physiology in patients with recurrent angina.

We believe that our angiogenic therapeutic approach differs markedly from other potential angiogenic therapies currently at various stages of development, and that our approach offers several advantages over competitors. Our intracoronary delivery technique uses a standard diagnostic catheter, a commonly used tool of all interventional cardiologists. The intracoronary catheter approach also offers the potential for a broader distribution of therapeutic material throughout the heart. Additionally, our delivery method is designed to allow for the use of angiogenic therapy as an adjunctive treatment along with percutaneous intracoronary intervention (angioplasty and stent). Our approach to the treatment of heart disease uses a standard cardiac catheter to gradually infuse an angiogenic adenovector into the coronary circulation. The intracoronary route of delivery is readily accessible from outside of the heart. It also directly supplies the

underlying heart muscle, as well as the coronary endothelium, to which adenovectors can bind and from which blood vessels grow in the process of angiogenesis. Cardiac infusion catheters and the intracoronary delivery route are also beneficial because they are routinely used by cardiologists for performing standard diagnostic procedures such as angiography.

Adenovectors are one of the most widely studied DNA delivery vehicles in human clinical trials. In the context of heart disease, angiogenic adenovectors are believed to be particularly useful as biologics in that they do not integrate into the human genome but can bind to and remain in the heart for a sufficient period of time to promote the development of new blood vessels. Adenovectors are also considered to be significantly more efficient than naked plasmid DNA for gene transfer. Naturally occurring biological receptors for adenovectors are believed to facilitate their binding to a broad area of heart muscle supplied by the infused coronary circulation.

Generx Clinical Data Meta-Analysis and Phase III Protocol

In June 2006, we reported our recently completed meta-analysis findings of the clinical studies conducted by Schering. Based on this analysis, positive effects following intracoronary angiogenic therapy in both men and women with heart disease were observed. The data was presented at the American Society of Gene Therapy (ASGT) 9th Annual Meeting in Baltimore, Maryland. Timothy D. Henry, M.D., FACC, an interventional cardiologist and Professor of Medicine at the Minneapolis Heart Institute presented the data at a Special Cardiovascular Session entitled Modulating Cardiac Phenotype: From Basic Mechanism to Clinical Trials. As reported, several positive findings emerged from a review of the AGENT clinical data relating to our lead product candidate, Generx (Ad5FGF-4).

The AGENT clinical studies involved 663 patients with angina who were enrolled at more than one hundred leading medical centers in the U.S., Canada, Europe and South America. All of the AGENT clinical studies were conducted in a randomized, placebo-controlled and "double-blind" manner so that neither patients nor their doctors knew whether a patient had received a one-time infusion of Generx or a placebo.

As reported at the ASGT meeting, there was a statistically significant reduction in anginal severity among the Generx patients compared to placebo at six months as measured by CCS Class (Canadian Cardiovascular Society), a widely used functional assessment for patients experiencing angina pectoris (chest pain associated with heart disease that can severely limit patients' daily activities). Longer-term patient follow-up showed that the observed improvements with respect to anginal class were maintained even a year after patients had received a one-time infusion of Generx.

It was further reported that among more exercise-limited patients in the AGENT-3 study (including both men and women over 55 who had previously been unable to exercise for more than five minutes on the exercise treadmill test (ETT)), there was a significant improvement in the primary endpoint of ETT duration in the group receiving Generx as compared to the placebo group. These improvements in exercise capacity were statistically significant with respect to the primary endpoint as measured 12 weeks following intracoronary administration, and a subsequent patient follow-up showed the differences between the Generx and placebo groups were even greater after six months.

In addition it was observed that a protocol-specified subgroup analysis by gender in AGENT-3 revealed a significant increase in the primary endpoint of ETT duration among women with angina, an improvement

that was also maintained six months after the one-time infusion of Generx. Additional data from the subgroup meta-analysis of all women participating in the AGENT-3 and AGENT-4 clinical studies showed that Generx had a statistically significant effect on improvements in overall exercise treadmill time, time to onset of angina during ETT, exercise time to 1 mm ST-segment depression on electrocardiogram, and CCS Class, each as compared to the placebo control group.

As reported previously and as seen in other studies involving exercise treadmill testing, a substantial placebo response, which may be further accentuated by accompanying exercise or lifestyle changes, was observed among healthier patients. The occurrence of such a placebo response, particularly one affecting exercise capacity, tends to limit drug versus placebo distinctions among more exercise-competent subgroups when using the treadmill test. In line with those observations, the meta-analysis of the AGENT-3 and AGENT-4 studies showed that among a subgroup of patients, particularly men who were younger and more capable of exercise, there was a substantial placebo response. Among women, who have generally been under-represented in cardiovascular clinical trials despite a high incidence of heart disease, the observed placebo response was substantially less and the apparent treatment effect was therefore greater—even when women with less severe forms of angina were included. Among both men and women, when patients were more exercise-limited to begin with, the placebo response was relatively limited. Importantly, the group of exercise-limited patients that had received Generx experienced a substantial improvement in exercise time on ETT whereas the placebo group did not, a difference that was both statistically significant and maintained over time.

As summarized by the AGENT clinical investigators in the abstract presented at the ASGT, "the results of this meta-analysis suggest that Ad5FGF-4 may have a clinically meaningful and measurable effect on ETT and other measures of angina in women with recurrent angina, and potentially in both men and women that are older than 55 and have limited exercise capacity."

Generx Advances to Phase 3 Following Meetings with FDA

In December 2006, we announced that Generx was to be advanced to a Phase 3 clinical trial in women as a potential treatment for myocardial ischemia (insufficient blood flow within the heart muscle), following an end-of-Phase 2 meeting with the U.S. Food and Drug Administration (FDA). As reported, Generx is the first and only DNA-based cardiovascular therapeutic to be advanced to Phase 3, and is believed to be the only current Phase 3 product candidate for the potential treatment of stable angina, a chronic medical condition affecting millions of patients in the U.S. and elsewhere.

The potential for Generx to bring about sustained improvements in blood flow and heart function, as compared to medications for symptom relief such as anti-anginals, also led the FDA to indicate that changes on an electrocardiogram (ECG) that are diagnostic of myocardial ischemia would constitute both an objective and acceptable primary efficacy endpoint for a proposed product indication of treating myocardial ischemia. Data from the completed AGENT-3 and AGENT-4 studies indicated that women receiving Generx showed a statistically significant improvement with respect to their ischemia as measured by time to ST segment changes on ECG (the primary efficacy endpoint accepted by the FDA for the Phase 3 study), as well as related improvements in overall ETT, time to onset of angina during ETT, and improvements in angina class, each as compared to the placebo control group.

Following discussions with the FDA, improvements in myocardial blood flow within the affected heart muscle will also be measured directly by SPECT perfusion imaging (single photon emission computed tomography) as a secondary efficacy endpoint. SPECT perfusion was the focus of the AGENT-2 mechanism of action study (Grines et al., JAM Coll Cardiol 2003; 42:1339-47). Improvements in myocardial blood flow observed in the AGENT-2 study, which included both men and women, were similar in magnitude to improvements reported in the literature for patients who have undergone revascularization procedures (coronary artery bypass graft surgery or angioplasty).

This Phase 3 clinical study (AWARE), which we began in the second half of 2007, is a randomized, placebo-controlled, double blind trial in approximately 300 women at multiple medical centers in the U.S. An additional follow-up study of Generx in men with recurrent angina due to myocardial ischemia is expected to commence later. Our therapeutic approach to the treatment of cardiovascular heart disease has been the focus of the most widely-conducted clinical studies for Angiogenic Gene Therapy (AGENT-1 through AGENT-4), which prior to our current study, had involved 663 patients at more than 100 U.S., European and other medical centers.

Additional Product Candidate for Heart Attack—Corgentin [Ad5IGF-I]

Corgentin, our lead pre-clinical product candidate, is a next-generation DNA-based therapeutic based on myocardial produced insulin-like growth factor-I (Ad5IGF-I). We will seek to advance the current standard of care for heart attack patients through the development of Corgentin to enhance myocardial healing in and around the infarct zone when used as an adjunct to existing vascular-directed pharmacologic and interventional therapies. As currently envisioned, Corgentin would be developed as a potential treatment to be administered to heart attack patients immediately following reperfusion. The objective of this treatment approach is focused on enhancing myocardial repair and restoration of heart cells that have been injured as a result of the heart attack. Today's current standard of care is vascular-directed, focusing on restoring blood flow, while Corgentin would seek to broaden treatment to include a cardiomyocyte-directed therapy to prevent further damage to and to help repair cells that have been injured as a result of the heart attack. To further confirm the utility of the Corgentin approach and establish its commercialization potential, we are planning additional pre-clinical studies in the porcine acute myocardial infarction model, closely mimicking the clinical setting. If confirmatory, we may seek to initiate clinical studies on our own or with a corporate development partner.

Additional Product Candidate for Peripheral Vascular Disease—Genvascor [Ad5eNOS]

As part of our acquisition of cardiovascular growth factor therapeutic assets from Schering, we secured the rights to Genvascor, a pre-clinical, DNA-based, endothelial nitric oxide synthase (eNOS) therapeutic. This product candidate is being designed to induce production of nitric oxide directed at mediating the effects of multiple growth factors to enhance neovascularization and increased blood flow for the treatment of patients with critical limb ischemia due to advanced peripheral vascular disease. We may seek to develop additional pre-clinical information through sponsored studies and, if confirmatory, we may consider the further development of Genvascor either alone or through a corporate collaboration.

Tissue Repair Company—Healing Chronic Wounds

Tissue Repair Company Transaction

In August 2006, we obtained the rights to develop various technologies and products now part of the Tissue Repair Company (TRC), a San Diego-based biopharmaceutical company focused on the development of growth factor therapeutics for the potential treatment of chronic diabetic wounds. TRC's lead product candidate, Excellarate, is a DNA-activated collagen gel for topical treatment formulated with an adenovector delivery carrier encoding human platelet-derived growth factor-B (PDGF-B). Excellarate is initially being developed as a single administration for the treatment of non-healing diabetic foot ulcers.

The Excellarate topical gel is designed to stimulate angiogenesis and granulation tissue formation through the recruitment and proliferation of chemotactic cells such as monocytes and fibroblasts, which are necessary for the stimulation of a variety of wound healing processes. Other potential applications for TRC's Gene Activated Matrix (GAM) technology include therapeutic angiogenesis (cardiovascular ischemia, peripheral arterial disease) and orthopedic products, including hard tissue (bone) and soft tissue (ligament, tendon, and cartilage) repair. We have entered into a contract manufacturing agreement to produce Excellarate for clinical studies, and we initiated the Phase 2b clinical study for Excellarate during the second half of 2007.

Incidence of Chronic Wounds

- An estimated 12.5 million patients worldwide suffer from chronic wounds with the industrialized countries making up 8 million, of which the U.S. totals approximately 3.7 million.
- Over 800,000 patients in the U.S. develop diabetic foot ulcers annually.
- Approximately 1.7 million patients suffer from pressure wounds, 1 million from diabetic foot ulcers and 1 million from venous status ulcers.
- Diabetic ulcers cost the U.S. healthcare system approximately $5 billion per year with treatment and subsequent lower limb amputations adding an additional $1 billion per year.
- Of the approximately 15 million diabetic patients, approximately 15 to 20 percent of this patient population will go on to suffer at least one chronic foot ulcer and of those six percent will be hospitalized due to infection or other ulcer-related complications.
- Diabetes is the leading cause of non-traumatic lower extremity amputations and approximately 14 to 24 percent of patients with diabetes who develop foot ulcers eventually have an amputation.

Current Treatment Approaches for Chronic Wounds

There are several treatment modalities currently used for severe chronic ulcers in diabetic patients, including topical dressings, off-loading, debridement and skin grafts. Regranex® Gel (becaplermin), which is marketed by Johnson & Johnson's Ethicon Wound Management Division, is considered to be the only FDA-approved prescription medicine to treat such wounds. Regranex® Gel is a recombinant human platelet-derived growth factor (rrPDGF-BB) protein that is used as an adjunct with other current treatment modalities described above and is used to treat lower extremity diabetic neuropathic ulcers. Based on Regranex® Gel's instructions for use, an estimated 70 administrations and 70 wound cleanings and redressings would be required over a 10-week treatment period (once daily administration followed by a subsequent wound cleaning and redressing without gel).

Gene Activated Matrix™ (GAM) Technology

We believe that patient compliance can be a major factor preventing or limiting improved medical outcomes, particularly when repeated administrations are required at a wound site. Gene Activated Matrix technology is designed to provide a therapeutic level of protein synthesis at a particular site in the body and can be used in soft tissue such as skin, ligament, tendons and cartilage, as well as hard tissue such as bone. The technology is distinctive in that it is an immobilized form of local gene delivery that allows for control of gene uptake. GAM consists of a biocompatible matrix comprising a gene or DNA vector encoding a growth factor or other therapeutic protein.

For tissue repair, the application method involves placement of a GAM gel directly onto a wound site. TRC's studies have shown that proliferative cells in the body can migrate into the GAM, take up the immobilized vector and gene and then transiently express the encoded therapeutic protein. Compared with topical applications of proteins, this in situ expression method significantly prolongs the availability of therapeutic protein to the cells involved in tissue repair. TRC's GAM technology may have potential utility in several clinical indications where protein therapeutics have had limited success, including treatment of dermal wounds (such as diabetic foot ulcers), therapeutic angiogenesis (pharmacologically inducing new blood vessel growth), and orthopedic products for repair of various tissues, including hard tissue (bone) and soft tissue (ligament, tendon, cartilage).

Tissue Repair Product Candidate—Excellarate™

Excellarate is being developed as a next-generation treatment to leverage the established medical utility of PDGF-B, and to simplify treatment by stimulating the body's own localized and sustained production of PDGF-B at the wound site over a six to 12-day period following a single dose administration. We believe that a one-time administration, or in more severe cases several once-a-week administrations, of the Excellarate topical gel, which is designed to mediate a sustained cellular-release of PDGF-B at the injury site, could substantially simplify the treatment regimen, thus potentially enhancing patient compliance and improving medical outcomes.

Excellarate™ is a DNA-activated collagen gel for topical treatment formulated with an adenovector delivery carrier encoding human platelet-derived growth factor-B (PDGF-B). Excellarate is initially being developed as a single administration for the treatment of non-healing, neuropathic diabetic foot ulcers. The Excellarate topical gel, a type of Gene Activated Matrix™, is designed to stimulate angiogenesis and granulation tissue formation through the recruitment and proliferation of chemotactic cells such as monocytes and fibroblasts, which are necessary for the stimulation of a variety of wound healing processes.

Excellarate has been evaluated in an initial multi-center Phase 1-2 clinical trial that evaluated preliminary safety and included an assessment of healing in 15 patients having diabetic foot ulcers that did not heal using conventional techniques. Based on the data obtained, Excellarate appeared to be safe and well tolerated in patients with diabetic foot ulcers. In addition, in the 12 patients that completed the treatment protocol and follow-up, over 80% of the patients exhibited complete closure of previously non-healing wounds by 14 weeks. Single dose applications were administered in 70% of the patients and the remaining patients received a weekly dose application over a four-week period. Based on the prior pre-clinical and toxicology database, and results from the Phase 1-2 clinical study, we advanced Excellarate

into a randomized, double-blind, placebo-controlled, multi-center Phase 2b clinical study in the second half of 2007.

InnerCool Therapies—Patient Temperature Modulation for Reducing Ischemic Injury

InnerCool Therapies Transaction and Subsequent Product Development

In March 2006, we acquired the technologies and products of InnerCool Therapies, Inc., a San Diego-based medical technology company in the emerging field of therapeutic hypothermia or patient temperature modulation, which is designed to controllably cool the body in order to reduce cell death and damage following acute ischemic events such as cardiac arrest or stroke, and to potentially lessen or prevent associated injuries such as adverse neurological outcomes, as well as in the management of patients experiencing trauma or fever. Rapid cooling and rewarming of patients can be accomplished from inside the body, using an endovascular catheter which is selectively chilled or warmed. For less acute needs, cooling and rewarming of patients can also be accomplished by surface-based systems which are applied to the outside of the body, such as a vest applied to the upper body. InnerCool's Celsius Control System™ is a rapid endovascular-based system, which has received regulatory clearance in the U.S., Europe and Australia.

Following the acquisition, we expanded InnerCool's direct sales force, completed the construction of a new San Diego-based cGMP manufacturing facility, and introduced a new CoolBlue™ surface temperature modulation system. With the introduction of CoolBlue, and our soon to be launched next-generation RapidBlue™ endovascular cooling system, we have positioned InnerCool Therapies as the first and only comprehensive provider of temperature modulation solutions for hospital and medical centers. We plan to accelerate the commercialization of InnerCool's surface and endovascular temperature modulation systems and broaden and expand its therapeutic hypothermia technology into other medical indications and applications.

Incidence of Ischemic Injuries and Potentially Related Applications

Cardiac Arrest:

- In the United States, an estimated 500,000 people experience cardiac arrest each year, of which approximately 150,000 survive and are treated with advanced care.
- Outside the United States, it is estimated that approximately 900,000 people experience cardiac arrest each year, of which 200,000 survive and are treated with advanced care.
- The American Heart Association recently revised its guidelines to recommend the use of therapeutic cooling as part of the critical care procedures for patients with an out-of-hospital cardiac arrest following ventricular fibrillation.

Heart Attack or Acute Myocardial Infarction (AMI):

- In the United States, an estimated 865,000 people experience a new or recurrent heart attack each year.
- An estimated 325,000 people in the U.S., and approximately 375,000 people outside the United States, receive emergency angioplasty or anti-clotting treatment as first-line care following a heart attack.

Stroke:

- In the United States, approximately 700,000 people experience a stroke each year, and a comparable number of patients are affected outside the United States.
- The American Stroke Association has identified the treatment of stroke victims with therapeutic hypothermia as a promising area of research.

Cardiothoracic Surgery:

- Approximately 500,000 patients in the U.S., and 300,000 patients outside the United States, undergo cardiothoracic surgery each year.
- Major medical societies, such as the American Society of PeriAnesthesia Nurses, American Society of Anesthesiologists, American Association of Nurse Anesthetists and Association of Perioperative Registered Nurses have issued specific guidelines for temperature management during cardiothoracic surgeries.

Achieving or Maintaining Normal Body Temperature:

- Potential applications for achieving or maintaining normal body temperature or normothermia include warming trauma patients whose temperatures have dropped below normal due to extensive blood loss and subsequent fluid replacement therapy, cooling heat stroke victims, re-warming patients with accidental hypothermia caused by exposure, and warming burn victims whose temperatures are below normal due to exposure in the intensive care unit.

Treatment of Acute Ischemic Conditions Using Patient Temperature Modulation

Numerous articles have been published in scientific and medical journals describing the usefulness of therapeutic cooling, which is designed to protect endangered cells, prevent tissue death and preserve organ function following events associated with severe deprivation such as stroke or cardiac arrest. Therapeutic hypothermia is believed to work by protecting critical tissues and organs such as the brain, heart and kidneys following acute ischemic or inflammatory events, by lowering metabolism and preserving cellular energy stores, thereby potentially stabilizing cellular structure and preventing or reducing injuries at the cellular, tissue and organ level. Two international clinical trials on hypothermia after cardiac arrest published in The New England Journal of Medicine demonstrated that induced hypothermia reduced mortality and improved long-term neurological function. Based on these results, the American Heart Association (AHA) and the International Liaison Committee on Resuscitation (ILCOR) issued new guidelines recommending that cardiac arrest victims be treated with cooling or induced hypothermia. The AHA guidelines now recommend the use of therapeutic cooling as part of the critical care procedures for patients with an out-of-hospital cardiac arrest following ventricular fibrillation.

Endovascular Temperature Control—the InnerCool Celsius Control System™ and RapidBlue™

Endovascular cooling, provided by InnerCool's Celsius Control System, is believed to offer more rapid and precise temperature control and ease of administration, which are believed to be important requirements for the potential treatment of patients presenting with acute ischemic stroke in a hospital setting. In addition, it offers the ability to cool "awake" patients without the need to anesthetize them, avoiding a potentially confounding factor.

InnerCool's Celsius Control System is currently being used in surgical and intensive care hospital units. The Celsius Control System is designed to rapidly and controllably cool the body in order to reduce cell death and damage following acute ischemic events such as cardiac arrest or stroke, and to potentially lessen or prevent associated injuries such as adverse neurological outcomes.

InnerCool's approach to therapeutic hypothermia is based on a single-use flexible metallic catheter and a fully integrated endovascular cooling system, which allows for rapid and controlled cooling and re-warming. InnerCool's Celsius Control System integrates a number of desirable features including a slim catheter profile, a highly efficient flexible metallic heat transfer element, a built-in temperature monitoring sensor, and a programmable console capable of rapidly and controllably inducing, maintaining and reversing therapeutic cooling.

InnerCool's Celsius Control System has received FDA 510(k) clearance for use in inducing, maintaining and reversing mild hypothermia in neurosurgical patients, both in surgery and in recovery or intensive care. The system has also received FDA clearance for use in cardiac patients to achieve or maintain normal body temperatures during surgery and in recovery/intensive care, and as an adjunctive treatment for fever control in patients with cerebral infarction and intracerebral hemorrhage. InnerCool has also received a CE mark allowing the Celsius Control System to be marketed in the European Community, and a TGA approval allowing the system to be marketed in Australia.

The Celsius Control System is now being used at a number of leading U.S. medical centers, including those at Stanford University, Cornell, Columbia, the University of Michigan, Harborview Medical Center, San Francisco General Hospital, the University of California Medical Centers at San Diego and San Francisco, and at medical centers in Australia and Sweden.

InnerCool's next-generation RapidBlue™ system for high-performance endovascular temperature modulation, which is scheduled for launch in the first half of 2008, includes a programmable console with an enhanced user interface and a catheter designed to quickly modulate patient temperature in association with surgery or other medical procedures. The RapidBlue system powers InnerCool's Accutrol™ catheter, which has a flexible metallic temperature control element and a built-in temperature feedback sensor to provide fast and precise patient temperature control.

The RapidBlue endovascular system is expected to initially have FDA 510(k) clearance for the same indications as already obtained for the Celsius Control System. Studies for additional indications with InnerCool's endovascular cooling systems are expected to be conducted in collaboration with the National Institutes of Health, AHA and others. Potential future applications of the technology include endovascular cooling for cardiac arrest, acute ischemic stroke and myocardial infarction (heart attack), and acute traumatic injury.

Surface-Based Temperature Control—CoolBlue™

InnerCool's new CoolBlue surface temperature modulation system is designed to provide a complementary tool for use in less acute patients or in clinical settings best suited to prolonged temperature management. The CoolBlue system includes a console and a disposable vest with upper thigh pads.

Surface cooling devices are becoming one of several important therapies to help manage patients who experience fevers in association with severe neurologic injuries or other medical conditions. The

ASA and the American Association of Neurological Surgeons (AANS), as well as other organizations internationally, now recommend proactive fever reduction following neurological injury. The company estimates that more than 450,000 hospital patients in the U.S. experience neurologic or non-neurologic fever conditions that either require or could benefit from proactive therapies to reduce patients' body temperatures. Fever patients typically require treatment for multiple days, sometimes as long as a week.

Therapeutic Hypothermia for Stroke—the ICTuS-L Study

The ICTuS-L study is sponsored by the National Institute of Neurological Disorders (NINDS), one of the National Institutes of Health (NIH). The NINDS sponsors and conducts research to learn about the healthy brain and to discover and disseminate information on ways to prevent, cure and treat neurological neuromuscular disorders and stroke. The NINDS leads the federal government's medical research effort to fight stroke. It funds research studies at universities, medical schools and hospitals across the country and conducts its own research on the grounds of the NIH campus in Bethesda, Maryland, as well as at the NIH Stroke Center at Suburban Hospital, Bethesda.

Positive Effects of Hypothermia Following Heart Attack

In October 2006, InnerCool announced preclinical data demonstrating a new and expanded benefit of early rapid cooling for the potential treatment of acute myocardial infarction (heart attack), as presented at the Transcatheter Cardiovascular Therapeutics (TCT) 2006 Annual Meeting in Washington, DC. Innercool also announced its plans for a new clinical study to further assess the safety and potential usefulness of early cooling for heart attack patients. The study began in 2007 and is being co-sponsored in Sweden.

The research reported at TCT was conducted by a team of interventional cardiologists led by Drs. Goran Olivecrona and David Erlinge at the Lund University Hospital, Sweden. In the recently completed study in a preclinical porcine heart attack model, researchers evaluated rapid cooling, induced by a combination of cold saline infusion along with InnerCool's endovascular Celsius Control System, before or coincident with percutaneous coronary intervention (PCI) procedures, which are used to restore blood flow in the heart. The data showed that cooling before PCI reduced overall infarct size (reflecting tissue damage) by an additional 40%. These findings strongly support the use of early rapid cooling in planned clinical studies, and suggest that InnerCool's endovascular cooling system may have the potential to enable interventional cardiologists to dramatically reduce tissue damage following a heart attack.

Based on these findings, InnerCool is sponsoring a study on the use of early rapid cooling following heart attack, which is being co-sponsored and conducted by the interventional cardiology center at Lund University Hospital, Sweden. The study is a randomized human clinical trial designed to evaluate the potential use of InnerCool's hypothermia system in the treatment of heart attack patients. This study will randomize approximately twenty patients who present within six hours of their heart attack for PCI alone or PCI plus the new early rapid cooling protocol. The hypothermia arm will include iced saline infusion plus use of the InnerCool Celsius Control System catheter before reperfusion in patients undergoing PCI. The trial will employ cardiac magnetic resonance imaging (MRI) to provide an accurate assessment of the damage to the heart within days of the injury.

Benefits of Inducing Hypothermia During Aneurysm Surgery

In September 2006, Michael K. Morgan, M.D. reported on his direct experience and the benefits of the Celsius Control System in inducing hypothermia in cerebral vascular surgery patients at the Neurosurgical

Society of Australasia (NSA) Annual Scientific Meeting in Cairns, Australia. It was reported by Dr. Morgan, a noted vascular neurosurgeon and Professor and Dean of the School of Advanced Medicine, Macquarie University, Sydney, that he had conducted retrospective review of over 600 aneurysms over a seven-year period, and found that patients with aneurysms greater than 12 millimeters are more likely to have over 20 minutes of temporary occlusion times. Temporary occlusion of arteries in the brain during aneurysm repair in such patients exposes the brain to ischemia (localized lack of oxygen), which can have negative consequences in terms of neurologic outcomes.

Dr. Morgan reported on the safety, efficient cooling and beneficial outcomes achieved using InnerCool's Celsius Control System in an open-label cohort of 26 patients with 33 aneurysms, and reported that based on his experience and the clinical data reviewed, aneurysms greater than 12 millimeters frequently require prolonged temporary occlusion times. It was also reported that the ability of InnerCool's Celsius Control System to safely and effectively cool patients with aneurysms provides an important new tool for protecting the brain from ischemic injury, especially in patients such as these who are at higher risk for tissue damage due to the prolonged lack of blood flow, and that, in addition to achieving positive outcomes, there were no clinically significant catheter-related complications. The specifics of these findings are expected to be published in a neurosurgical journal.

Business Strategy

Strategic Goals

Building upon our core products and product candidates, our strategic goal is to develop a portfolio of medical products at various stages of development and secure additional financial resources to commercialize these products in a timely and effective manner. The key elements of our strategy are to:

- advance the Phase 3 AWARE clinical study for Generx;
- advance the Phase 2b clinical study for Excellarate;
- accelerate the commercialization of Innercool's RapidBlue System and, at the same time, expand our CoolBlue product placements, broaden and expand our therapeutic hypothermia technology into other medical indications and applications;
- leverage our financial resources and focused corporate infrastructure through the use of contract manufacturers to produce clinical supplies and a contract research organization to manage or assist planned clinical studies;
- advance the pre-clinical development of Corgentin and potentially seek partnering opportunities for the Corgentin and Genvascor product candidates;
- broaden and expand our product base and financial resources through other corporate development transactions in an attempt to enhance stockholder value, which could include acquiring other medical-related companies or product opportunities and/or securing additional capital; and
- monetize the economic value of our product portfolio by establishing strategic collaborations and selling businesses and assets at appropriate valuation inflection points.

Strategic Business Transactions

We were initially formed as a Delaware corporation in December 2003 by Christopher J. Reinhard, our Chairman, President and Chief Executive Officer, and Tyler M. Dylan, Ph.D., our Chief Business Officer and General Counsel, to acquire certain technology and product rights from Schering AG Group, Germany relating to certain growth factor therapeutics initially developed by Collateral Therapeutics Inc. ("Collateral") in partnership with Schering. Mr. Reinhard was a co-founder and executive officer of Collateral and Dr. Dylan was General Counsel of Collateral. In 2002, following a six year strategic research and development collaboration and successful Phase 2 clinical studies of Generx, Schering acquired Collateral for approximately $160 million.

As part of a strategic refocusing in 2004, Schering divested its cardiovascular small molecule drugs and biologics under clinical development, including Generx. Mr. Reinhard and Dr. Dylan subsequently negotiated a transaction to acquire Schering's portfolio of cardiovascular growth factor therapeutics formerly co-developed with Collateral. In October 2005, we completed a private equity financing concurrent with a merger transaction with a small public company raising $30 million to support our acquisition of Schering's portfolio of growth factor therapeutics. Since we were initially funded, a little more than two years ago, we have made three acquisitions described above and which are summarized below.

As set forth in the summary below, we estimate that approximately $270 million has been invested by sellers and their affiliates in connection with the businesses, product candidates and technology in our three completed acquisitions . Based on the terms negotiated by our management team, these assets have been acquired at an average purchase price (as measured by upfront cash, equity, assumed debt and product success milestones) of approximately 10% on capital invested by corporate pharmaceutical partners, venture capital firms and other investors.

Summary of Strategic Acquisitions

Acquisition	Estimated Capital Invested (by sellers and affiliates)	Acquisition Price plus Milestones (excluding royalties)	Price/ Invested Capital
Cardium Biologics Cardiovascular Growth Factor Therapeutics	~ $200 Million	$4 Million Cash plus potential $10 Million Milestone upon product success (Product Sales)	7%
InnerCool Therapies Endovascular Temperature Control Systems	~ $50 Million	~ $6 Million Equity plus potential $5 Million Milestone upon product success (Sales > $20 Million); No royalties	22%
Tissue Repair Company DNA-Activated Matrices for Wounds	~ $20 Million	~ $1 Million Cash plus $1 Million Clinical Milestone (Phase 2 advancement)	10%
Total	~ $270 Million	~ $27 Million	10%
		Up-front payments: ~$11 Million (incl. equity)	4%

We plan to continue to build our business through internal development and external acquisitions. As an emerging public company, we have initially focused on acquiring undervaluled opportunities having unrealized value but that we believe have potential for significant future growth and development or partnering prospects when combined with the value-added skills and perspectives of our experienced management team.

We intend to continue to pursue opportunistic acquisitions designed to enhance long-term stockholder value. At the same time, to the extent our technologies and product canidates are advanced and businesses are built-up, further developed and mature, we may consider various corporate development transactions to enhance and monetize stockholder value such as corporate partnerings, spin-out transactions and equity distributions.

Government Regulation

New drugs and biologics, including gene therapy and other DNA-based products, are subject to regulation under the federal Food, Drug, and Cosmetic Act. In addition, biologics are also regulated under the Public Health Service Act. We believe that the pharmaceutical products we are attempting to develop will be regulated either as biological products or as new drugs. Both statutes and their corresponding regulations govern, among other things, the testing, manufacturing, distribution, safety, efficacy, labeling, storage, record keeping, advertising and other promotional practices involving biologics or new drugs. FDA approval or other clearances must be obtained before clinical testing, and before manufacturing and marketing, of biologics and drugs. Obtaining FDA approval has historically been a costly and time-consuming process. Different regulatory regimes are applicable in other major markets.

In addition, any gene therapy and other DNA-based products we develop will require regulatory approvals before human trials and additional regulatory approvals before marketing. New biologics are subject to extensive regulation by the FDA and the Center for Biological Evaluation and Research and comparable agencies in other countries. Currently, each human-study protocol is reviewed by the FDA and, in some instances, the National Institutes of Health, on a case-by-case basis. The FDA and the National Institutes of Health have published guidance documents with respect to the development and submission of gene therapy protocols.

To commercialize our product candidates, we must sponsor and file an investigational new drug (IND) application and be responsible for initiating and overseeing the human studies to demonstrate the safety and efficacy and, for a biologic product, the potency, which are necessary to obtain FDA approval of any such products. For our newly sponsored investigational new drug applications, we will be required to select qualified investigators (usually physicians within medical institutions) to supervise the administration of the products, and we will be required to ensure that the investigations are conducted and monitored in accordance with FDA regulations and the general investigational plan and protocols contained in the IND application.

The FDA receives reports on the progress of each phase of testing, and it may require the modification, suspension, or termination of trials if an unwarranted risk is presented to patients. If the FDA imposes a clinical hold, trials may not recommence without FDA authorization and then only under terms authorized by the FDA. The IND application process can thus result in substantial delay and expense. Human gene therapy products, a primary area in which we are seeking to develop products, are a new category of therapeutics. Because this is a relatively new and expanding area of novel therapeutic interventions, there can be no assurance as to the length of the trial period, the number of patients the FDA will require to be enrolled in the trials to establish the safety, efficacy and potency of human gene therapy products, or that the data generated in these studies will be acceptable to the FDA to support marketing approval.

After the completion of trials of a new drug or biologic product, FDA marketing approval must be obtained. If the product is regulated as a biologic, the Center for Biological Evaluation and Research will require the submission and approval, depending on the type of biologic, of either a biologic license application or a product license application and a license application before commercial marketing of the biologic. If the product is classified as a new drug, we must file a new drug application with the Center for Drug Evaluation and Research and receive approval before commercial marketing of the drug. The new drug application or biologic license applications must include results of product development, laboratory, animal and human studies, and manufacturing information. The testing and approval processes require substantial time and effort and there can be no assurance that the FDA will accept the new drug application or biologic license applications for filing and, even if filed, that any approval will be granted on a timely basis, if at all. In the past, new drug applications and biologic license applications submitted to the FDA have taken, on average, one to two years to receive approval after submission of all test data. If questions arise during the FDA review process, approval can take more than two years.

Notwithstanding the submission of relevant data, the FDA may ultimately decide that the new drug application or biologic license application does not satisfy its regulatory criteria for approval and may require additional studies. In addition, the FDA may condition marketing approval on the conduct of specific post-marketing studies to further evaluate safety and effectiveness. Rigorous and extensive FDA regulation of pharmaceutical products continues after approval, particularly with respect to compliance

with current good manufacturing practices (GMPs), reporting of adverse effects, advertising, promotion and marketing. Discovery of previously unknown problems or failure to comply with the applicable regulatory requirements may result in restrictions on the marketing of a product or withdrawal of the product from the market as well as possible civil or criminal sanctions.

Ethical, social and legal concerns about gene therapy, genetic testing and genetic research could result in additional regulations restricting or prohibiting the processes we or our suppliers may use. Federal and state agencies, congressional committees and foreign governments have expressed interest in further regulating biotechnology. More restrictive regulations or claims that our products are unsafe or pose a hazard could prevent us from commercializing any such products.

The approval and/or clearance for marketing of medical devices, such as those being developed by our Innercool Therapies subsidiary, is also subject to extensive controls by health regulatory and other authorities. Although some devices can be cleared for marketing pursuant to a procedure referred to as an FDA 501(k) clearance, other devices and/or indications may require additional clinical studies and may be subject to even more extensive regulatory and other controls.

In addition to the foregoing, state and federal laws regarding environmental protection and hazardous substances, including the Occupational Safety and Health Act, the Resource Conservancy and Recovery Act and the Toxic Substances Control Act, affect our business. These and other laws govern our use, handling and disposal of various biological, chemical and radioactive substances used in, and wastes generated by, our operations. If our operations result in contamination of the environment or expose individuals to hazardous substances, we could be liable for damages and governmental fines. We believe that we are in material compliance with applicable environmental laws and that continued compliance therewith will not have a material adverse effect on our business. We cannot predict, however, how changes in these laws may affect our future operations.

We are also subject to a variety of other regulations in the United States, including those relating to bioterrorism, taxes, labor and employment, import and export, and intellectual property.

To the extent we have operations outside the United States, any such operations would be similarly regulated by various agencies and entities in the countries in which we operate. The regulations of these countries may conflict with those in the United States and may vary from country to country. In markets outside the United States, we may be required to obtain approvals, licenses or certifications from a country's ministry of health or comparable agency before we begin operations or the marketing of products in that country. Approvals or licenses may be conditioned or unavailable for certain products. These regulations may limit our ability to enter certain markets outside the United States.

Competition

The pharmaceutical, biotechnology and medical device industries are intensely competitive. Our products and any product candidates developed by us would compete with existing drugs, therapies and medical devices or procedures and with others under development. There are many pharmaceutical companies, biotechnology companies, medical device companies, public and private universities and research organizations actively engaged in research and development of products for the treatment of cardiovascular and related diseases, and/or products for temperature control therapy and the healing of

chronic wounds. Many of these organizations have financial, technical, research, clinical, manufacturing and marketing resources that are greater than ours. If a competing company develops or acquires rights to a more efficient, more effective, or safer competitive therapy for treatment of the same or similar diseases we have targeted, or one that offers significantly lower costs of treatment, our business, financial condition and results of operations could be materially adversely affected. In view of the relatively early stage of the industry, we believe that the most significant competitive factor in the field of gene therapy and biologics is the effectiveness and safety of a product candidate, as well as its relative safety, efficacy and cost as compared to other products, product candidates or approaches that may be useful for treating a particular disease condition.

We believe that our product development programs will be subject to significant competition from companies using alternative technologies, some of which are described above, as well as to increasing competition from companies that develop and apply technologies similar to ours. Other companies may succeed in developing products earlier than we do, obtaining approvals for these products from the FDA more rapidly than we do or developing products that are safer, more effective or less expensive than those under development or proposed to be developed by us. We cannot assure you that research and development by others will not render our technology or product candidates obsolete or non-competitive or result in treatments superior to any therapy developed by us, or that any therapy developed by us will be preferred to any existing or newly developed technologies.

We are aware of products currently under development by competitors targeting the same or similar cardiovascular and vascular diseases as our Generx product development. These include biologic treatments using forms of genes and therapeutic proteins. For example, Corautus Genetics, Inc., pursuant to a development agreement with Boston Scientific, has initiated a clinical study to evaluate a non-viral delivery of vascular endothelial growth factor-2 (VEGF-2) DNA in the form of "naked" plasmid for the direct injection into the heart muscle of patients with severe angina. They are conducting a Phase 2 clinical study with plans to enroll patients with Class III or IV angina that are not suitable for traditional revascularization procedures. Additionally, GenVec, Inc. announced the initiation of a Phase 2 clinical study of BioByPass™ Angiogen, which uses Vascular Endothelial Growth Factor-121 (VEGF-121) as a treatment for patients with severe coronary artery disease. This study will reportedly evaluate the effects of ETT time, heart function and quality of life in patients. Angiogen will apparently be administered to patients using direct injection into heart muscle using a guidance system (NOGA). GenVec previously announced a research collaboration with Cordis Corporation, a Johnson & Johnson company, to utilize the NOGA guidance delivery for its Angiogen product. We will also face competition from entities using other traditional methods, including new drugs and mechanical therapies, to treat cardiovascular and vascular disease.

In the areas of temperature control therapy, as practiced by our Innercool Therapies subsidiary, there are a number of actual or potential competitive approaches including alternative endovascular approaches based on inflatable balloon devices, such as the CoolGard™ thermal regulating system developed by Alsius Corporation, and the Reprieve™ system being developed by Radiant Medical Inc. Alsius is currently marketing its CoolGard™ device, although it has recalled a number of units. Radiant is studying its Reprieve™ device in "COOL MI," an international study reportedly designed to demonstrate that lowering a patient's body temperature in connection with treatment of a heart attack can reduce subsequent

damage to the heart and that earlier, faster and deeper cooling results in a clinically significant reduction in heart damage. There are also a number of actual or potential competitive approaches including alternative surface-based cooling devices, include the use of specialized cooling pads such as those employed in the Artic Sun™ system being developed by Medivance, and other devices such as cooling blankets and helmets.

Manufacturing Strategy

To leverage our experience and available financial resources, except as noted below with respect to Innercool Therapies, we do not plan to develop company-owned and operated manufacturing facilities. We plan to outsource all product manufacturing to one or more contract manufacturers of clinical drug products that operate manufacturing facilities in compliance with current good manufacturing practices (GMPs). We may also seek to refine the current manufacturing process and final product formulation to achieve improvements in storage temperatures and the like.

Our management team already has experience with the production of Adenovirus vector ("Adenovector"), DNA-based therapies, which is believed to be useful in understanding the unique requirements of our business. Schering, using their experience in the production of clinical grade, DNA-based drug products, has developed an adenovector manufacturing process employing the use of master viral banks and master cell banks. Technical transfer of process materials and methodologies from Schering to Cardium has taken place, combining the expertise of both companies.

The FDA has established guidelines and standards for the development and commercialization of molecular and gene-based drug products i.e.: *Guidance for Industry—CMC for Human Gene Therapy INDs November 2004, Sterile Drug Products Produced by Aseptic Processing September 2004, Human Somatic Cell Therapy and Gene Therapy March 1998, PTC in the Characterization of Cell Lines Used to Produce Biologicals July 1993.* These industry guidelines, among others, provide essential oversight with regard to process methodologies, product formulations and quality control standards to ensure the safety, efficacy and quality of these drug products.

The disposable portions of Innercool's products, the catheter and administrative set, are currently assembled at our facilities in San Diego. The console's cooling sub-assembly is currently purchased from a single vendor, although we believe there are several vendors that could supply this component. Innercool currently integrates this sub-assembly with additional software, printed circuit boards, electrical isolation, and a user interface in order to create the final product. Our CoolBlue consoles and disposable pads are currently being assembled for us by a third party in the Midwest. We are nearly complete with the redesign of our Celsius Control System console to enhance functionality and manufacturability to allow for assembly at third party manufacturing facilities. The redesigned console will be launched in the first half of 2008 under the name RapidBlue.

Innercool's manufacturing operations are required to comply with certain quality assurance regulations. Specifically, Innercool must adhere to the FDA quality system regulations, comply with ISO 13485 requirements and maintain our CE mark. We believe Innercool's operations meet such requirements.

Marketing and Sales

Our product candidates must undergo testing and development in clinical trials and pre-clinical studies. Other than Innercool's Celsius Control System and CoolBlue surface cooling system, we do not currently have any products approved for marketing nor any present capacity to market and sell products that could be commercially developed based on our technology. If we should obtain any such marketing approvals, we expect that we would elect to engage in marketing or sales through or in collaboration with a commercialization partner, although we are not currently involved with such a partner.

Innercool is currently selling its products into neurosurgical and neurocritical care markets. Innercool's sales force currently consists of seven individuals. Representative accounts include medical centers at Stanford University, Cornell, Columbia, the University of Michigan, Seattle's Harborview and Swedish medical centers, San Francisco General Hospital, and the University of California medical centers at San Diego and San Francisco.

Innercool has received a CE mark allowing its products to be marketed in the European Community, and approval from the Therapeutic Goods Administration (TGA) that allows it to market its products in Australia. Innercool has used a distributorship arrangement to commence sales efforts in Australia and has opened accounts at some of the country's premier hospitals. Innercool has not commenced sales efforts in Europe and does not currently expect to do so other than through a distributorship arrangement.

Intellectual Property

As part of our acquisition of Schering's portfolio of cardiovascular growth factor therapeutic assets, pursuant to a Technology Transfer Agreement entered into between Cardium and Schering, we acquired from Schering a portfolio of methods and compositions directed at the treatment of cardiovascular diseases. We also have exclusive licenses to methods for introducing DNA to the heart and for improving heart muscle function, as well as to various biologics. Our resulting portfolio of cardiovascular product candidates and associated intellectual property include methods and genes applicable to the treatment of heart diseases, the promotion of healing, and the treatment of peripheral vascular disease. In March 2006, we also acquired a portfolio of intellectual property related to devices and methods for endovascular temperature control therapy, in connection with our acquisition of the assets of Innercool Therapies. In August 2006, we acquired the rights to various technologies and products now part of TRC including Excellarate. There can be no assurance that our intellectual property assets will be sufficient to protect our commercialization opportunities, nor that our planned commercialization activities will not infringe any intellectual property rights held or developed by third parties.

We have entered into certain collaborative and licensing arrangements in connection with each of our acquisitions. We expect to continue evaluations of the safety, efficacy and possible commercialization of our therapeutic genes and methods of gene therapy, as well as our other product candidates and technologies. On the basis of such evaluations, we may alter our current research and development programs, clinical studies, partnering or other development or commercialization activities. Accordingly, we may elect to cancel, from time to time, one or more of the following arrangements with third parties, subject to any applicable accrued liabilities and, in certain cases, termination fees. Alternatively, the other parties to such arrangements may, in certain circumstances, be entitled to terminate the arrangements. Further, the amounts payable under certain of our arrangements may depend on the number of products or indications

for which any particular technology licensed under such arrangement is used by us. Thus, any statement of potential fees payable by us under each agreement is subject to a high degree of potential variation from the amounts indicated.

Our business strategy includes the establishment of research collaborations to support and supplement our discovery, pre-clinical and clinical research and development phases of the product commercialization cycle, as well as the implementation of long-term strategic partnerships with major pharmaceutical and biotechnology companies and interventional cardiology and medical device companies, to support clinical trials and product commercialization activities, including product manufacturing, marketing and distribution.

Schering Agreement

We entered into an agreement with Schering covering the transfer or license of certain assets and technology relating to (i) methods of gene therapy for the treatment of cardiovascular disease (including methods for the delivery of genes to the heart or vasculature and the use of angiogenic and/or non-angiogenic genes for the potential treatment of diseases of the heart or vasculature); (ii) therapeutic genes that include fibroblast growth factors (including FGF-4), insulin-like growth factors (including IGF-I), and potentially other related biologics (including mutant eNOS); and (iii) other technology and know-how, including manufacturing and formulation technology, as well as data relating to the clinical development of Generx and corresponding FDA regulatory matters. Under this agreement, we paid Schering a $4 million up front fee in October 2005 and would be required to pay a $10 million milestone payment upon the first commercial sale of each resulting product. We also may be obligated to pay the following royalties to Schering: (i) 5% on net sales of an FGF-4 based product such as Generx; or (ii) 4% on net sales of other products developed based on technology transferred to us by Schering. We are also obligated to reimburse Schering for patent expenses, including the expenses of any interference or other proceedings, accrued on or after April 1, 2005 in connection with the transferred technologies.

University of California License Agreement

In September 1995, Collateral Therapeutics entered into an agreement with the Regents of the University of California (Regents) pursuant to which the Regents granted to Collateral Therapeutics an exclusive license (with the right to sublicense) in the United States, and in foreign countries where the respective patent rights exist, to certain technology relating to angiogenic gene therapy, based on scientific discovery research conducted at a laboratory at the University of California. In June 1997, Collateral Therapeutics and the Regents entered into an exclusive license agreement (with the right to sublicense) in the United States, and in foreign countries where the respective patent rights exist, for certain technology relating to angiogenic gene therapy for congestive heart failure.

As part of the Schering transaction, we acquired Collateral Therapeutics' rights and corresponding obligations under the September 1995 agreement, which in connection with the Schering transaction was amended, among other things, to include the technology previously covered by the June 1997 agreement. The agreement as amended may be canceled by us at any time on 60 days' notice, following which we would continue to be responsible only for obligations and liabilities accrued before termination. Under the agreement, we are obligated to pay (1) an annual royalty fee of 2% based on net sales of products incorporating the technology licensed under the agreement, and (2) a minimum annual royalty fee (which may be offset against the net sales-based royalty fee) of $150,000 for 2009, $200,000 for 2010, $250,000 for

2011, $300,000 for 2012, $400,000 for 2013 and $500,000 for 2014 and thereafter. We also are obligated to reimburse the Regents for ongoing patent expenses incurred in connection with the licensed technologies. We are obligated to make a milestone payment to the Regents of $200,000 payable on the earlier to occur of the beginning of Phase II/III clinical trials in the United States or December 31, 2008.

The above agreement provides us with exclusive rights (subject to any license rights of the U.S. government) to develop and commercialize technology covered by patent applications that have been filed in the United States and in foreign countries. Under the terms of the agreement, we are required to diligently proceed with the development and commercialization of the products covered by the licensed patents. To demonstrate our diligence, we are required to attain certain developmental milestones on or before deadlines set forth in the licenses. If and after we receive marketing approval of the products, we will be required to market the products in the United States within six months thereafter. If there is a material breach of any of these agreements, which material breach remains uncured for 60 days, the breached agreement could be terminated by the Regents.

New York University Research and License Agreement

In March 1997, Collateral Therapeutics entered into an agreement with New York University (NYU) pursuant to which NYU granted to Collateral Therapeutics an exclusive worldwide license (with the right to sublicense) to certain technology covering development, manufacture, use and sale of gene therapy products based on FGF-4 for the treatment of coronary artery disease, peripheral vascular disease and congestive heart failure. This agreement was also assumed by us in connection with the Schering transaction and amended in certain respects pursuant to an agreement with NYU. Upon assumption, this agreement as amended provides us with exclusive rights in such fields to develop and commercialize technology covered by the issued patent and patent applications that have been filed in the United States and in foreign countries. Pursuant to the agreement, we are obligated to pay NYU license fees through the completion of the first full year of sales of licensed product equal to $50,000 per year. We also are obligated to reimburse NYU for ongoing patent expenses incurred in connection with the licensed technologies. Should licensed products under the agreement reach the stage of filing of a product license application (PLA) and PLA approval or foreign equivalent thereof, we could be obligated to pay up to an aggregate amount of approximately $1.8 million for each product in milestone payments. In addition, beginning in the year in which we complete one full year of sales of licensed products and continuing thereafter until the agreement terminates or expires, we could also be obligated to pay annual royalty fees equal to the greater of $500,000 or 3% on net sales of products incorporating the technology licensed under the agreement. Under the license agreement, we are required to pursue development and commercialization of the licensed products. If there is a material breach of this agreement that remains uncured for 60 days (or 30 days in the case of unpaid amounts due), the breached agreement could be terminated by NYU.

Yale University License Agreement

In September 2000, Schering entered into an agreement with Yale University pursuant to which Yale University granted to Schering an exclusive worldwide license (with the right to sublicense) to certain technology covering development, manufacture, use and sale of gene therapy products based on a phosphomimetic mutant of human endothelial nitric oxide synthase (eNOS) for the treatment of all cardiovascular diseases. As part of the Schering transaction, we assumed this agreement with Yale University and as such will be obligated to pay an annual license fee of $15,000, and make certain milestone payments during the development of the licensed products as follows: (i) $150,000 upon filing the first

investigational new drug application for the first licensed product in any one of the United States, Japan or a country in the European Union; (ii) $825,000 upon treating the first patient in the second clinical trial in any one of the United States, Japan or a country in the European Union; (iii) $900,000 upon filing first Biologics License Application (BLA) or new drug application in the United States; (iv) $1.5 million upon the first commercial sale of a licensed product; and (v) $3 million upon the first $10 million in net sales. If we achieve sales of licensed products, we would be required to pay a minimum royalty of $50,000 per year that is credited to an annual sales royalty equal to 4% of the first $250 million of net sales, 5% of the next $250 million of net sales and 6% of net sales in excess of $500 million. Under the terms of this agreement, we are obligated to reimburse Yale University for ongoing patent expenses incurred in connection with the licensed technologies. If there is a material breach of this agreement that remains uncured for 60 days, the breached agreement could be terminated by Yale.

SurModics License Agreement

In connection with the Innercool Therapies acquisition, a Master License Agreement with SurModics, Inc., dated December 1, 1999, was assigned to and assumed by Innercool Therapies, Inc. (SurModics License). Pursuant to the terms of the SurModics License, SurModics granted to Innercool a worldwide license with respect to medical products that are surface-treated with photo-reactive polyvinylpyrrolidone, photo-reactive heparin, diphoto diquat (photo-reactive crosslinking compound) or any combination of such photo-reactive reagents, under SurModics' trade secrets and other technical information relating to the surface-treatment of medical devices and which SurModics has the right to transmit to others, as well as certain patent applications and patents. In connection with the SurModics License, Innercool is obligated to pay SurModics a royalty equal to the greater of: (A) earned royalties calculated as a percentage of net sales of licensed products sold in each calendar year (the percentage used in each calculation during each calendar year is based on the cumulative net sales of licensed product in the calendar year as follows: 2.5% on the first $15 million of net sales; 2.25% on the next $15 million; and 2.0% on net sales over $30 million); or (B) quarterly minimum royalties that increase on an annual basis. Quarterly minimum royalties for 2006 and 2007 were approximately $22,000. In addition, Innercool granted to SurModics a non-cancelable, nonexclusive, sublicensable, worldwide license to make, have made, use and sell products and processes covered by any Innercool latent reactive chemical patent, to the extent such manufacture, sale or use is covered by any claim of any patent that SurModics has the right to license or may have licensed to others, and SurModics agrees to pay to Innercool 5% of the royalties SurModics receives from its sublicensees based on sales of products that but for such sublicenses would infringe Innercool's patents. Each license granted under the SurModics License extends until expiration of the last to expire patent rights covering the applicable product or for 15 years following the first bona fide commercial sale of such product, whichever is longer. The SurModics License may be terminated by Innercool upon 90 days' advance notice and by SurModics in the event of any material breach or default by Innercool upon 30 days' advance notice.

University of Michigan License Agreement

In August 2006, as part of the Tissue Repair Company transaction, we acquired Tissue Repair Company's rights to an exclusive license with the University of Michigan for certain technology upon which Excellarate is based. We are obligated to reimburse the University of Michigan for patent expenses under the licensed technology and we may be obligated to pay royalties of 2 – 3.5 % on net sales of products based on the technology such as the product candidate Excellarate.

Employees

As of December 31, 2007 we employed 61 full-time employees. We expect to hire approximately eight additional employees during the next 12 months. Our employees are not represented by a collective bargaining agreement and we have not experienced any work stoppages as a result of labor disputes. We believe our relationship with our employees is good. We also rely on various consultants and advisors to provide services to us.

Available Information

Our website address is www.cardiumthx.com. We make available, free of charge, through our website our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, as soon as reasonably practicable after we electronically file or furnish such reports to the SEC.

ITEM 1A. RISK FACTORS

You should carefully consider the risks described below, as well as the other information in this report and in other reports and documents we file with the SEC when evaluating our business and future prospects. If any of the following risks actually occur, our business, financial condition, results of operations and future growth prospects could be seriously harmed. In that event, the market price of our common stock could decline and you could lose all or a portion of the value of your investment in our stock.

Risks Related to Our Business and Industry

We are a development stage company formed in December 2003. We have incurred losses since inception and expect to incur significant net losses in the foreseeable future and may never become profitable.

We have sustained operating losses to date and will likely continue to sustain losses as we seek to accelerate our product development efforts. We expect these losses to be substantial in the early years of our operations because our product development and other costs, including significant amounts we expect to spend on development activities and clinical trials for Generx™, Excellarate™ and other product candidates, cannot be offset by our limited revenues during our development stage. As of December 31, 2007, our accumulated deficit was approximately $49 million, and our cash equivalents were approximately $7.7 million. To date, we have generated limited revenues, consisting of revenues from sales of our InnerCool Celsius Control System™ and CoolBlue and associated disposables, grant revenue, as well as interest income. A large portion of our expenses are fixed, including expenses related to facilities, equipment, contractual commitments and personnel. As a result, we expect our net losses from operations to continue for at least the next five years. Our ability to generate additional revenues and potential to become profitable will depend largely on our ability, alone or with potential collaborators, to efficiently and successfully complete the development of our product candidates, successfully complete pre-clinical and clinical tests, obtain necessary regulatory approvals, and manufacture and market our products. There can be no assurance that any such events will occur or that we will ever become profitable. Even if we do achieve profitability, we cannot predict the level of such profitability. If we sustain losses over an

extended period of time, we may be unable to continue our business. The audit opinion accompanying our consolidated financial statements for the year ended December 31, 2007, included under Item 8 of this report, contains a going concern qualification.

Our business prospects are difficult to evaluate because we are a new company and are developing complex and novel medical products.

Since we have a short operating history and our product candidates rely on complex technologies, it may be difficult for you to assess our growth, partnering and earnings potential. It is likely we will face many of the difficulties that new technology companies often face. These include, among others: limited financial resources; developing, testing and marketing new products for which a market is not yet established and may never become established; challenges related to the development, approval and acceptance of a new technology or product; delays in reaching our goals; lack of substantial revenues and cash flow; high product development costs; competition from larger, more established companies; and difficulty recruiting qualified employees for management and other positions. We will likely face these and other difficulties in the future, some of which may be beyond our control. If we are unable to successfully address these difficulties as they arise, our future growth and earnings will be negatively affected. We cannot be certain that our business strategies will be successful or that we will successfully address any problems that may arise.

We will need substantial additional capital to develop our products and for our future operations. If we are unable to obtain such funds when needed, we may have to delay, scale back or terminate our product development or our business.

Conducting the costly and time consuming research, pre-clinical and clinical testing necessary to obtain regulatory approvals and bring our products to market will require a commitment of substantial funds in excess of our current capital. Our future capital requirements will depend on many factors, including, among others: the progress of our current and new product development programs; the progress, scope and results of our pre-clinical and clinical testing; the time and cost involved in obtaining regulatory approvals; the cost of manufacturing our products and product candidates; the cost of prosecuting, enforcing and defending against patent claims and other intellectual property rights; competing technological and market developments; and our ability and costs to establish and maintain collaborative and other arrangements with third parties to assist in potentially bringing our products to market.

We will need to raise substantial additional capital to fund our future operations. We cannot be certain that additional financing will be available on acceptable terms, or at all. In recent years, it has been difficult for companies to raise capital due to a variety of factors, which may or may not continue. To the extent we raise additional capital through the sale of equity securities or we issue securities in connection with another transaction, the ownership position of existing stockholders could be substantially diluted. If additional funds are raised through the issuance of preferred stock or debt securities, these securities are likely to have rights, preferences and privileges senior to our common stock and may involve significant fees, interest expense, restrictive covenants and the granting of security interests in our assets. Fluctuating interest rates could also increase the costs of any debt financing we may obtain. Raising capital through a licensing or other transaction involving our intellectual property could require us to relinquish valuable intellectual property rights and thereby sacrifice long term value for short-term liquidity.

Our failure to successfully address ongoing liquidity requirements would have a substantially negative impact on our business. If we are unable to obtain additional capital on acceptable terms when needed, we may need to take actions that adversely affect our business, our stock price and our ability to achieve cash flow in the future, including possibly surrendering our rights to some technologies or product opportunities, delaying our clinical trials or curtailing or ceasing operations.

We acquired the assets and business of InnerCool Therapies, Inc. in March 2006 and rights to develop the Excellarate product candidate of the Tissue Repair Company in August 2006 and may, in the future, pursue acquisitions of other companies or product rights that, if not successful, could adversely affect our business, financial condition and results of operations.

On March 8, 2006, we completed our acquisition of the assets and business of InnerCool Therapies, Inc., a medical technology company focused on the emerging field of therapeutic hypothermia. On August 11, 2006, we acquired rights to develop the Excellarate product candidate of the Tissue Repair Company, a medical technology company focused on the development of growth factor therapeutics for the potential treatment of chronic wounds such as dermal ulcers. These businesses are subject to all of the operational risks that can affect medical technology companies, including those related to regulatory approvals and clinical studies, acceptance of technology, competing technology, intellectual property rights, profitability, suppliers and third party collaborators, adverse publicity, litigation, and retention of key personnel.

In the future, we may pursue additional acquisitions of other companies, technologies or products. Acquisitions of businesses or product rights, including the InnerCool and Tissue Repair Company transactions, involve numerous risks, including:

- our limited experience in evaluating businesses and product opportunities and completing acquisitions;
- the use of our existing cash reserves or the need to obtain additional financing to pay for all or a portion of the purchase price of such acquisitions and to support the ongoing operations of the businesses acquired;
- the potential need to issue convertible debt, equity securities, stock options and stock purchase warrants to complete an acquisition, which would dilute our stockholders and could adversely affect the market price of our common stock;
- potential difficulties related to integrating the technology, products, personnel and operations of the acquired company;
- requirements of significant capital infusions in circumstances under which the acquired business, its products and/or technologies may not generate sufficient revenue or any revenue to offset acquisition costs or ongoing expenses;
- entering markets in which we have no or limited prior direct experience and where competitors have stronger market or intellectual property positions;
- disruptions to our ongoing business, diversion of resources, increases in our expenses and distraction of management's attention from the normal daily operations of our business;
- the potential to negatively impact our results of operations because an acquisition may require us to incur large one-time charges to earnings, amortize or write down amounts related to goodwill

and other intangible assets, or incur or assume substantial debt or liabilities, or cause adverse tax consequences, substantial depreciation or deferred compensation charges;

- an uncertain sales and earnings stream, or greater than expected liabilities and expenses, associated with the acquired company, product or product rights;
- failure to operate effectively and efficiently as a combined organization utilizing common information and communication systems, operating procedures, financial controls and human resources practices;
- potential loss of key employees of the acquired company; and
- disruptions to our relationships with existing collaborators who could be competitive with the acquired business.

There can be no assurance that our InnerCool or Tissue Repair transactions, or other transactions that we may pursue, will ultimately prove successful. If we pursue an acquisition but are not successful in completing it, or if we complete an acquisition but are not successful in integrating the acquired company's employees, products or operations successfully, our business, financial condition or results of operations could be harmed.

We are an early stage company and, other than InnerCool's Celsius Control System and CoolBlue and related disposables that are approved for limited uses, we have no other products available for sale or use. Our product candidates require additional research, development, testing, and regulatory approvals before marketing. We may be unable to develop, obtain regulatory approval or market any of our product candidates or expand the market of our existing products and technology. If our product candidates are delayed or fail, our business and stockholder value will be negatively impacted, and we may have to curtail or cease our operations.

We are in the early stage of product development and, other than InnerCool's Celsius Control System and related disposables, and its CoolBlue surface-based system and related disposables, each of which is approved only for limited uses, we currently do not sell any other products and may not have any other products commercially available for several years, if at all. Our product candidates, and the potential expansion of our therapeutic hypothermia products into other medical indications and applications, require additional research and development, clinical testing and regulatory clearances before we can market them. To our knowledge, the U.S. Food and Drug Administration, or FDA, has not yet approved any gene therapy or similar product and there can be no assurance that it will. There are many reasons that our products and product candidates may fail or not advance beyond clinical testing, including the possibility that:

- our products and product candidates may be ineffective, unsafe or associated with unacceptable side effects;
- our product candidates may fail to receive necessary regulatory approvals or otherwise fail to meet applicable regulatory standards;
- our product candidates may be too expensive to develop, manufacture or market;
- physicians, patients, third-party payers or the medical community in general may not accept or use our products;

- our potential collaborators may withdraw support for or otherwise impair the development and commercialization of our products or product candidates;
- other parties may hold or acquire proprietary rights that could prevent us or our potential collaborators from developing or marketing our products or product candidates; or
- others may develop equivalent, superior or less expensive products.

In addition, our product candidates are subject to the risks of failure inherent in the development of biologics, gene therapy and other products based on innovative technologies. As a result, we are not able to predict whether our research, development and testing activities will result in any commercially viable products or applications. If our product candidates are delayed or we fail to successfully develop and commercialize our product candidates, or if we are unable to expand the market of our existing products or related technology, our business, financial condition or results of operations will be negatively affected, and we may have to curtail or cease our operations.

We may experience delays in our clinical trials that could adversely affect our business, financial results and commercial prospects.

To obtain regulatory approvals for new products or to expand indications for existing ones, we must, among other things, initiate and successfully complete multiple clinical trials demonstrating to the satisfaction of the FDA that our product candidates are sufficiently safe and effective for a particular indication. We are in ongoing discussions with the FDA regarding clinical trials of our Generx and Excellarate product candidates. While both product candidates began clinical trials in 2007, there is no assurance that they will complete the clinical trials, as the completion is dependent on, among other things, FDA reviews, clinical site approvals, successful manufacturing of clinical materials, sufficient funding and other factors outside of our control. Furthermore, there can be no assurance that our clinical trials will in fact demonstrate to the satisfaction of the FDA and others that our products are sufficiently safe or effective.

The FDA or we may also restrict or suspend our clinical trials at any time if either believes that we are exposing the subjects participating in the trials to unacceptable health risks. We expect to continue to rely on third party clinical investigators at medical institutions and healthcare facilities to conduct and monitor our clinical trials, and, as a result, we may face additional delaying factors outside of our control. Product development costs to us and our potential collaborators will increase, and our business may be negatively impacted, if we experience delays in testing or approvals or if we need to perform more or larger clinical trials than planned, for reasons such as the following:

- the FDA or other health regulatory authorities, or institutional review boards, do not approve a clinical study protocol or place a clinical study on hold;
- suitable patients do not enroll in a clinical study in sufficient numbers or at the expected rate, or data is adversely affected by trial conduct or patient drop out;
- patients experience serious adverse events, including adverse side effects of our drug candidate or device;
- patients die during a clinical study for a variety of reasons that may or may not be related to our products, including the advanced stage of their disease and medical problems;

- patients in the placebo or untreated control group exhibit greater than expected improvements or fewer than expected adverse events;
- third-party clinical investigators do not perform the clinical studies on the anticipated schedule or consistent with the clinical study protocol and good clinical practices, or other third-party organizations do not perform data collection and analysis in a timely or accurate manner;
- service providers, collaborators or co-sponsors do not adequately perform their obligations in relation to the clinical study or cause the study to be delayed or terminated;
- regulatory inspections of manufacturing facilities, which may, among other things, require us or a co-sponsor to undertake corrective action or suspend the clinical studies;
- the interim results of the clinical study are inconclusive or negative;
- the clinical study, although approved and completed, generates data that is not considered by the FDA or others to be sufficient to demonstrate safety and efficacy; and
- changes in governmental regulations or administrative actions affect the conduct of the clinical trial or the interpretation of its results.

Significant delays may adversely affect our financial results and the commercial prospects for our product candidates and delay our ability to become profitable.

If we cannot successfully complete the clinical trial process for our product candidates, or products for which we seek expanded approvals, then we will not be able to market them. Even successful clinical trials may not result in a marketable product and may not be predictive of a product's safety or efficacy in a larger and more diverse patient population.

Our Celsius Control System acquired from InnerCool Therapies has received FDA 510(k) clearance for certain specified indications but we may elect to pursue other indications, which would generally require that collaborators or we conduct additional clinical studies and/or testing. Our Generx and Excellarate product candidates are currently in the clinical stage. Other product candidates are in the pre-clinical stage and there can be no assurance they will ever advance to clinical trials. For product candidates that advance to clinical testing, we cannot be certain that a collaborator or we will successfully complete the clinical trials necessary to receive regulatory product approvals. This process is lengthy, unpredictable and expensive. To obtain regulatory approvals, a collaborative partner or we must ultimately demonstrate to the satisfaction of the FDA and others that our product candidates are sufficiently safe and effective for their proposed use.

Many factors, known and unknown, can adversely impact clinical trials and the ability to evaluate a product's safety and efficacy. Such factors may have a negative impact on our business by making it difficult to advance product candidates or by reducing or eliminating their potential or perceived value. Further, if we are forced to contribute greater financial and clinical resources to a study, valuable resources will be diverted from other areas of our business.

Clinical trials for products such as ours are often conducted with patients who have more advanced forms of a particular disease. For example, in clinical trials for our lead product candidate Generx, we expect to study patients who are not only suffering from severe forms of heart disease but are also older and much more likely to develop cancers and other serious adverse conditions. During the course of

treatment, these patients could die or suffer other adverse events for reasons that may or may not be related to the proposed product being tested. Our clinical trials may also be adversely impacted by patient deaths or problems that occur in other trials. Even if unrelated to our product, such events can nevertheless adversely impact our clinical trials. As a result, our business and ability to ultimately develop and market our products and obtain revenues would suffer.

Deaths and other adverse events that occur in the conduct of clinical trials may also result in an increase in governmental regulations or litigation, and could result in delays or halts being imposed upon clinical trials, including our own. In addition, patients involved in clinical trials such as ours often have unknown as well as known health risks and pre-existing conditions. An adverse event may therefore appear to have been caused or exacerbated by the administration of study product, even if it was not actually related. Such consequences can also increase the risk that any potential adverse event in our trial could give rise to claims for damages against us, or could cause further delays or halt our clinical trial, any of which results would negatively impact us. In addition, fears regarding the potential consequences of gene therapy trials or the conduct of such trials could dissuade investigators or patients from participating in our trials, which could substantially delay or prevent our product development efforts.

Even promising results in pre-clinical studies and initial clinical trials do not ensure successful results in later clinical trials, which test broader human use of our products. Many companies in our industry have suffered significant setbacks in advanced clinical trials, despite promising results in earlier trials. Even successful clinical trials may not result in a marketable product or be indicative of the efficacy or safety of a product in the broader patient population. Many factors or variables could affect the results of clinical trials and cause them to appear more promising than they may otherwise be. Product candidates that successfully complete clinical trials could ultimately be found to be unsafe or ineffective or to have poorer risk to benefit or cost to benefit profiles as compared to other potential products or therapies.

Our ability to complete clinical trials depends on many factors, including obtaining adequate clinical supplies and having a sufficient rate of patient recruitment. For example, patient recruitment is a function of many factors, including: the size of the patient population; the proximity of patients to clinical sites; the eligibility criteria for the trial; the perceptions of investigators and patients regarding safety; and the availability of other treatment options. Even if patients are successfully recruited, we cannot be sure they will complete the treatment process. Delays in patient enrollment or treatment in clinical trials may result in increased costs, program delays, or failure, any of which can substantially affect our business or perceived value.

In addition, DNA-based therapies such as those being developed by us are relatively new and are only beginning to be tested in humans. Regulatory authorities may require us or our potential collaborators to demonstrate that our products are improved treatments relative to other therapies or may significantly modify the requirements governing gene therapies, which could result in regulatory delays or rejections that negatively impact our business. Compliance with these regulatory requirements is also time consuming and expensive. If we fail to comply with regulatory requirements, either before approval or in marketing our products after approval, we could be subject to regulatory or judicial enforcement actions. These actions could result in withdrawal of existing approvals, product recalls, injunctions, civil penalties, criminal prosecution, and enhanced exposure to product liabilities.

Ethical, social and legal concerns about gene therapy and genetic research could also result in additional regulations restricting or prohibiting our products and processes we may use. More restrictive government regulations or negative public opinion may have a negative effect on our business or financial condition and may delay or impair the development and commercialization of our product candidates.

With respect to markets in other countries, we or a partner will also be subject to regulatory requirements governing clinical trials in those countries. Even if we complete clinical trials, we may not be able to submit a marketing application. If we submit an application, the regulatory authorities may not review or approve it in a timely manner, if at all.

Our technologies and product candidates may have unacceptable side effects that could delay or prevent product approval.

Possible side effects of therapeutic technologies may be serious and life threatening. The occurrence of any unacceptable side effects during or after pre-clinical and clinical testing of our product candidates, or the perception or possibility that our products cause or could cause such side effects, could delay or prevent approval of our products and negatively impact our business. For example, possible serious side effects of viral vector-based gene transfer could potentially include viral or gene product toxicity resulting in inflammation or other injury to the heart or other parts of the body. In addition, the development or worsening of cancer in a patient could potentially be a perceived or actual side effect of gene therapy technologies such as our own. Furthermore, there is a possibility of side effects or decreased effectiveness associated with an immune response toward any viral vector or gene used in gene therapy. The possibility of such response may increase if there is a need to deliver the viral vector more than once.

Even if approved for marketing, our technologies and product candidates are relatively novel and unproven and they may fail to gain market acceptance.

Our ongoing business and future depends on the success of our technologies and product candidates. Gene-based therapy and endovascular temperature control therapy are new and rapidly evolving medical approaches that have not been shown to be effective on a widespread basis. Biotechnology and pharmaceutical companies have successfully developed and commercialized only a limited number of biologic-based products to date and no gene therapy has yet been successfully commercialized. Our product candidates, and the technology underlying them, are new and unproven and there is no guarantee that health care providers or patients will be interested in our products even if they are approved for use. Our success will depend in part on our ability to demonstrate sufficient clinical benefits, reliability, safety and cost effectiveness of our product candidates and technology relative to other approaches, as well as on our ability to continue to develop our product candidates to respond to competitive and technological changes. If the market does not accept our products or product candidates, when and if we are able to commercialize them, then we may never become profitable. It is difficult to predict the future growth of our business, if any, and the size of the market for our product candidates because the market and technology are continually evolving. There can be no assurance that our technologies and product candidates will prove superior to technologies and products that may currently be available or may become available in the future or that our technologies or research and development activities will result in any commercially profitable products.

We may not successfully establish and maintain collaborative and licensing arrangements, which could adversely affect our ability to develop and commercialize our product candidates.

Our strategy for the development, testing, manufacturing and commercialization of our product candidates generally relies on establishing and maintaining collaborations with corporate partners, licensors and other third parties. For example, we have licenses from New York University and the University of California relating to the use and delivery of our Generx product candidates for the treatment of vascular disease, as well as a relationship with Schering AG Group (Germany) regarding the transfer of information about certain manufacturing and regulatory matters concerning our product candidates. We may not be able to maintain or expand these licenses and collaborations or establish additional licensing and collaboration arrangements necessary to develop and commercialize our product candidates. Even if we are able to maintain or establish licensing or collaboration arrangements, these arrangements may not be on favorable terms and may contain provisions that will restrict our ability to develop, test and market our product candidates. Any failure to maintain or establish licensing or collaboration arrangements on favorable terms could adversely affect our business prospects, financial condition or ability to develop and commercialize our product candidates.

We expect to rely at least in part on third party service providers and collaborators to perform a number of activities relating to the development and commercialization of our product candidates, including the manufacture of product materials, the design and conduct of clinical trials, and potentially the obtaining of regulatory approvals and the marketing and distribution of any successfully developed products. Our collaborative partners also may have or acquire rights to control aspects of our product development and clinical programs. As a result, we may not be able to conduct these programs in the manner or on the time schedule we currently contemplate. In addition, if any of these collaborative partners withdraw support for our programs or product candidates or otherwise impair their development, our business could be negatively affected. To the extent we undertake any of these activities internally, our expenses may increase.

Our success hinges on the proper and effective performance of our service providers and collaborators of their responsibilities under their arrangements with us. Our existing or potential collaborators may not perform their obligations in a timely fashion or in a manner satisfactory to us. We and our present and future collaborators may fail to develop or effectively commercialize products covered by our present and future collaborations if, among other things:

- we do not achieve our objectives under our collaboration agreements;
- we or our collaborators are unable to obtain patent protection for the products or proprietary technologies we develop in our collaborations;
- we are unable to manage multiple simultaneous product discovery and development collaborations;
- our collaborators become competitors of ours or enter into agreements with our competitors;
- we or our collaborators encounter regulatory hurdles that prevent commercialization of our products; or
- we develop products and processes or enter into additional collaborations that conflict with the business objectives of our other collaborators.

In addition, conflicts may arise with our collaborators, such as conflicts concerning the interpretation of clinical data, the achievement of milestones, the interpretation of financial provisions or the ownership of intellectual property developed during the collaboration. If any conflicts arise with our existing or future collaborators, they may act in their self-interest, which may be adverse to our best interest. If we or our collaborators are unable to develop or commercialize products, or if conflicts arise with our collaborators, we will be delayed or prevented from developing and commercializing products, which will harm our business and financial results.

We will rely on third parties to manufacture our product candidates. There can be no guarantee that we can obtain sufficient and acceptable quantities of our product candidates on acceptable terms, which may delay or impair our ability to develop, test and market such products.

Our business strategy relies on third parties to manufacture and produce our products and product candidates and the catheters used to deliver the products in accordance with good manufacturing practices established by the FDA and other regulators. These third party manufacturers are subject to extensive government regulation and must receive FDA approval before they can produce clinical material or commercial product.

Our products and product candidates may be in competition with other products for access to these facilities and may be subject to delays in manufacture if third parties give other products greater priority than our products. These third parties also may not deliver sufficient quantities of our products, manufacture our products in accordance with specifications, or comply with applicable government regulations. Successful large-scale manufacturing of gene-based therapy products has been accomplished by very few companies, and it is anticipated that significant process development changes will be necessary before commercializing and manufacturing any of our biologic product candidates. Additionally, if the manufactured products fail to perform as specified, our business and reputation could be severely impacted.

If any manufacturing agreement is terminated or any third party service provider or collaborator experiences a significant problem that could result in a delay or interruption in the supply of product materials to us, there are very few contract manufacturers who currently have the capability to produce our product candidates. There can be no assurance that manufacturers on whom we depend will be able to successfully produce our products or product candidates on acceptable terms, or on a timely or cost-effective basis, or in accordance with our product specifications and applicable FDA or other governmental regulations. We must have sufficient and acceptable quantities of our product materials to conduct our clinical trials and to market our product candidates, if and when such products have been approved by the FDA for marketing. If we are unable to obtain sufficient and acceptable quantities of our product material, we may be required to delay the clinical testing and marketing of our products, which would negatively impact our business.

If we do not comply with applicable regulatory requirements in the manufacture and distribution of our products and product candidates, we may incur penalties that may inhibit our ability to commercialize our products and adversely affect our financial condition and ability to become profitable.

Our failure or the failure of our potential collaborators or third party manufacturers to comply with applicable FDA or other product-related regulatory requirements including manufacturing, quality control,

labeling, safety surveillance, promoting and reporting may result in criminal prosecution, civil penalties, recall or seizure of our products, total or partial suspension of production or an injunction, as well as other regulatory action against our products, product candidates or us. Discovery of previously unknown problems with a product, supplier, manufacturer or facility may result in restrictions on the sale of our products, including a withdrawal of such products from the market. The occurrence of any of these events would negatively impact our business and results of operations.

If we are unable to create and maintain sales, marketing and distribution capabilities or enter into agreements with third parties to perform those functions, we will not be able to commercialize our product candidates or market our products.

We currently have limited sales, marketing and distribution capabilities in connection with our InnerCool products and none with respect to our other product candidates, which are not yet approved for marketing. To commercialize our other product candidates, if and when such products have been approved and are ready for marketing, we expect either to collaborate with third parties to perform these functions or develop them internally.

We have little experience in developing, training or managing a sales force and will incur substantial additional expenses for any products that we market directly. Developing a marketing and sales force is also time consuming and could delay the launch of new products or expansion of existing product sales. We expect that we will need to develop additional marketing and sales personnel, and/or work with outside providers, to achieve increased sales of our InnerCool products. In addition, we will compete with many companies that currently have extensive and well-funded marketing and sales operations. Our marketing and sales efforts may be unable to compete successfully against these companies, in which event our business prospects may suffer.

We face intense and increasing competition and must cope with rapid technological change, which may adversely affect our financial condition and/or our ability to successfully commercialize and/or market our products and product candidates.

Our competitors and potential competitors include large pharmaceutical and medical device companies and more established biotechnology companies. These companies have significantly greater financial and other resources and greater expertise than us in research and development, manufacturing, pre-clinical and clinical testing, obtaining regulatory approvals and marketing. This may make it easier for them to respond more quickly than us to new or changing opportunities, technologies or market needs. Small companies may also prove to be significant competitors, particularly through collaborative arrangements with large pharmaceutical companies or through acquisition or development of intellectual property rights. Our larger competitors may be able to devote greater resources to research and development, marketing, distribution and other activities that could provide them with a competitive advantage. Many of these competitors operate large, well-funded research and development programs and have significant products approved or in development. Our potential competitors also include academic institutions, governmental agencies and other public and private research organizations that conduct research, seek patent protection and establish collaborative arrangements for product and clinical development and marketing.

We are engaged in DNA-based therapies and temperature control therapy. Our industry is characterized by extensive research and development, rapid technological change, frequent innovations

and new product introductions, and evolving industry standards. Existing products and therapies to treat vascular and cardiovascular disease, including drugs and surgical procedures, as well as competitive approaches to temperature control therapy such as those being developed by Alsius Corporation, Radiant Medical, Medivance, Gaymar Industries and Cincinnati Sub-Zero, will compete directly or indirectly with the products that we are seeking to develop and market. In addition, our competitors may develop more effective or more affordable products, or achieve earlier patent protection or product commercialization and market penetration than us. As these competitors develop their technologies, they may develop proprietary positions that prevent us from successfully commercializing our future products. To be successful, we must be able to adapt to rapidly changing technologies by continually enhancing our products and introducing new products. If we are unable to adapt, products and technologies developed by our competitors may render our products and product candidates uneconomical or obsolete, and we may not be successful in marketing our products and product candidates against competitors. We may never be able to capture and maintain the market share necessary for growth and profitability and there is no guarantee we will be able to compete successfully against current or future competitors.

Changes and reforms in the health care system or reimbursement policies may adversely affect the sale of our products and future products or our ability to obtain an adequate level of reimbursement or acceptable prices for our products or future products.

Other than InnerCool's Celsius Control System and CoolBlue and associated disposables, we currently have no products approved for marketing. Our ability to earn sufficient returns on our products and future products, if and when such products are approved and ready for marketing, will depend in part on the extent to which reimbursement for our products and related treatments will be available from government health administration authorities, private health coverage insurers, managed care organizations and other third-party payers. If we fail to obtain appropriate reimbursement, it could prevent us from successfully commercializing and marketing our products and future products.

There have been and will continue to be efforts by governmental and third-party payers to contain or reduce the costs of health care through various means, including limiting coverage and the level of reimbursement. We expect that there will continue to be a number of legislative proposals to implement government controls and other reforms to limit coverage and reimbursement. Additionally, third-party payers, including Medicare, are increasingly challenging the price of medical products and services and are limiting the reimbursement levels offered to consumers for these medical products and services. If purchasers or users of our products or future products are not able to obtain adequate reimbursement from third-party payers for the cost of using the products, they may forego or reduce their use. Significant uncertainty exists as to the reimbursement status of newly approved health care products, including gene therapy and therapeutic hypothermia treatments, and whether adequate third-party coverage will be available. The announcement or considerations of these proposals or reforms could impair our ability to raise capital and negatively affect our business.

If we are unable to attract and retain key personnel and advisors, it may adversely affect our ability to obtain financing, pursue collaborations or develop or market our products or product candidates.

Our future success depends on our ability to attract, retain and motivate highly qualified management and scientific and regulatory personnel and advisors, as well as production, marketing and sales personnel in connection with our InnerCool products. The loss of any of our senior management team, in particular

Christopher J. Reinhard, our Chairman of the Board, Chief Executive Officer, President and Treasurer, Tyler M. Dylan, our director, Chief Business Officer, General Counsel, Executive Vice President and Secretary, and Dennis M. Mulroy, our Chief Financial Officer, or our vice presidents, or the operating officers of our subsidiaries, could harm our business.

To pursue our business strategy, we will need to hire or otherwise engage qualified scientific personnel and managers, including personnel with expertise in clinical trials, government regulation, manufacturing, marketing and other areas. Competition for qualified personnel is intense among companies, academic institutions and other organizations. If we are unable to attract and retain key personnel and advisors, it may negatively affect our ability to successfully develop, test, commercialize and market our products and product candidates.

Our facilities are located in or near seismic zones, and an earthquake or other natural disaster or resource shortage could delay our research and development efforts and adversely affect our business.

Our headquarters and research and development facilities in San Diego, California, and our third party manufacturing and storage facilities in Carlsbad, California, are both located in or near seismic zones, and there is a constant possibility that an earthquake or other natural disaster or resource shortage could be disruptive to our operations and result in delays in our research and development efforts. In the event of a natural or other disaster such as earthquake, fire, flood or terrorist attack, if our facilities or the equipment in our facilities, or our clinical supplies, are significantly damaged or destroyed, we may not be able to rebuild or relocate our facility or replace any damaged equipment, records or clinical supplies in a timely manner and our business, financial condition and results of operations could be materially and adversely affected.

We will use hazardous and biological materials in our business. Any claims relating to improper handling, storage or disposal of these materials could be time consuming and costly.

Our products and processes will involve the controlled storage, use and disposal of certain hazardous and biological materials and waste products. We and our suppliers and other collaborators are subject to federal, state and local regulations governing the use, manufacture, storage, handling and disposal of materials and waste products. Even if we and these suppliers and collaborators comply with the standards prescribed by law and regulation, the risk of accidental contamination or injury from hazardous materials cannot be completely eliminated. In the event of an accident, we could be held liable for any damages that result, and any liability could exceed the limits or fall outside the coverage of any insurance we may obtain and exceed our financial resources. We may not be able to maintain insurance on acceptable terms, or at all. We may incur significant costs to comply with current or future environmental laws and regulations.

To the extent we enter markets outside the United States, our business will be subject to political, economic, legal and social risks in those markets, which could adversely affect our business.

There are significant regulatory and legal barriers in markets outside the United States that we must overcome to the extent we enter or attempt to enter markets in countries other than the United States. We will be subject to the burden of complying with a wide variety of national and local laws, including multiple and possibly overlapping and conflicting laws. We also may experience difficulties adapting to

new cultures, business customs and legal systems. Any sales and operations outside the United States, including those associated with our InnerCool products, would be subject to political, economic and social uncertainties including, among others:

- changes and limits in import and export controls;
- increases in custom duties and tariffs;
- changes in currency exchange rates;
- economic and political instability;
- changes in government regulations and laws;
- absence in some jurisdictions of effective laws to protect our intellectual property rights; and
- currency transfer and other restrictions and regulations that may limit our ability to sell certain products or repatriate profits to the United States.

Any changes related to these and other factors could adversely affect our business to the extent we enter markets outside the United States.

Risks Related to Our Intellectual Property and Potential Litigation

If our products and product candidates are not effectively protected by valid, issued patents or if we are not otherwise able to protect our proprietary information, or if our right to use intellectual property that we license from third parties is terminated or adversely affected, our financial condition, operations or ability to develop and commercialize our product candidates may be harmed.

The success of our operations will depend in part on our ability and that of our licensors to: obtain patent protection for our gene therapy, therapeutic genes and/or gene-delivery methods, temperature control devices and procedures, and other methods or components on which we rely both in the United States and in other countries with substantial markets; defend patents once obtained; maintain trade secrets and operate without infringing upon the patents and proprietary rights of others; and obtain appropriate licenses upon reasonable terms to patents or proprietary rights held by others that are necessary or useful to us in commercializing our technology, both in the United States and in other countries with substantial markets.

Our business substantially relies on our own or in-licensed intellectual property related to various technologies that are material to our products and processes. We depend on our and our licensors' abilities to successfully prosecute and enforce the patents, file patent applications and prevent infringement of those patents and patent applications. The licenses and other intellectual property rights we acquire may or may not provide us with exclusive rights. To the extent we do not have exclusive rights, others may license the same technology and may develop the technology more successfully or may develop products similar to ours and that compete with our products. Even if we are provided with exclusive rights, the scope of our rights under our licenses may be subject to dispute and termination or reduction by our licensors or third parties. Our licenses also contain milestones that we must meet and/or minimum royalty or other payments that we must make to maintain the licenses. There is no assurance that we will be able to meet such milestones and/or make such payments. Our licenses may be terminated if we fail to meet applicable milestones or make applicable payments.

If we are not able to maintain adequate patent protection for our products and product candidates, we may be unable to prevent our competitors from using our technology or technology that we license.

The patent positions of the technologies being developed by us and our collaborators involve complex legal and factual uncertainties. As a result, we cannot be certain that we or our collaborators will be able to obtain adequate patent protection for our products or product candidates. There can be no assurance that (i) any patents will be issued from any pending or future patent applications of ours or our collaborators; (ii) the scope of any patent protection will be sufficient to provide us with competitive advantages; (iii) any patents obtained by us or our collaborators will be held valid if subsequently challenged; or (iv) others will not claim rights in or ownership of the patents and other proprietary rights we or our collaborators may hold. Unauthorized parties may try to copy aspects of our products and technologies or obtain and use information we consider proprietary. Policing the unauthorized use of our proprietary rights is difficult. We cannot guarantee that no harm or threat will be made to our or our collaborators' intellectual property. In addition, changes in, or different interpretations of, patent laws in the United States and other countries may also adversely affect the scope of our patent protection and our competitive situation.

Due to the significant time lag between the filing of patent applications and the publication of such patents, we cannot be certain that our licensors were the first to file the patent applications we license or, even if they were the first to file, also were the first to invent, particularly with regards to patent rights in the United States. In addition, a number of pharmaceutical and biotechnology companies and research and academic institutions have developed technologies, filed patent applications or received patents on various technologies that may be related to our operations. Some of these technologies, applications or patents may conflict with our or our licensors' technologies or patent applications. A conflict could limit the scope of the patents, if any, that we or our licensors may be able to obtain or result in denial of our or our licensors' patent applications. If patents that cover our activities are issued to other companies, we may not be able to develop or obtain alternative technology.

Patents issued and patent applications filed internationally relating to gene therapy, temperature control therapy, and other of our technologies are numerous, and we cannot assure you that current and potential competitors or other third parties have not filed or received, or will not file or receive applications in the future for patents or obtain additional proprietary rights relating to products or processes used or proposed to be used by us.

Additionally, there is certain subject matter that is patentable in the United States but not generally patentable outside of the United States. Differences in what constitutes patentable subject matter in various countries may limit the protection we can obtain outside of the United States. For example, methods of treating humans are not patentable in many countries outside of the United States. These and other issues may prevent us from obtaining patent protection outside of the United States, which would have a material adverse effect on our business, financial condition and results of operations.

We may be subject to costly claims, and, if we are unsuccessful in resolving conflicts regarding patent rights, we may be prevented from developing, commercializing or marketing our products and/or product candidates.

There has been, and will likely continue to be, substantial litigation regarding patent and other intellectual property rights in the biotechnology industry. As the biotechnology industry expands and more patents are issued, the risk increases that our processes, technology, products and product candidates may give rise to claims that they infringe on the patents of others. Others could bring legal actions against us claiming damages and seeking to stop clinical testing, manufacturing and marketing of the affected product or use of the affected process. Litigation may be necessary to enforce our or our licensors' proprietary rights or to determine the enforceability, scope and validity of the proprietary rights of others. If we become involved in litigation, it could be costly and divert our efforts and resources. In addition, if any of our competitors file patent applications in the United States claiming technology also invented by us or our licensors, we may need to participate in interference proceedings held by the U.S. Patent and Trademark Office to determine priority of invention and the right to a patent for the technology. Like litigation, interference proceedings can be lengthy and often result in substantial costs and diversion of resources.

If we are unsuccessful in defending against any adverse claims, we could be compelled to seek licenses from one or more third parties who could be direct or indirect competitors and who might not make licenses available on terms that we find commercially reasonable or at all. In addition, such proceedings, even if decided in our favor, involve lengthy processes, are subject to appeals, and typically result in substantial costs and diversion of resources.

As more potentially competing patent applications are filed, and as more patents are actually issued, in the fields of gene therapy, wound healing, adenoviral vectors or therapeutic hypothermia or in other fields in which we may become involved and with respect to component methods or compositions that we may employ, the risk increases that we or our licensors may be subjected to litigation or other proceedings that claim damages or seek to stop our manufacturing, marketing, product development or commercialization efforts. Even if such patent applications or patents are ultimately proven to be invalid, unenforceable or non-infringed, such proceedings are generally expensive and time consuming and could consume a significant portion of our resources and substantially impair our marketing and product development efforts.

If there were an adverse outcome of any litigation or interference proceeding, we could have a potential liability for significant damages. In addition, we could be required to obtain a license to continue to make or market the affected product or use the affected process, or face an injunction to block our sale or marketing of affected products or use of the affected process. Costs of a license may be substantial and could include up-front payments as well as ongoing royalties. We may not be able to obtain such a license on acceptable terms, or at all, which could substantially impact our business.

We may not have adequate protection for our unpatented proprietary information, which could adversely affect our competitive position.

We also rely on trade secrets, know-how, continuing technological innovations and licensing opportunities to develop and maintain our competitive position. However, others may independently develop substantially equivalent proprietary information and techniques or otherwise gain access to our trade secrets or disclose our technology. To protect our trade secrets, we may enter into confidentiality agreements with employees, consultants and potential collaborators. However, these agreements may not provide meaningful protection of our trade secrets or adequate remedies in the event of unauthorized use or disclosure of such information. Likewise, our trade secrets or know-how may become known through

other means or be independently discovered by our competitors. Any of these events could prevent us from developing or commercializing our product candidates.

We face the risk of product liability claims, which could adversely affect our business and financial condition.

Our marketing and sale of therapeutic hypothermia products as well as our other operations will expose us to product liability risks that are inherent in the testing, manufacturing and marketing of biotechnology and medical device products. Failure to obtain or maintain sufficient product liability insurance or otherwise protect against product liability claims could prevent or delay the commercialization or marketing of our products or product candidates or expose us to substantial liabilities and diversions of resources, all of which can negatively impact our business. Regardless of the merit or eventual outcome, product liability claims may result in withdrawal of product candidates from clinical trials, costs of litigation, damage to our reputation, substantial monetary awards to plaintiffs and decreased demand for products.

Product liability may result from harm to patients using our products, such as a complication that was either not communicated as a potential side effect or was more extreme than communicated. We will require all patients enrolled in our clinical trials to sign consents, which explain various risks involved with participating in the trial. However, patient consents provide only a limited level of protection, and it may be alleged that the consent did not address or did not adequately address a risk that the patient suffered from. Additionally, we will generally be required to indemnify the clinical product manufacturers, clinical trial centers, medical professionals and other parties conducting related activities in connection with losses they may incur through their involvement in the clinical trials. We may not be able to obtain or maintain product liability insurance on acceptable terms or with adequate coverage against potential liabilities.

Risks Related to Our Common Stock

The price of our common stock is expected to be volatile and an investment in our common stock could decline substantially in value.

In light of our small size and limited resources, as well as the uncertainties and risks that can affect our business and industry, our stock price is expected to be highly volatile and can be subject to substantial drops, with or even in the absence of news affecting our business. The following factors, in addition to the other risk factors described in this report, and the potentially low volume of trades in our common stock, may have a significant impact on the market price of our common stock, some of which are beyond our control:

- anticipated or unanticipated changes in financial conditions, operating results or the perceived value of our business;
- developments concerning any research and development, clinical trials, manufacturing, and marketing efforts or collaborations;
- our announcement of significant acquisitions, strategic partnerships, joint ventures or capital commitments;
- announcements of technological innovations;
- new products or services that we or our competitors offer;

- the initiation, conduct and/or outcome of intellectual property and/or litigation matters;
- changes in financial or other estimates by securities analysts or other reviewers or evaluators of our business;
- conditions or trends in bio-pharmaceutical or other healthcare industries;
- regulatory developments in the United States and other countries;
- changes in the economic performance and/or market valuations of other biotechnology and medical device companies;
- additions or departures of key personnel;
- sales or other transactions involving our common stock; and
- global unrest, terrorist activities, and economic and other external factors.

The stock market in general has recently experienced relatively large price and volume fluctuations. In particular, the market prices of securities of smaller biotechnology and medical device companies have experienced dramatic fluctuations that often have been unrelated or disproportionate to the operating results of these companies. Continued market fluctuations could result in extreme volatility in the price of the common stock, which could cause a decline in the value of the common stock. You should also be aware that price volatility may be worse if the trading volume of the common stock remains limited or declines.

We could be difficult to acquire due to anti-takeover provisions in our charter, our stockholder rights plan and Delaware law.

Our board of directors has adopted a stockholder rights plan in which preferred stock purchase rights were distributed as a dividend. These provisions may make it more difficult for stockholders to take corporate actions and may have the effect of delaying or preventing a change in control. These provisions also could deter or prevent transactions that stockholders deem to be in their interests. In addition, we are subject to the anti- takeover provisions of Section 203 of the Delaware General Corporation Law. Subject to specified exceptions, this section provides that a corporation may not engage in any business combination with any interested stockholder during the three-year period following the time that such stockholder becomes an interested stockholder. This provision could have the effect of delaying or preventing a change of control of our company. The foregoing factors could reduce the price that investors or an acquirer might be willing to pay in the future for shares of our common stock.

We have never paid cash dividends on our capital stock and we do not anticipate paying dividends in the foreseeable future.

We have paid no cash dividends on any of our classes of capital stock to date, and we currently intend to retain our future earnings, if any, to fund the development and growth of our business. In addition, the terms of any future debt or credit facility may preclude or limit our ability to pay any dividends. As a result, capital appreciation, if any, of our common stock will be your sole source of potential gain for the foreseeable future.

ITEM 1B. UNRESOLVED STAFF COMMENTS

Not applicable.

ITEM 2. PROPERTIES

The table below summarizes our facilities. We believe our facilities are adequate to meet our operating requirements for the foreseeable future.

Location	Nature of Use	Square Feet	How Held	Monthly Base Rent	Lease Expiration Date
3611 Valley Centre Drive Suite 525 San Diego, CA USA	Corporate headquarters (Principal executive offices)	5,727	Leased	$ 23,722[1]	October 31, 2008[2]
6740 Top Gun St. San Diego, CA USA	Office, Research Development, Production and Related Uses[3]	29,706	Leased	$ 41,506[4]	January 19, 2013[5]

[1] In addition to base rent, we are also required to pay our proportionate share of operating and tax expenses for the office park in which our space is located.

[2] In November 2007, we signed a 64 month lease for new principal executive offices consisting of approximately 11,200 square feet. The new space is also located in San Diego, California. The lease term commences upon substantial completion of tenant improvements by the new landlord, which we anticipate will occur during the first half of 2008. If all the terms and conditions of the lease are met, the monthly base rent for the first year will be $46,973, increasing to $48,650 in the second year and subject to an additional increase each year thereafter.

[3] This facility is used by Innercool Therapies, Inc., and Tissue Repair Company, each a wholly-owned subsidiary.

[4] In addition to base rent, we are also required to pay our proportionate share of operating and tax expenses for the office park in which our space is located.

[5] The lease contains an option allowing us to cancel the last two years of the lease for a one time fee of $75,000 if we provide written notice of our intent to exercise the option no later than July 20, 2010 and an option to cancel only the last year of the lease for a one time fee of $50,000 if we give written notice no later than September 20, 2011. The lease contains an option to renew the lease for an additional six year period, provided the lessor does not elect to sell the property at the end of the current lease term.

ITEM 3. LEGAL PROCEEDINGS

From time to time, we may become involved in various investigations, claims and legal proceedings that arise in the ordinary course of our business. These matters may relate to intellectual property, employment, tax, regulation, contract or other matters. The resolution of these matters as they arise will be subject to various uncertainties and, even if such claims are without merit, could result in the expenditure of significant financial and managerial resources.

As of March 9, 2008, neither Cardium nor its subsidiaries were a party to any material pending legal proceeding nor was any of their property the subject of any material pending legal proceeding. We anticipate, however, that we will be regularly engaged in various patent prosecution and related matters in connection with the technology we develop and/or license. To the extent we are not successful in defending against any adverse claims concerning our technology, we could be compelled to seek licenses from one or more third parties who could be direct or indirect competitors and who might not make licenses available on terms that we find commercially reasonable or at all. In addition, any such proceedings, even if decided in our favor, involve lengthy processes, are subject to appeals, and typically result in substantial costs and diversion of resources.

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

We did not submit any matters to our stockholders for a vote during the fourth quarter ended December 31, 2007.

PART II

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

Market Information

Our common stock trades on AMEX under the symbol "CXM." Below are the high and low closing prices of our common stock for each quarter of the years ended December 31, 2007 and 2006:

	2007		2006	
	High	Low	High	Low
First Quarter	$ 3.63	$ 2.95	$ 3.94	$ 1.85
Second Quarter	$ 3.10	$ 2.45	$ 3.23	$ 2.00
Third Quarter	$ 2.95	$ 2.22	$ 2.60	$ 1.85
Fourth Quarter	$ 3.17	$ 2.38	$ 3.40	$ 2.75

Until February 27, 2006, our common stock traded solely on the Pink Sheets. From February 28, 2006 through July 31, 2007, our common stock traded on the Over-The-Counter Bulletin Board. The information above for periods before August 1, 2007 reflects inter-dealer prices, without retail mark-up, mark down or commissions, and may not represent actual transactions.

Holders

As of March 9, 2008, there were approximately 1,900 stockholders of record of our common stock.

Dividends

During the last two years ended December 31, 2007 and 2006, we did not pay a dividend on our common stock and we do not intend to pay a dividend in the foreseeable future, as we are in our development stage and expect to sustain losses over the next several years. To the extent we do have earnings, we intend to retain any earnings to help provide funds for the development of our product candidates, the implementation of our business strategy and for our future growth. Additionally, under the terms of our Loan and Security Agreement with Life Sciences Capital, LLC, we are precluded from paying a cash dividend.

Recent Sales of Unregistered Securities

Other than as previously reported, during the years ended December 31, 2007, 2006, and 2005, we did not sell any unregistered securities.

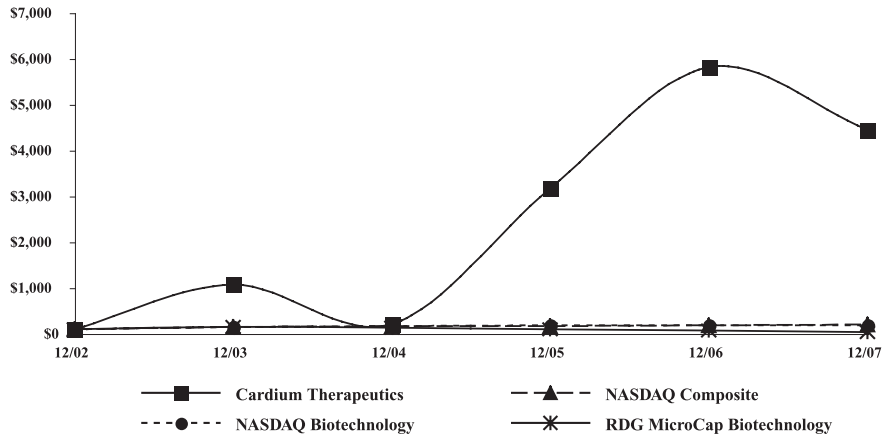
Repurchases

During the fourth quarter of the year ended December 31, 2007, we did not repurchase any shares of our common stock, nor were any repurchases made on our behalf.

Performance Graph

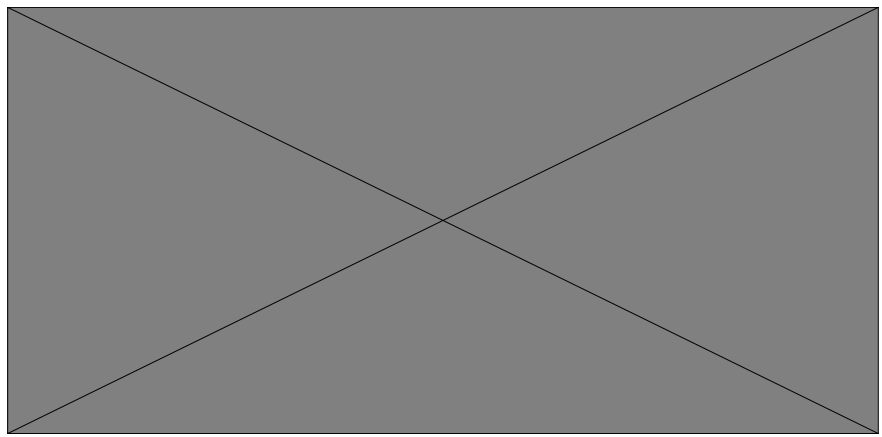
The graph below provides a comparison of cumulative total returns for our common stock, the Nasdaq Composite Index, the Nasdaq Biotechnology Index, and the RDG MicroCap Biotechnology Index for the five year period ended December 31, 2007. Please note that the information used to calculate the returns for periods before December 2005 is based on the share price of Aries Ventures Inc. On October 20, 2005, Cardium completed a reverse merger whereby it merged with a wholly-owned subsidiary of Aries. Thereafter, Aries was merged with and into Cardium with Cardium as the surviving entity and successor issuer to Aries. For the period from December 31, 2002 until October 20, 2005, Aries had no business operations.

The graph below assumes an investment of $100 on December 31, 2002 in each of our common stock, and the stock comprising each of the indices shown. Each of the indices assumes that all dividends were reinvested. The graph lines merely connect the prices on the dates indicated and do not reflect fluctuations between those dates.



The stock performance shown above is not indicative of future performance.

The graph below provides a comparison of cumulative total returns for our common stock, the Nasdaq Composite Index, the Nasdaq Biotechnology Index, and the RDG MicroCap Biotechnology Index for the period from October 20, 2005, the date of the merger between Cardium and the Aries subsidiary described above and commencement of business operations, through December 31, 2007. This graph assumes an investment of $100 on October 20, 2005 in each of our common stock and the stock comprising each of the indices shown, and also assumes that all dividends were reinvested. As noted above, the graph lines merely connect the prices on the dates indicated and do not reflect fluctuations between those dates.



The stock performance shown above is not indicative of future performance.

The performance information above is not deemed to be filed with the SEC or subject to the liabilities of Section 18 of the Securities Exchange Act of 1934, as amended, and shall not be deemed incorporated by reference by any general statement incorporating by reference this report into any filing with the SEC, except to the extent we specifically incorporate this information by reference.

ITEM 6. SELECTED FINANCIAL DATA

The following tables contain certain financial information about the Company, including its subsidiaries. You should review this information together with our audited consolidated financial statements and the notes to the consolidated financial statements included under Item 8 in this report. Our future financial condition and results of operations will vary from our historical financial information below based on a variety of factors. You should carefully review the risks described under Items 1A and 7A and elsewhere in this report, which identify certain important factors that could cause our future financial condition and results of operations to vary.

Annual Financial Data

	Years Ended December 31,				
	2007	**2006**	**2005**	**2004**	**2003[1]**
Consolidated Statements of Operations Data:					
Revenues	$ 1,586,519	$ 756,137	$ —	$ —	N/A
Loss from operations	$ (25,803,878)	$ (19,309,141)	$ (5,588,288)	$ (3,961)	N/A
Net loss	$ (25,321,770)	$ (18,593,165)	$ (5,441,694)	$ (3,961)	N/A
Net loss per common share—basic and diluted	$ (0.64)	$ (0.59)	$ (0.54)	$ (0.00)	N/A
Weighted average shares outstanding—basic and diluted	39,311,359	31,308,650	9,992,426	1,700,000	N/A

	Years Ended December 31,				
	2007	**2006**	**2005**	**2004**	**2003**
Consolidated Balance Sheet Data:					
Current assets, net of current liabilities	$ 4,592,268	$ 4,754,127	$ 21,344,443	$ 13,039	$ 17,000
Total assets	$ 16,925,689	$ 14,117,423	$ 22,351,624	$ 13,039	$ 17,000
Long-term liabilities, less current portion	$ 3,241,992	$ —	$ —	$ —	$ —
Total stockholder's equity	$ 8,428,305	$ 11,153,355	$ 21,738,116	$ 13,039	$ 17,000

[1] The Company began operation on December 22, 2003 and did not incur any expenses or receive any revenues for the period from December 22 to December 31, 2003.

Quarterly Consolidated Financial Data—Unaudited

Year Ended December 31, 2007	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Revenues	$ 309,331	$ 229,472	$ 364,330	$ 683,386
Gross profit (loss)	$ 62,766	$ (28,705)	$ 45,396	$ 158,727
Loss from operations	$ (5,926,244)	$ (6,629,409)	$ (6,214,717)	$ (7,033,508)
Net loss	$ (5,839,849)	$ (6,401,181)	$ (6,067,969)	$ (7,012,771)
Net loss per common share—basic and diluted	$ (0.17)	$ (0.16)	$ (0.15)	$ (0.16)

Year Ended December 31, 2006	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Revenues	$ 39,342	$ 209,438	$ 134,062	$ 373,295
Gross loss	$ (13,986)	$ (19,052)	$ (29,052)	$ (135,967)
Loss from operations	$ (2,774,072)	$ (3,784,402)	$ (5,599,117)	$ (7,151,550)
Net loss	$ (2,554,291)	$ (3,573,038)	$ (5,425,620)	$ (7,040,216)
Net loss per common share—basic and diluted	$ (0.09)	$ (0.11)	$ (0.17)	$ (0.22)

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

The following discussion and analysis is intended to help you understand our financial condition and results of operations for the last three years ended December 31, 2007. You should read the following discussion and analysis together with our audited consolidated financial statements and the notes to the consolidated financial statements included under Item 8 in this report. Our future financial condition and results of operations will vary from our historical financial condition and results of operations described below based on a variety of factors. You should carefully review the risks described under Item 1A and 7A and elsewhere in this report, which identify certain important factors that could cause our future financial condition and results of operations to vary.

Executive Overview

The following overview does not address all of the matters covered in the other sections of this Item 7 or other items in this report or contain all of the information that may be important to our stockholders or the investing public. This overview should be read in conjunction with the other sections of this Item 7 and this report.

We are a medical technology company primarily focused on the development, manufacture and sale of innovative therapeutic products and devices for cardiovascular, ischemic and related indications. Building upon our core products and product candidates, our strategic goal is to develop a portfolio of medical

products at various stages of development and secure additional financial resources to commercialize these products in a timely and effective manner.

To that end, during the year ended December 31, 2007, we (i) initiated the Phase 3 AWARE clinical study for our lead product candidate, Generx, and received fast track designation by the FDA for the study; (ii) initiated preclinical studies supported by a National Institute of Health Small Business Innovation Research grant designed to further establish the therapeutic potential of our product candidate Corgentin; (iii) launched InnerCool's new CoolBlue surface temperature modulation system; (iv) advanced InnerCool's next generation RapidBlue endovascular system, which we expect to launch in 2008; (v) entered into a license agreement for the clinical research, development and commercialization of a new therapeutic for potential use in stroke patients in combination with InnerCool's endovascular hypothermia technology; (vi) initiated a Phase 2b clinical trial (MATRIX) to evaluate the safety and efficacy of Tissue Repair's product candidate, Excellarate, for the potential treatment of non-healing diabetic foot ulcers; (vii) completed a $5 million commercial credit facility to support the launch of InnerCool's new product lines; and (viii) completed a private placement of our common stock that resulted in net proceeds to the Company of approximately $20 million. In addition, on January 31, 2008, we closed a $5.3 million registered direct offering to provide funding to further develop our ongoing programs, as well as for other general corporate purposes.

As a development stage company, our revenues are generally limited to those generated by the sale of InnerCool's endovascular system and its new CoolBlue surface temperature modulation system and its RapidBlue system. We do not have any other products available for sale or use. Because of the limited nature of our revenues and the high costs we must incur to develop our product candidates, we have yet to generate positive cash flows or income from operations and do not anticipate doing so in the foreseeable future. As a result, we are currently dependent on debt and equity funding to finance our operations.

Going forward, the key elements of our strategy are to:

- advance the Phase 3 AWARE clinical study for Generx;
- advance the Phase 2b clinical study for Excellarate;
- accelerate the commercialization of Innercool's RapidBlue System™ and, at the same time, expand our CoolBlue product placements and broaden and expand our therapeutic hypothermia technology into other medical indications and applications;
- leverage our financial resources and focused corporate infrastructure through the use of contract manufacturers to produce clinical supplies and a contract research organization to manage or assist planned clinical studies;
- advance the pre-clinical development of Corgentin and potentially seek partnering opportunities for the Corgentin and Genvascor product candidates;
- broaden and expand our product base and financial resources through other corporate development transactions in an attempt to enhance stockholder value, which could include acquiring other medical-related companies or product opportunities and/or securing additional capital; and
- monetize the economic value of our product portfolio by establishing strategic collaborations and selling businesses and assets at appropriate valuation inflection points.

We recognize that the practical realities of developing therapeutic products and devices in the current regulatory environment require sizable financial investment. In view of this, we plan to pursue clinical development strategies intended to facilitate collaborations and partnerships for joint development of our products at appropriate valuation inflection points during their clinical development cycle.

More detailed information about our products, product candidates, our intended efforts to develop our products and are business strategy is included under Item 1 of this report.

Critical Accounting Policies and Estimates

Our consolidated financial statements included under Item 8 in this report have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP). The preparation of our financial statements in accordance with GAAP requires that we make estimates and assumptions that affect the amounts reported in our financial statements and their accompanying notes. We have identified certain policies that we believe are important to the portrayal of our financial condition and results of operations. These policies require the application of significant judgment by our management. We base our estimates on our historical experience, industry standards, and various other assumptions that we believe are reasonable under the circumstances. Actual results could differ from these estimates under different assumptions or conditions. An adverse effect on our financial condition, changes in financial condition, and results of operations could occur if circumstances change that alter the various assumptions or conditions used in such estimates or assumptions. Our significant accounting policies are described in the notes to our financial statements.

Results of Operations

Fiscal 2007 Compared to Fiscal 2006

Revenues for the year ended December 31, 2007 were $1,587,000, of which Innercool Therapies generated $1,141,000, compared to $756,000 for the year ended December 31, 2006. Our increase in revenues during 2007 was due in large part to an increase in sales of Innercool Therapies' Celsius Control System resulting from our expanded sales and marketing efforts at Innercool Therapies, as well as new sales from the launch of Innercool Therapies' CoolBlue system in late 2007 and the timing of our acquisition of Innercool Therapies in March 2006. Before March 2006, we had no products available for sale or use and thus the amount for 2006 reflects only ten months of revenues. In addition, Tissue Repair Company generated $446,000 in grant revenue during the year ended December 31, 2007, compared to $71,000 during the five months of 2006 following our acquisition of Tissue Repair Company in August 2006.

Cost of goods sold for the year ended December 31, 2007 was $1,348,000 compared to $954,000 for the year ended December 31, 2006. The increase in cost of goods sold was directly related to the increase in revenues from the sale of Innercool Therapies products, which accounted for a significant portion of our revenues.

Research and development expenses for the year ended December 31, 2007 were $13,118,000 compared to $8,384,000 for the same period last year. The increase of $4.7 million over last year was primarily due to (i) our efforts to advance our lead product candidate, Generx, to a Phase 3 clinical trial (AWARE), (ii) develop and launch a next-generation console for the Celsius Control System, and (iii) advance our Excellarate product candidate to a Phase 2b clinical study. In the first half of 2006, we classified our clinical

staff as general and administrative expense, as during that time the staff was focused on the technology transfer from Schering AG Group, Germany. As our clinical staff has transitioned to development activities and clinical studies for our product candidates, as of July 1, 2006, their related expenses are included in research and development. Because we did not acquire Innercool Therapies and its Celsius Control System until March 2006, research and development expenses for the year ended December 31, 2006 included only ten months of expenses related to Innercool Therapies and the development of its products. Similarly, due to the timing of the Tissue Repair Company acquisition in August 2006, research and development expenses for the year ended December 31, 2006 included only four and a half months of expenses related to the development of Tissue Repair Company's products.

For the year ended December 31, 2007, selling, general and administrative expenses were $12,135,000 compared to $10,054,000 for the year ended December 31, 2006. The $2,081,000 increase in selling, general and administrative expenses was due to increased expenses related to our acquisitions of Innercool Therapies and Tissue Repair Company and our expanded sales and marketing efforts at Innercool, partially offset by the reclassification of our clinical staff expenses from selling, general and administrative to research and development as discussed above. Amortization expense for the year ended December 31, 2007 was $790,000 compared to $673,000 for the year ended December 31, 2006. Our amortization expenses were in connection with our acquisition of Innercool Therapies as we recorded patented technology and other intangibles at the time of purchase. The increase of $117,000 in 2007 compared to the previous year was due to the timing of the InnerCool acquisition in March 2006 and the inclusion of only ten months of amortization in 2006.

We derive interest income from the investment of our available cash in various short-term obligations, such as certificates of deposit, commercial paper and money market funds. Interest income for the year ended December 31, 2007 was $482,000 compared to $716,000 for the same period last year. The $234,000 decrease in interest income for the year when compared to the same period last year is directly related to the decrease in cash available for investment as we used the proceeds from our October 2005 private placement to fund operations, partially offset by the investment of the proceeds received from the private placement we completed in March 2007.

Fiscal 2006 Compared to Fiscal 2005

Revenues for the year ended December 31, 2006 were $756,000 and consisted of revenues of $685,000 from the sale of Innercool Therapies' Celsius Control System and grant revenue of $71,000 generated by Tissue Repair Company. We did not have any products available for sale or use before our acquisition of Innercool Therapies in March 2006 and we did not acquire Tissue Repair Company until August 2006. Thus, we did not have any revenues for the year ended December 31, 2005. Cost of goods sold for the year ended December 31, 2006 was $954,000, representing the cost associated with sales of Innercool Therapies' Celsius Control System.

Research and development expenses for the year ended December 31, 2006 were $8,384,000 compared to $4,000,000 for the year ended December 31, 2005. In the first half of 2006, we classified our clinical staff as general and administrative expense, as during that time the staff was focused on the technology transfer from Schering AG Group, Germany. As our clinical staff has transitioned to development activities and clinical studies for our product candidates, as of July 1, 2006, their related expenses are included in research and development. Because we did not acquire Innercool Therapies and its Celsius Control System until March 2006, research and development expenses for the year ended December 31, 2006 included

only ten months of expenses related to Innercool Therapies and the development of its products. Similarly, due to the timing of the Tissue Repair Company acquisition in August 2006, research and development expenses for the year ended December 31, 2006 included only four and a half months of expenses related to the development of Tissue Repair Company's products. Research and development expenses for the year ended December 31, 2005 related to the in-process research and development we purchased from Schering in October 2005.

For the year ended December 31, 2006, selling, general and administrative expenses were $10,054,000 compared to $1,588,000 for the year ended December 31, 2005. The $8,446,000 increase in selling, general and administrative expenses was due to increased expenses related to our acquisitions of Innercool Therapies and Tissue Repair Company, and a full year of operations of Cardium in 2006 versus only two months of operations following Cardium's initial funding in October 2005.

Amortization expense for the year ended December 31, 2006 was $673,000. Our amortization expense was in connection with our acquisition of Innercool Therapies as we recorded patented technology and other intangibles at the time of purchase in March 2006. We did not have any amortization expense for the year ended December 31, 2005.

We derive interest income from the investment of our available cash in various short-term obligations, such as certificates of deposit, commercial paper and money market funds. Interest income for the year ended December 31, 2006 was $716,000 compared to $146,000 for the year ended December 31, 2005. The $570,000 increase in interest income for 2006 was directly related to the length of time cash was available for investment as we invested the proceeds from our October 2005 private placement.

Liquidity and Capital Resources

Our primary source of liquidity has been cash flows from financing activities and in particular proceeds from the sale of our common stock. Net cash provided by financing activities was $24,375,000 for the year ended December 31, 2007, and was primarily derived from proceeds we received from the sale of our common stock, net of issuance costs. Net cash used in operating activities was $21,356,000 for the year ended December 31, 2007 compared to $14,940,000 for the same period last year. The increase in net cash used in operating activities was due primarily to an increase in expenditures for research and development and the spending associated with the acquisitions of Innercool Therapies and Tissue Repair Company. During the year ended December 31, 2007, we purchased $1,227,000 of property and equipment and leasehold improvements for our new Tech Center facility.

Since inception, our operations have consumed substantial amounts of cash and we have had only limited revenues. We anticipate that the negative cash flow from operations will continue. On March 9, 2007, we completed a private placement of our common stock that resulted in net proceeds to the Company of approximately $20 million. As of December 31, 2007, we had $7.7 million in cash and cash equivalents. On November 12, 2007, we obtained debt financing in the principal amount of $5 million for working capital secured by our assets and intellectual property (see note 8 of the consolidated financial statements). Monthly payments on the debt financing are approximately $159,184. In addition, on January 31, 2008, we completed a registered direct offering of our common stock that resulted in net proceeds to the Company of approximately $5 million. With the completion of our recent offering, we believe we will be able to fund required operations for approximately the next six months, not including the efforts we would like to undertake to accelerate the study of our Generx and Excellarate product candidates and actively promote the

launches of InnerCool's CoolBlue and RapidBlue product lines. As a result, we will need to raise additional funds through the sale of equity securities, debt financings and/or strategic licensing agreements. If we do not raise such funds, we will not be able to accelerate our product development activities or maintain operations. In addition, under the terms of our debt financing, we are required to raise an additional $25 million in capital from the sale of equity, and/or funds received through licensing, and/or other corporate transactions by June 30, 2008. If we fail to raise such amount by June 30, 2008, we would be in default under the existing terms of our debt financing. For these reasons, our financial statements for the fiscal year ended December 31, 2007, contain a going concern qualification from our independent registered public accounting firm, Marcum & Kliegman LLP. While there is no guarantee the additional financing we need will be available on terms desirable or acceptable to us, or at all, we believe we will be able to raise the additional funds we need on a timely basis.

Off-Balance Sheet Arrangements

As of December 31, 2007, we did not have any significant off-balance sheet debt nor did we have any transactions, arrangements, obligations (including contingent obligations) or other relationships with any unconsolidated entities or other persons that have or are reasonably likely to have a material current or future effect on financial condition, changes in financial condition, results of operations, liquidity, capital expenditures, capital resources, or significant components of revenue or expenses material to investors. As of December 31, 2007, we had operating lease obligations of approximately $1,854,000 extending through 2010.

Contractual Obligations

The following table summarizes our known contractual obligations and commercial commitments at December 31, 2007:

	Payments Due By Period				
Contractual Obligations	**Total**	**Less Than 1 Year**	**1-3 Years**	**3-5 Years**	**More than 5 Years**
Long-Term Debt	$ 4,863,515	$ 1,531,298	$ 3,332,217	$ —	$ —
Operating Leases	1,854,441	730,372	1,049,069	75,000	—
Total Obligations	$ 6,717,956	$ 2,261,670	$ 4,381,286	$ 75,000	$ —

Recent Accounting Pronouncements

In December 2007, the Financial Accounting Standards Board ("FASB") issued Statement of Financial Accounting Standards ("SFAS") No. 141R, "Business Combinations" ("SFAS 141R"), which replaces SFAS No. 141, "Business Combinations." SFAS 141R establishes principles and requirements for determining how an enterprise recognizes and measures the fair value of certain assets and liabilities acquired in a business combination, including non-controlling interests, contingent consideration, and certain acquired contingencies. SFAS 141R also requires acquisition-related transaction expenses and restructuring costs be expensed as incurred rather than capitalized as a component of the business combination. SFAS 141R will be applicable prospectively to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008. SFAS 141R would have an impact on accounting for any businesses acquired after the effective date of this pronouncement.

In December 2007, the FASB issued SFAS No. 160, "Non-controlling Interests in Consolidated Financial Statements—An Amendment of ARB No. 51" ("SFAS 160"). SFAS 160 establishes accounting and reporting standards for the non-controlling interest in a subsidiary (previously referred to as minority interests). SFAS 160 also requires that a retained non-controlling interest upon the deconsolidation of a subsidiary be initially measured at its fair value. Upon adoption of SFAS 160, the Company would be required to report any non-controlling interests as a separate component of stockholders' equity. The Company would also be required to present any net income allocable to non-controlling interests and net income attributable to the stockholders of the Company separately in its consolidated statements of income. SFAS 160 is effective for fiscal years, and interim periods within those fiscal years, beginning on or after December 15, 2008. SFAS 160 requires retroactive adoption of the presentation and disclosure requirements for existing minority interests. All other requirements of SFAS 160 shall be applied prospectively. SFAS 160 would have an impact on the presentation and disclosure of the non-controlling interests of any non wholly-owned businesses acquired in the future.

In February 2007, the FASB issued SFAS No. 159, "The Fair Value Option for Financial Assets and Financial Liabilities" ("SFAS 159"). SFAS 159 provides companies with an option to report selected financial assets and liabilities at fair value. The objective of SFAS 159 is to reduce both complexity in accounting for financial instruments and the volatility in earnings caused by measuring related assets and liabilities differently. Generally accepted accounting principles have required different measurement attributes for different assets and liabilities that can create artificial volatility in earnings. The FASB has indicated it believes that SFAS 159 helps to mitigate this type of accounting-induced volatility by enabling companies to report related assets and liabilities at fair value, which would likely reduce the need for companies to comply with detailed rules for hedge accounting. SFAS 159 also establishes presentation and disclosure requirements designed to facilitate comparisons between companies that choose different measurement attributes for similar types of assets and liabilities.

SFAS 159 does not eliminate disclosure requirements included in other accounting standards, including requirements for disclosures about fair value measurements included in SFAS 157 and SFAS No. 107, "Disclosures about Fair Value of Financial Instruments." SFAS 159 is effective for the Company as of the beginning of fiscal year 2009. The Company has not yet determined the impact SFAS 159 may have on its consolidated financial position, results of operations, or cash flows.

In September 2006, the FASB issued SFAS No. 157, "Fair Value Measurements." SFAS No. 157 defines fair value, establishes a framework for measuring fair value, and expands disclosure about fair value measurements. Where applicable, this statement simplifies and codifies related guidance with accounting principles generally accepted in the United States of America. This statement is effective for financial statements issued for fiscal years beginning after November 15, 2007, and interim periods within those years. The Company's adoption of SFAS 157 is not expected to have a material impact on the Company's consolidated financial position and results of operations.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to a limited level of market risk, which is the potential loss arising from adverse changes in market rates and prices, such as interest rates, due to the investment of our available cash in various instruments.

The goal of our investment activities is to preserve principal while seeking to increase income received on our investments without significantly increasing risk. In the normal course of business, we employ established policies and procedures to manage our exposure to changes in the fair value of our investments. We generally do not, however, enter into derivatives or other financial instruments for trading or speculative purposes or to otherwise manage our exposure to interest rate changes. Generally, we seek to limit our exposure to risk by investing substantially in short-term, investment grade securities, such as commercial paper, certificates of deposit and money market funds. The amount of interest income we receive on our investments will vary with changes in the general level of interest rates in the United States, generally decreasing as interest rates decrease and increasing as interest rates increase.

While we cannot predict with any certainty our future exposure to fluctuations in interest rates or other market risks or the impact, if any, such fluctuations may have on our future business, consolidated financial condition, results of operations or cash flows, due to the short-term, investment grade nature of our investments, we do not believe our exposure to market risk from our investments is material.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Audit Committee of
The Board of Directors and Stockholders of
Cardium Therapeutics, Inc.

We have audited the accompanying consolidated balance sheets of Cardium Therapeutics, Inc. (the "Company") (a development stage company) as of December 31, 2007 and 2006, and the related consolidated statements of operations, stockholders' equity and cash flows for each of the years in the three-year period ended December 31, 2007 and for the period from December 22, 2003 (date of inception) through December 31, 2007. We have also audited the Company's internal control over financial reporting as of December 31, 2007, based on the criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company's management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting. Our responsibility is to express an opinion on these consolidated financial statements and an opinion on the Company's internal control over financial reporting 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 audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the consolidated financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall consolidated financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our

audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

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

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

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Cardium Therapeutics, Inc. (a development stage company) at December 31, 2007 and 2006, and the consolidated results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2007 and for the period from December 22, 2003 (date of inception) through December 31, 2007 in conformity with accounting principles generally accepted in the United States of America.

The accompanying consolidated financial statements have been prepared assuming that Cardium Therapeutics, Inc. will continue as a going concern. As more fully described in Note 1, the Company has suffered recurring operating losses, continues to generate negative cash flows from operating activities, and is dependent on funds from outside sources to operate its business. These conditions raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 1. The consolidated financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that may result from the outcome of this uncertainty.

Also, in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2007, based on the criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission.

/s/ Marcum & Kliegman LLP

New York, New York
March 13, 2008

CARDIUM THERAPEUTICS, INC.
(a development stage company)

CONSOLIDATED BALANCE SHEETS

December 31,	2007	2006
Assets		
Current assets:		
Cash and cash equivalents	$ 7,722,816	$ 5,931,123
Accounts receivable, net	565,613	275,590
Inventories, net	1,037,164	857,034
Prepaid expenses and other current assets	522,067	654,448
Total current assets	9,847,660	7,718,195
Restricted cash	500,000	—
Property and equipment, net	1,650,632	791,277
Patented technology, net	4,582,009	5,327,648
Intangibles, net	184,321	228,338
Deferred financing costs, net	66,306	—
Deposits	94,761	51,965
Total assets	$ 16,925,689	$ 14,117,423
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 1,461,458	$ 989,021
Accrued liabilities	2,311,849	1,975,047
Current portion of long-term debt, net of debt discount of $49,214	1,482,085	—
Current liabilities	5,255,392	2,964,068
Long-term debt, less current portion, net of debt discount of $90,224	3,241,992	—
Total liabilities	8,497,384	2,964,068
Commitments and contingencies		
Stockholders' equity:		
Common stock, $0.0001 par value; 200,000,000 shares authorized; issued and outstanding 40,955,291 at December 31, 2007 and 32,190,804 at December 31, 2006	4,095	3,218
Additional paid-in capital	57,784,800	35,188,957
Deficit accumulated during development stage	(49,360,590)	(24,038,820)
Total stockholders' equity	8,428,305	11,153,355
Total liabilities and stockholders' equity	$ 16,925,689	$ 14,117,423

See accompanying notes, which are an integral part of these consolidated financial statements.

CARDIUM THERAPEUTICS, INC.
(a development stage company)

CONSOLIDATED STATEMENTS OF OPERATIONS

Years Ended December 31,	2007	2006	2005	Period from December 22, 2003 (Inception) To December 31, 2007
Revenues				
Product sales	$ 1,140,921	$ 684,912	$ —	$ 1,825,833
Grant revenues	445,598	71,225	—	516,823
Total revenues	1,586,519	756,137	—	2,342,656
Cost of goods sold	1,348,335	954,194	—	2,302,529
Gross profit (loss)	238,184	(198,057)	—	40,127
Operating expenses				
Research and development	13,117,849	8,384,324	4,000,000	25,502,173
Selling, general and administrative	12,134,557	10,053,530	1,588,288	23,780,336
Amortization—intangibles	789,656	673,230	—	1,462,886
Total operating expenses	26,042,062	19,111,084	5,588,288	50,745,395
Loss from operations	(25,803,878)	(19,309,141)	(5,588,288)	(50,705,268)
Interest, net	482,108	715,976	146,594	1,344,678
Net loss	$ (25,321,770)	$ (18,593,165)	$ (5,441,694)	$ (49,360,590)
Net loss per common share—basic and diluted	$ (0.64)	$ (0.59)	$ (0.54)	
Weighted average shares outstanding—basic and diluted	39,311,359	31,308,650	9,992,426	

See accompanying notes, which are an integral part of these consolidated financial statements.

CARDIUM THERAPEUTICS, INC.
(a development stage company)

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
YEARS ENDED DECEMBER 31, 2007, 2006 AND 2005

	Common Stock		Additional Paid-In Capital	Stock Subscription Receivable	Deficit Accumulated During Development Stage	Total Stockholders' Equity
	Shares	Amount				
Balance—December 22, 2003 (Date of Inception)	—	$ —	$ —	$ —	$ —	$ —
Sale of common stock (December 31, 2003; $.01 per share)	1,700,000	170	16,830	(17,000)	—	—
Balance—December 31, 2003	1,700,000	$ 170	$ 16,830	$ (17,000)	$ —	$ —
Proceeds from subscription receivable	—	—	—	17,000	—	17,000
Net loss	—	—	—	—	(3,961)	(3,961)
Balance—December 31, 2004	1,700,000	$ 170	$ 16,830	$ —	$ (3,961)	$ 13,039
Issuance of common stock for services and reimbursement of expenses (April 1, 2005; $.01 per share)	3,800,000	380	37,620	—	—	38,000
Issuance of common stock for services and reimbursement of expenses (May 20, 2005; $.01 per share)	350,000	35	3,465	—	—	3,500
Issuance of common stock for cash (July 1, 2005; $.01 per share)	2,000,000	200	19,800	—	—	20,000
Issuance of common stock to Aries Ventures shareholders (October 20, 2005; $.73 per share)	2,032,226	203	1,499,797	—	—	1,500,000
Issuance of common stock for reimbursement of expenses (October 20, 2005; $1.50 per share)	41,924	4	62,878	—	—	62,882

CARDIUM THERAPEUTICS, INC.
(a development stage company)

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
Continued

	Common Stock		Additional Paid-In Capital	Stock Subscription Receivable	Deficit Accumulated During Develop-ment Stage	Total Stockholders' Equity
	Shares	Amount				
Issuance of common stock for cash (October 20, 2005; $1.50 per share)	19,325,651	1932	25,540,457	—	—	25,542,389
Net loss	—	—	—	—	(5,441,694)	(5,441,694)
Balance— December 31, 2005	29,249,801	$ 2,924	$ 27,180,847	—	$ (5,445,655)	$ 21,738,116
Issuance of stock for purchase of business (March 8, 2006; $2.35 per share)	2,500,000	250	5,874,750	—	—	5,875,000
Stock option compensation expense	—	—	1,634,806	—	—	1,634,806
Exercise of warrants (June 30, 2006– December 31, 2006; $1.13 per share) see note 11	441,003	44	498,554	—	—	498,598
Net Loss	—	—	—	—	(18,593,165)	(18,593,165)
Balance— December 31, 2006	32,190,804	$ 3,218	$ 35,188,957	$ —	$ (24,038,820)	$ 11,153,355
Issuance of common stock for cash (March 9, 2007; $2.50 per share)	8,636,000	875	20,092,489	—	—	20,093,364
Stock option compensation expense	—	—	2,329,440	—	—	2,329,440
Exercise of warrants ($1.50 per share)	128,487	2	26,274			26,276
Warrants issued with debt (November 12, 2007)	—	—	147,640	—	—	147,640
Net Loss	—	—	—	—	(25,321,770)	(25,321,770)
Balance— December 31, 2007	40,955,291	$ 4,095	$ 57,784,800	$ —	$ (49,360,590)	$ 8,428,305

Note: The par value of common stock and the additional paid-in capital have been adjusted to reflect the change in par value from $0.001 to $0.0001 on May 20, 2005.

See accompanying notes, which are an integral part of these consolidated financial statements.

CARDIUM THERAPEUTICS, INC.
(a development stage company)

CONSOLIDATED STATEMENTS OF CASH FLOWS

Years Ended December 31,	2007	2006	2005	Period from December 22, 2003 (Inception) To December 31, 2007
Cash Flows From Operating Activities				
Net loss	$ (25,321,770)	$ (18,593,165)	$ (5,441,694)	$ (49,360,590)
Adjustments to reconcile net loss to net cash used in operating activities:				
Depreciation	367,881	248,041	11,646	627,568
Amortization—intangibles	789,656	673,230	—	1,462,886
Amortization—debt discount	8,202	—	—	8,202
Amortization—deferred financing costs	6,028	—	—	6,028
Provision for obsolete inventory	50,402	600,479	—	650,881
Provision for doubtful accounts	5,936	—	—	5,936
Common stock issued for services and reimbursement of expenses	—	—	41,500	41,500
Stock based compensation expense	2,329,440	1,634,806	—	3,964,246
In-process purchased technology	—	1,027,529	—	1,027,529
Changes in operating assets and liabilities, excluding effects of acquisition:				
Accounts receivable	(295,959)	(98,996)	—	(394,955)
Inventories	(230,532)	(1,360,849)	—	(1,591,381)
Prepaid expenses and other current assets	168,547	(465,818)	(170,082)	(467,353)
Deposits	(42,796)	(3,828)	(21,476)	(68,100)
Accounts payable	472,437	777,722	162,869	1,413,028
Accrued liabilities	336,802	620,757	450,639	1,408,198
Net cash used in operating activities	(21,355,726)	(14,940,092)	(4,966,598)	(41,266,377)
Cash Flows From Investing Activities				
In-process technology purchased from Tissue Repair Company	—	(1,000,000)	—	(1,000,000)
Purchases of property and equipment	(1,227,236)	(467,052)	(383,843)	(2,078,131)
Net cash used in investing activities	(1,227,236)	(1,467,052)	(383,843)	(3,078,131)

CARDIUM THERAPEUTICS, INC.
(a development stage company)

CONSOLIDATED STATEMENTS OF CASH FLOWS
Continued

Years Ended December 31,	2007	2006	2005	Period from December 22, 2003 (Inception) To December 31, 2007
Cash Flows From Financing Activities				
Proceeds from officer loan	—	—	62,882	62,882
Cash acquired in Aries merger and Innercool acquisition	—	51,800	1,500,000	1,551,800
Restricted cash	(500,000)	—	—	(500,000)
Proceeds from the exercise of warrants, net	26,276	498,598	—	524,874
Proceeds from debt financing agreement, net of deferred financing costs of $108,500	4,891,500	—	—	4,891,500
Repayment of debt	(136,485)	—	—	(136,485)
Proceeds from the sale of common stock	20,093,364	—	25,562,389	45,672,753
Net cash provided by financing activities	24,374,655	550,398	27,125,271	52,067,324
Net increase (decrease) in cash	1,791,693	(15,856,746)	21,774,830	7,722,816
Cash and cash equivalents at beginning of period	5,931,123	21,787,869	13,039	—
Cash and cash equivalents at end of period	$ 7,722,816	$ 5,931,123	$ 21,787,869	$ 7,722,816
Supplemental Disclosures of Cash Flow Information:				
Cash payments made for interest	$ 73,731	$ —	$ —	$ 73,731
Cash payments made for income taxes	$ 9,284	$ 8,078	—	$ 17,362
Non-Cash Activity:				
Subscription receivable for common shares	$ —	$ —	$ —	$ 17,000
Common stock issued for repayment of loans	$ —	$ —	$ 62,882	$ 62,882
Net assets acquired for the issuance of common stock (exclusive of cash)	$ —	$ 5,824,000	$ —	$ 5,824,000
Warrants issued in connection with debt financing	$ 147,640	—	—	$ 147,640

See accompanying notes, which are an integral part of these consolidated financial statements.

CARDIUM THERAPEUTICS, INC.
(a development stage company)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1—Organization and Liquidity

Organization

Cardium Therapeutics, Inc. (the "Company," "Cardium," "we," "our" and "us") was organized in Delaware in December 2003. We are a medical technology company primarily focused on the development, manufacture and sale of innovative therapeutic products for cardiovascular, ischemic and related indications. In October 2005, we acquired a portfolio of biologic growth factors and related delivery techniques from the Schering AG Group, Germany, which we plan to develop as cardiovascular-directed growth factor therapeutics for potential use by interventional cardiologists as a one-time treatment to promote and stimulate the growth of collateral circulation in the hearts of patients with ischemic conditions such as recurrent angina. In March 2006, we acquired the technologies and products of Innercool Therapies, Inc., a medical technology company in the emerging field of therapeutic hypothermia, or patient temperature modulation, whose systems and products are designed to rapidly and controllably cool the body to reduce cell death and damage following acute ischemic events such as cardiac arrest and stroke, and to potentially lessen or prevent associated injuries such as adverse neurologic outcomes. In August 2006, we acquired rights to assets and technologies of Tissue Repair Company, a company focused on the development of growth factor therapeutics for the potential treatment of tissue wounds such as chronic diabetic wounds, and whose product candidate, Excellarate™ is initially being developed as a single administration for the treatment of non-healing, neuropathic diabetic foot ulcers. Innercool Therapies and Tissue Repair Company are each operated as a wholly-owned subsidiary of Cardium.

We are a development stage company. We have yet to generate positive cash flows from operations, and are essentially dependent on debt and equity funding to finance our operations. Before October 2005, cash requirements were funded by loans from executive officers. In October 2005, we closed a private placement of 19,325,651 shares of our common stock at a purchase price of $1.50 per share and received net proceeds of $25,542,389. In connection with the private placement, we completed a reverse merger, whereby Cardium merged with a wholly-owned subsidiary of Aries Ventures Inc. ("Aries"), a publicly-traded company (see Note 12). As a result of these transactions, the stockholders of Cardium became the controlling stockholders of Aries. Accordingly, the acquisition of Cardium by Aries was a reverse merger. The historical financial results before the reverse merger on October 20, 2005, are those of Cardium. Aries' results of operations are included in Cardium's financial results beginning October 20, 2005.

In January 2006, Aries was merged with and into Cardium, with Cardium as the surviving entity and the successor issuer to Aries. As a result, we are now in our present form a publicly-traded, Delaware corporation named Cardium Therapeutics, Inc.

Liquidity

Since inception, our operations have consumed substantial amounts of cash and we have had only limited revenues. We anticipate that the negative cash flow from operations will continue. On January 31, 2008, we completed a registered direct offering of our common stock that resulted in net proceeds to

the Company of approximately $5 million. On March 9, 2007, we completed a private placement of our common stock that resulted in net proceeds to the Company of approximately $20 million. As of December 31, 2007, we had $7.7 million in cash and cash equivalents. With the completion of our recent offering, we believe we will be able to fund required operations for approximately the next six months, not including the efforts we would like to undertake to accelerate the study of our Generx and Excellarate product candidates and actively promote the launches of InnerCool's CoolBlue and RapidBlue product lines. As a result, we will need to raise additional funds through the sale of equity securities, debt financings and/or strategic licensing agreements. If we do not raise such funds, we will not be able to accelerate our product development activities or maintain operations. In addition, under the terms of our debt financing, we are required to raise an additional $25 million in capital from the sale of equity, and/or funds received through licensing, and/or other corporate transactions by June 30, 2008. If we fail to raise such amount by June 30, 2008, we would be in default under the existing terms of our debt financing. For these reasons, our financial statements for the fiscal year ended December 31, 2007, contain a going concern qualification from our independent registered public accounting firm, Marcum & Kliegman LLP. While there is no guarantee the additional financing we need will be available on terms desirable or acceptable to us, or at all, we believe we will be able to raise the additional funds we need on a timely basis.

NOTE 2—Summary of Significant Accounting Policies

Basis of Presentation

Our principal activities are expected to focus on the commercialization of our licensed technologies, other technologies and the expansion of our existing products. The accompanying financial statements have been prepared in accordance with Statement of Financial Accounting Standard ("SFAS") No. 7, "Development Stage Enterprises." The consolidated financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classification of liabilities that may result from the outcome of the Company's ability to continue as a going concern.

Fair Value of Financial Instruments

The carrying amounts of cash and cash equivalents, accounts receivable, accounts payable, and accrued liabilities approximate fair value due to the short term maturities of these instruments.

Intangible Assets

In July 2001, the Financial Accounting Standards Board ("FASB") issued SFAS No. 142, "Goodwill and Other Intangible Assets." SFAS No. 142 requires companies to stop amortizing goodwill and certain other intangible assets with indefinite useful lives. Instead, goodwill and other intangible assets deemed to have an indefinite useful life will be subject to an annual review for impairment. Separable intangible assets that are not deemed to have indefinite useful lives will continue to be amortized over their estimated useful lives (but with no maximum life).

Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the

reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

Principles of Consolidation

The accompanying consolidated financial statements include the financial statements of Cardium and its wholly-owned subsidiaries, Innercool Therapies, Inc. and Tissue Repair Company. All inter-company balances and transactions have been eliminated in consolidation.

Cash and Cash Equivalents

Cash and cash equivalents, including approximately $7,100,000 invested in short-term commercial paper and money market funds, includes all highly-liquid investments with an original maturity of three months or less at the date of purchase. We attempt to reduce our credit risk by investing our cash and cash equivalents with major banks and financial institutions located primarily in the United States. At times, cash balances held at financial institutions may exceed federally-insured limits.

Restricted Cash

The Company has a total of $500,000 invested in a certificate of deposit that serves as collateral for an outstanding letter of credit, and is therefore restricted. The letter of credit is a security deposit towards tenant improvements for the Company's new office space and does not expire within the next 12 months. Therefore, the restricted cash is classified as a non-current asset.

Accounts Receivable

Accounts receivable represent amounts due from the sale of our products and for services provided under the grant. The Company provides allowances against trade receivables estimated losses resulting from customers' inability to pay. The adequacy of this allowance is determined by regularly reviewing specific account payment history and circumstances, the accounts receivable aging, accounts receivable payments, and historical write-off rates. If customer payment timeframes were to deteriorate, additional allowance for doubtful accounts would be required. As of December 31, 2007 and 2006, the allowance for doubtful accounts amount to $5,936 and $0, respectively.

Inventories

Inventories are stated at the lower of cost (first-in, first-out method) or market. The Company evaluates inventories on hand against historical and planned usage to determine appropriate provisions for obsolete, slow-moving and demonstration inventory. Inventories include material, labor and overhead costs.

Deferred Financing Costs

The costs incurred in connection with the issuance of certain indebtedness were capitalized as deferred costs and are being amortized over the term of the related indebtedness as a financing cost over the period of future benefit. The Company incurred related amortization expense of $6,028 for the year ended December 31, 2007 and for the period December 22, 2003 (inception) to December 31, 2007, respectively.

Long-Lived Assets

The Company adopted SFAS No. 144 "Accounting for the Impairment or Disposal of Long-Lived Assets." Long-lived assets held for use are subject to an impairment assessment if the carrying value is no longer recoverable based upon the undiscounted cash flows of the assets. The amount of the impairment is the difference between the carrying amount and the fair value of the asset. Management does not believe that there is any impairment of long-lived assets at December 31, 2007.

Property and Equipment

Property and equipment are stated at cost, net of accumulated depreciation. Property and equipment are depreciated on a straight-line basis over the estimated useful lives of the assets (three years for computer equipment and five years for furniture and fixtures). Leasehold improvements are being amortized on a straight-line basis over a period of six years.

Common Stock Purchase Warrants

The Company accounts for the issuance of common stock purchase warrants issued in connection with capital financing transactions in accordance with the provisions of Emerging Issues Task Force ("EITF") Issue No. 00-19 "Accounting for Derivative Financial Instruments Indexed to, and Potentially Settled in, a Company's Own Stock." Based upon the provisions of EITF Issue No. 00-19, the Company classifies as equity any contracts that (i) require physical settlement or net-share settlement or (ii) gives the Company a choice of net-cash settlement or settlement in its own shares (physical settlement or net-share settlement). The Company classifies as assets or liabilities any contracts that (i) require net-cash settlement (including a requirement to net-cash settle the contract if an event occurs and if that event is outside the control of the Company) or (ii) gives the counterparty a choice of net-cash settlement or settlement in shares (physical settlement or net-share settlement).

The Company assessed the classification of its derivative financial instruments as of December 31, 2007, which consisted of common stock purchase warrants, and determined that such derivatives meet the criteria for equity classification under EITF 00-19.

Revenue Recognition

We earn revenue from two main sources, the sale of our products to major medical teaching universities, hospitals and private surgical centers located throughout the United States, and funds received from a government grant. For sales of our product we recognize revenue pursuant to Staff Accounting Bulletin ("SAB") No. 104, "Revenue Recognition" issued by the U.S. Securities and Exchange Commission. Accordingly, revenue is recognized when all four of the following criteria are met: (i) persuasive evidence that an arrangement exists; (ii) delivery of the products and/or services has occurred; (iii) the selling price is fixed or determinable; and (iv) collectability is reasonably assured.

Revenue is recognized on the grant when the services are provided and direct costs are incurred. Grant revenues are received by the Company to further advance its research and development activities associated with product development. As of December 31, 2007, the remaining funds that can be received under the grant amount to approximately $862,000.

Reclassification

Certain prior year amounts have been reclassified to conform to the current year presentation. The reclassification did not have any effect on reported consolidated net losses for any periods presented.

Research and Development

In accordance with SFAS No. 2, "Research and Development Expenses," research and development costs are expensed as incurred. Research and development expenses are expected to consist of purchased technology, purchased research and development rights and outside services for research and development activities associated with product development. In accordance with SFAS No. 2, the cost to purchase such technology and research and development rights are required to be charged to expense if there is currently no alternative future use for this technology and, therefore, no separate economic value.

Income Taxes

In accordance with SFAS No. 109 "Accounting for Income Taxes", we account for deferred income taxes under the liability method. Under this method, we recognize deferred tax assets and liabilities based on the tax effects of temporary differences between the financial statement and tax bases of assets and liabilities, as measured by current enacted tax rates. A valuation allowance is recorded to reduce deferred tax assets when necessary.

Loss Per Common Share

We compute earnings per share in accordance with SFAS No. 128, "Earnings Per Share." SFAS No. 128 requires dual presentation of basic and diluted earnings per share.

Basic loss per common share is computed by dividing net loss by the weighted average number of common shares outstanding during the period. Diluted loss per common share is computed by dividing net loss by the weighted average number of common shares outstanding, plus the issuance of common shares, if dilutive, resulting from the exercise of outstanding stock options and warrants. These potentially dilutive securities were not included in the calculation of loss per common share for the years ended December 31, 2007, 2006 and 2005 because, due to the loss we incurred during such periods, their inclusion would have been anti-dilutive. Accordingly, basic and diluted loss per common share are the same for all periods presented. The common stock issued and outstanding with respect to the stockholders of Aries has been included since October 20, 2005, the effective date of the reverse merger.

Potentially dilutive securities consisted of outstanding stock options and warrants to acquire 11,193,110 shares as of December 31, 2007. As of December 31, 2006, potentially dilutive securities consisted of outstanding stock options and warrants to acquire 7,611,853 shares. At December 31, 2005, potentially dilutive securities consisted of outstanding stock options and warrants to acquire 4,951,818 shares.

Stock-Based Compensation

Effective January 1, 2006, we adopted the fair value recognition provisions of SFAS No. 123 (revised 2004), "Share-Based Payment" (SFAS 123R), using the modified prospective transition method. Under the transition method, stock-based compensation expense is recognized (i) for all stock-based compensation

awards granted before, but not yet vested as of, January 1, 2006, based on the grant date fair value estimated in accordance with the original provision of SFAS No. 123, "Accounting for Stock-Based Compensation" (SFAS 123), and (ii) for all stock-based compensation awards granted after January 1, 2006, based on the grant date fair value estimated in accordance with the provisions of SFAS 123R.

Stock-based compensation costs are recognized on a straight-line basis over the requisite service period of the award, which is generally the vesting term of the award. Total stock-based compensation expense included in the consolidated statements of operations was $2,329,440 and $1,634,806 for the years ended December 31, 2007 and 2006, respectively. During the year ended December 31, 2007 $1,064,554 was recorded as a component of research and development expenses and $1,264,886 was recorded as a component of sales, general and administrative expenses. During the year ended December 31, 2006 $747,586 was recorded as a component of research and development expenses and $887,220 was recorded as a component of sales, general and administrative. As of December 31, 2007, the Company had $4,047,248 of unvested stock-based compensation at fair value remaining to be expensed ratably over the period January 2008 through December 2012.

The fair value of the stock options and similar stock-based compensation granted is estimated on the date of grant using the Black-Scholes option valuation model. The Black-Scholes option valuation model was developed for use in estimating the fair value of traded options that have no vesting restrictions and are fully transferable. Option valuation models require the input of highly subjective assumptions, including expected life and stock price volatility. The following weighted-average assumptions were used:

December 31,	**2007**	**2006**	**2005**
Dividend yield	0 %	0 %	0 %
Expected life (years)	5.25	5.25	4.50
Risk-free interest rate	4.40 %	4.60 %	4.50 %
Volatility	76 %	67 %	60 %

Before the adoption of SFAS 123R on January 1, 2006, the Company recognized stock-based compensation expense in accordance with Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees" ("APB 25"), and provided pro forma disclosure amounts in accordance with SFAS No. 148, "Accounting for Stock-Based Compensation—Transition and Disclosure" ("SFAS 148"), as if the fair value method defined by SFAS 123 had been applied to its stock-based compensation. The pro forma table below reflects net loss, and net loss per common share, as if the Company had applied the fair value recognition provisions of SFAS 123 to all outstanding and unvested awards in fiscal year 2005:

	2005
Net loss, as reported	$ (5,441,694)
Add: compensation expense included in net loss	—
Less: compensation expense pursuant to SFAS No. 123	(29,083)
Pro forma net loss	$ (5,470,777)
Pro forma net loss per common share (basic and diluted)	$ (0.55)

Recent Accounting Pronouncements

In December 2007, the Financial Accounting Standards Board ("FASB") issued Statement of Financial Accounting Standards ("SFAS") No. 141R, "Business Combinations" ("SFAS 141R"), which replaces SFAS No. 141, "Business Combinations." SFAS 141R establishes principles and requirements for determining how an enterprise recognizes and measures the fair value of certain assets and liabilities acquired in a business combination, including non-controlling interests, contingent consideration, and certain acquired contingencies. SFAS 141R also requires acquisition-related transaction expenses and restructuring costs be expensed as incurred rather than capitalized as a component of the business combination. SFAS 141R will be applicable prospectively to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008. SFAS 141R would have an impact on accounting for any businesses acquired after the effective date of this pronouncement.

In December 2007, the FASB issued SFAS No. 160, "Non-controlling Interests in Consolidated Financial Statements—An Amendment of ARB No. 51" ("SFAS 160"). SFAS 160 establishes accounting and reporting standards for the non-controlling interest in a subsidiary (previously referred to as minority interests). SFAS 160 also requires that a retained non-controlling interest upon the deconsolidation of a subsidiary be initially measured at its fair value. Upon adoption of SFAS 160, the Company would be required to report any non-controlling interests as a separate component of stockholders' equity. The Company would also be required to present any net income allocable to non-controlling interests and net income attributable to the stockholders of the Company separately in its consolidated statements of income. SFAS 160 is effective for fiscal years, and interim periods within those fiscal years, beginning on or after December 15, 2008. SFAS 160 requires retroactive adoption of the presentation and disclosure requirements for existing minority interests. All other requirements of SFAS 160 shall be applied prospectively. SFAS 160 would have an impact on the presentation and disclosure of the non-controlling interests of any non wholly-owned businesses acquired in the future.

In February 2007, the FASB issued SFAS No. 159, "The Fair Value Option for Financial Assets and Financial Liabilities" ("SFAS 159"). SFAS 159 provides companies with an option to report selected financial assets and liabilities at fair value. The objective of SFAS 159 is to reduce both complexity in accounting for financial instruments and the volatility in earnings caused by measuring related assets and liabilities differently. Generally accepted accounting principles have required different measurement attributes for different assets and liabilities that can create artificial volatility in earnings. The FASB has indicated it believes that SFAS 159 helps to mitigate this type of accounting-induced volatility by enabling companies to report related assets and liabilities at fair value, which would likely reduce the need for companies to comply with detailed rules for hedge accounting. SFAS 159 also establishes presentation and disclosure requirements designed to facilitate comparisons between companies that choose different measurement attributes for similar types of assets and liabilities.

SFAS 159 does not eliminate disclosure requirements included in other accounting standards, including requirements for disclosures about fair value measurements included in SFAS 157 and SFAS No. 107, "Disclosures about Fair Value of Financial Instruments." SFAS 159 is effective for the Company as of the beginning of fiscal year 2009. The Company has not yet determined the impact SFAS 159 may have on its consolidated financial position, results of operations, or cash flows.

In September 2006, the FASB issued SFAS No. 157, "Fair Value Measurements." SFAS No. 157 defines fair value, establishes a framework for measuring fair value, and expands disclosure about fair value measurements. Where applicable, this statement simplifies and codifies related guidance with accounting principles generally accepted in the United States of America. This statement is effective for financial statements issued for fiscal years beginning after November 15, 2007, and interim periods within those years. The Company's adoption of SFAS 157 is not expected to have a material impact on the Company's consolidated financial position and results of operations.

NOTE 3—Business Combinations

Innercool Therapies Acquisition

On March 8, 2006, Cardium, through wholly-owned subsidiary, Innercool Therapies, Inc., a Delaware corporation, acquired substantially all of the assets and the business of Innercool Therapies, Inc., an unaffiliated California corporation, in the development stage, engaged in the emerging field of therapeutic hypothermia. As partial consideration therefore, Cardium issued to the seller 2,500,000 shares of Cardium's common stock. In addition, as part of the acquisition, Cardium agreed to (i) deliver to the seller $5,000,000 in cash or shares of Cardium's common stock, at Cardium's election, if net sales revenue from certain of Innercool's products acquired in the acquisition equals or exceeds $20,000,000 in any one calendar year beginning with 2006 and ending December 31, 2011; (ii) assume certain liabilities of Innercool Therapies in the aggregate amount of approximately $580,000; and (iii) pay certain transaction costs associated with the acquisition and amounts that were payable to former employees of the seller for accrued and unpaid vacation , in the aggregate, amount of approximately $170,000, as well as certain audit fees and other expenses of approximately $100,000. The acquisition was recorded based on Cardium's then current common stock price of $2.35 per share.

The results of operations of Innercool Therapies have been included in the accompanying consolidated financial statements from the date of acquisition. The estimated total cost of the acquisition is as follows:

Issuance of common stock	$	5,875,000
Transaction costs		100,000
Total purchase price	$	5,975,000

The allocation of the purchase price for the Innercool Therapies acquisition as of March 8, 2006, the date of the acquisition, is as follows:

Assets acquired:		
Cash	$	51,800
Accounts receivable		176,593
Inventory		96,664
Property and equipment, net		110,943
Prepaid expenses		18,548
Deposits		24,381
Intangible assets (amortizable over 3-6 years)		264,102
Acquired technology (amortizable over 8 years)		5,965,114
Total assets acquired	$	6,708,145
Liabilities assumed:		
Accounts payable	$	387,105
Other accrued expenses		346,040
Total liabilities assumed	$	733,145
Total consideration	$	5,975,000

Tissue Repair Company Acquisition

On August 11, 2006, Cardium through its newly-formed, wholly-owned subsidiary, Cardium Biologics, Inc., a Delaware corporation, acquired rights to assets and technologies of Tissue Repair Company, a privately-held, San Diego-based Delaware corporation focused on the development of growth factor therapeutics for the potential treatment of tissue wounds such as dermal ulcers. The rights acquired included product rights to a lead product candidate, Excellarate™, a DNA-activated collagen gel for topical treatment formulated with an adenovector delivery carrier encoding human platelet-derived growth factor-B (PDGF-B). Excellarate is initially being developed as a single administration for the treatment of non-healing, neuropathic diabetic foot ulcers. The Excellarate topical gel is designed to stimulate angiogenesis and granulation tissue formation through the recruitment and proliferation of chemotactic cells such as monocytes and fibroblasts, which are necessary for the stimulation of a variety of wound healing processes. The rights acquired also included technologies applicable to the treatment of ischemic heart disease. Following the acquisition, Cardium Biologics, Inc. changed its name to Tissue Repair Company ("TRC").

As consideration for the rights acquired, Cardium, through its TRC subsidiary, paid the seller $1.0 million and assumed approximately $120,000 in liabilities of the seller. If TRC advances the Excellarate product candidate to a Phase 2 clinical study, TRC would be obligated to pay a product advancement milestone of $1.0 million. TRC has the right to return the assets and product rights at anytime before the milestone payment and would have no further obligation under the terms of the acquisition. If TRC successfully commercializes Excellarate, TRC would pay royalties based on worldwide net sales of such product. The royalty rate to the seller would be 10% minus any applicable third party royalties (including a royalty to the University of Michigan under a license agreement assumed by TRC), and would also be subject to a development cost-recovery offset that could be deducted at the rate of $5.0 million per year from any applicable royalty obligations. The deduction for third party royalties would apply until worldwide net sales exceeded $100 million per year. The cost-recovery offset would apply until TRC recovered 50% of its associated product development costs. TRC would also have a right to buy out the ongoing royalty obligation based on a one-time payment of 30% of net sales for the fifth calendar year or

the first year in which sales exceeded $250 million. If pre-specified milestones relating to the commercial development of Excellarate are not satisfied, Cardium would issue to the seller stock purchase warrants to purchase up to an aggregate of 1.5 million shares of Cardium's common stock (one 500,000 share allotment for each of up to three missed events) at an exercise price of $4.00 per share. The seller could also require TRC to return certain product rights if TRC failed to meet the Excellarate development milestones by more than six months, excluding delays caused by defined product-related limitations.

The results of operations of TRC have been included in the accompanying consolidated financial statements from the date of acquisition.

Based on our evaluation, the allocation of the purchase price for the Tissue Repair Company acquisition is as follows as of August 11, 2006, the date of the acquisition:

Assets acquired:	
Property and equipment	$ 89,126
Deposits	2,280
In-process Purchased Technology	1,027,529
Total assets acquired	$ 1,118,935
Liabilities assumed:	
Other accrued expenses	$ 118,935
Total liabilities assumed	$ 118,935
Cash consideration	$ 1,000,000

Unaudited pro forma consolidated financial information is presented below as if the Innercool Therapies and Tissue Repair Company acquisitions had occurred before the beginning of the periods shown. The results have been adjusted to account for the amortization of acquired technology and intangibles and other pro forma adjustments. The pro forma information presented below does not purport to present what actual results would have been if the acquisition occurred at the beginning of such periods, nor does the information project results for any future period. The unaudited pro forma consolidated financial information should be read in conjunction with the historical financial information of Cardium included in this report, as well as the historical financial information of Cardium and Innercool Therapies included in other reports and documents we file with the SEC. The unaudited pro forma consolidated financial information for the years ended December 31, 2006 and 2005 is as follows:

December 31,	**2006**	**2005**
Revenues	$ 1,550,854	$ 705,310
Net loss	(19,902,386)	(9,727,698)
Net loss per common share— basic and diluted	$ (0.63)	$ (0.78)
Weighted average common shares outstanding— basic and diluted	31,767,554	12,492,426

NOTE 4—Inventories

Inventories consist of the following:

December 31,	2007	2006
Raw materials	$ 490,688	$ 544,548
Work in process	109,868	88,946
Finished goods	1,087,489	824,019
	1,688,045	1,457,513
Less provision for obsolete inventories	(650,881)	(600,479)
Inventories, net	$ 1,037,164	$ 857,034

NOTE 5—Property and Equipment

Property and equipment consisted of the following:

December 31,	2007	2006
Computer and telecommunication equipment	$ 670,387	$ 528,447
Machinery and equipment	604,299	135,225
Office equipment	27,595	27,595
Instrumentation	115,421	84,000
Office furniture and equipment	320,773	275,697
Leasehold improvements	525,225	—
	2,263,700	1,050,964
Accumulated depreciation and amortization	(627,568)	(259,687)
	1,636,132	791,277
Construction in progress	14,500	—
Property and equipment, net	$ 1,650,632	$ 791,277

Depreciation and amortization of property and equipment totaled $367,881, $248,041 and $11,646 for the years ended December 31, 2007, 2006 and 2005, respectively. For the period from December 22, 2003 (date of inception) through December 31, 2007 depreciation and amortization of property and equipment totaled $627,568.

NOTE 6—Accrued Liabilities

Accrued Liabilities consisted of the following:

December 31,	2007	2006
Accrued consulting expense	$ —	$ 37,500
Accrued legal expenses	57,867	70,933
Accrued expenses other	533,057	462,470
Accrued payroll and benefits	1,720,925	1,404,144
Total	$ 2,311,849	$ 1,975,047

NOTE 7—Patented Technology and Other Intangible Assets

In connection with the Company's acquisition of Innercool Therapies, the Company recorded patented technology and other intangibles. The following is a summary of intangible assets:

December 31, 2007	Cost	Accumulated Amortization	Net Asset
Acquired Technology	$ 5,965,114	$ 1,383,105	$ 4,582,009
Tradenames and Trademarks	264,102	79,781	184,321
Total	$ 6,229,216	$ 1,462,886	$ 4,766,330

December 31, 2006	Cost	Accumulated Amortization	Net Asset
Acquired Technology	$ 5,965,114	$ 637,466	$ 5,327,648
Tradenames and Trademarks	264,102	35,764	228,338
Total	$ 6,229,216	$ 673,230	$ 5,555,986

Amortization expenses for the years ended December 31, 2007 and 2006 was $789,656 and $673,230, respectively. There was no amortization expense for the period ended December 31, 2005.

Based on the carrying amount of the intangible assets as of December 31, 2007, the amortization expense for the next five years and thereafter is estimated as follows:

Years Ending December 31,	Amount
2008	$ 789,656
2009	789,656
2010	789,656
2011	789,656
2012	753,893
Thereafter	853,813
Total	$ 4,766,330

NOTE 8—Commitments and Contingencies

Lease Commitments

Effective November 1, 2005, we entered into a two year lease for our principal executive offices. The lease contains two options, the first for an additional term of one year and the second for an additional term of two years. The second option is subject to a third party right of first refusal. During the first year of the lease, the monthly installment of base rent was approximately $21,500, which increased to approximately $22,335 in November 2006. In addition to base rent, we also are required to pay our proportionate share of operating and tax expenses for the office park in which our space is located.

On December 20, 2006, we entered into a six year lease for our technology center, which houses the operations of Innercool Therapies Inc. and Tissue Repair Company. The lease contains an option allowing us to cancel the last two years of the lease for a one time fee of $75,000 if we provide written notice of our intent to exercise the option no later than July 20, 2010 and an option to cancel only the last year of the lease for a one time fee of $50,000 if we give written notice no later than September 20, 2011. The lease also contains an option to renew the lease for an additional six year period, provided the lessor does not elect to sell the property at the end of the current lease term. During the first year of the lease, the monthly installment of base rent averaged $38,320, and increased to $40,103 in the second year of the lease, and further increased to $41,405 beginning January 20, 2008. In addition to base rent, we also are required to pay our proportionate share of operating and tax expenses for the office park in which our space is located.

Future annual minimum rental payments under the leases are as follows:

Years Ending December 31,	Facilities (Operating Lease)
2008	730,372
2009	515,513
2010	533,556
2011	75,000
Total	$ 1,854,441

Rent expense was $677,516, $363,685 and $42,953 for the years ended December 31, 2007, 2006 and 2005, respectively.

We have entered into an Office Lease on November 19, 2007, for the lease of approximately 11,184 square feet of office space in San Diego, California to be used as Cardium's corporate headquarters. The lease term is expected to commence in the first half of 2008 and will have a term of 64 months from the commencement date with an option to renew for an additional five years. Monthly base rent is approximately $46,972 during the first year of the lease and increases to $48,650 in the second year. In addition to monthly base rent, we are also required to pay our proportionate share of any excess building operating expenses. In connection with entering into the lease, we paid a security deposit of $55,808 and delivered a $500,000 letter of credit to the landlord. The letter of credit is subject to annual reductions during the original term of the lease.

Future Sales Results Commitment

On March 8, 2006, we acquired substantially all of the assets of Innercool Therapies, Inc. and as part of the acquisition, we agreed to deliver to the seller $5,000,000 in cash or shares of our common stock, at our election, if net sales revenue from certain of Innercool's products acquired in the acquisition equals or exceeds $20,000,000 in any one calendar year beginning with 2006 and ending December 31, 2011. No payments have been required through December 31, 2007.

Long-term Debt

On November 12, 2007, Cardium, InnerCool Therapies and Tissue Repair Company entered into a Loan and Security Agreement with Life Sciences Capital, LLC, whereby we obtained debt financing in the principal amount of $5 million to be used for general working capital purposes. The loan bears interest at a fixed rate equal to 9.08% per annum, has a maturity date of November 1, 2010, and is secured by all of our assets, including our intellectual property. The loan is due and payable in monthly installments beginning December 1, 2007 in the approximate amount of $159,184. The loan is subject to a prepayment fee equal to 4% of the principal amount prepaid for any prepayment during the first year of the loan, 3% for any prepayment during the second year of the loan, and 1% for any prepayment thereafter. The loan requires that we receive net proceeds of at least $25 million, in the aggregate, from the sale of equity securities, licensing transactions, collaborative ventures and/or the disposition of assets outside the ordinary course of business before June 30, 2008. If we fail to raise such amount by June 30, 2008, we would be in default. Management believes that it is more likely than not that the Company will not be in default under the terms of the agreement. In connection with the loan, we paid Life Sciences Capital, LLC a loan commitment fee and related legal expenses of $108,500, which was capitalized as deferred financing costs and amortized over the term of the loan. As of December 31, 2007, the balance of the unamortized deferred financing costs amounted to $102,472 and included as a component of prepaid and other current assets (current portion) and deferred financing costs (noncurrent portion).

The Company also issued a five-year warrant to Life Sciences Capital, LLC to purchase 93,333 shares of our common stock at an exercise price of $3.75 per share. The Company allocated $4,852,359 of the proceeds of the $5 million investment to the loan and $147,641 of the proceeds to the warrant. The fair value of the warrant was recorded as a debt discount to the loan. The debt discount will be amortized over the term of the loan and charged to interest expense. Total debt discount of $8,202 was amortized through December 31, 2008. As of December 31, 2007, the balance of unamortized debt discount amounted to $139,438. The warrant was evaluated in accordance with EITF 00-19 "Accounting for Derivative Financial Instruments Indexed to, and Potentially Settled in, a Company's Own Stock," and was determined to be an equity instrument.

Maturities of the long-term debt at December 31, 2007 were as follows:

Year Ending December 31,	Long-term debt
2008	1,531,298
2009	1,676,275
2010	1,655,942
Total	$ 4,863,515

Legal Proceedings

From time to time, we may become involved in various investigations, claims and legal proceedings that arise in the ordinary course of our business. These matters may relate to intellectual property, employment, tax, regulation, contract or other matters. The resolution of these matters as they arise will be subject to various uncertainties and, even if such claims are without merit, could result in the expenditure of significant financial and managerial resources.

NOTE 9—Purchase of Technology from Schering AG

In October 2005, we completed a transaction with Schering AG Group (Germany) and related licensors, including the University of California, New York University and Yale University, for the transfer or license of certain assets and technology relating to (i) methods of gene therapy for the treatment of cardiovascular disease (including methods for the delivery of genes to the heart or vasculature and the use of angiogenic and/or non-angiogenic genes for the potential treatment of diseases of the heart or vasculature); (ii) therapeutic genes that include fibroblast growth factors (including FGF-4); insulin-like growth factors (including IGF-I); and potentially other related biologics (including mutant eNOS); and (iii) other technology and know-how, including manufacturing and formulation technology, as well as data relating to the clinical development of Generx™ and corresponding Food and Drug Administration regulatory matters. Under the terms of the transaction, we paid Schering a $4 million fee, and would be required to pay a $10 million milestone payment upon the first commercial sale of each resulting product. We also may be obligated to pay the following future royalties to Schering: (i) 5% on net sales of an FGF-4 based product such as Generx, or (ii) 4% on net sales of other products developed based on technology transferred to Cardium by Schering. To date, no royalty payments have been required.

NOTE 10—Income Taxes

Effective January 1, 2007, the Company adopted the provisions of FASB Interpretation No. 48, "Accounting for Uncertainty in Income Taxes—an interpretation of FASB Statement No. 109" ("FIN 48"). FIN 48 prescribes a recognition threshold and a measurement attribute for the financial statement recognition and measurement of tax positions taken or expected to be taken in a tax return. For those benefits to be recognized, a tax position must be more-likely-than-not to be sustained upon examination by taxing authorities. Differences between tax positions taken or expected to be taken in a tax return and the benefit recognized and measured pursuant to the interpretation are referred to as "unrecognized benefits." A liability is recognized (or amount of net operating loss carryforward or amount of tax refundable is reduced) for an unrecognized tax benefit because it represents an enterprise's potential future obligation to the taxing authority for a tax position that was not recognized as a result of applying the provisions of FIN 48.

In accordance with FIN 48, interest costs related to unrecognized tax benefits are required to be calculated (if applicable) and would be classified as "Interest, net". Penalties if incurred would be recognized as a component of "Selling, general and administrative" expenses.

The Company files income tax returns in the United States (federal) and in various state and local jurisdictions. In most instances, the Company is no longer subject to federal, state and local income tax examinations by tax authorities for years prior to 2004.

The adoption of the provisions of FIN 48 did not have a material impact on the Company's consolidated financial position and results of operations. As of January 1, 2007 and December 31, 2007, no liability for unrecognized tax benefits was required to be recorded. The Company does not expect its unrecognized tax benefit position to change during the next 12 months.

The Company recognized a deferred tax asset of approximately $ 19.2 million as of December 31, 2007, primarily relating to net operating loss carryforwards of approximately $ 44.4 million (which excludes net operating losses of $71 million that represent pre-merger losses for which the use of these losses is limited in accordance with Section 382 of the Internal Revenue Code of 1986, as amended),

available to offset future taxable income through 2027. The net operating losses begin to expire in 2023 for federal tax purposes and in 2013 for state income tax purposes.

The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. The Company considers projected future taxable income and tax planning strategies in making this assessment. At present, the Company does not have a sufficient history of income to conclude that it is more-likely-than-not that the Company will be able to realize all of its tax benefits in the near future and therefore a valuation allowance was established for the full value of the deferred tax asset.

A valuation allowance will be maintained until sufficient positive evidence exists to support the reversal of any portion or all of the valuation. Should the Company become profitable in future periods with supportable trends, the valuation allowance will be reversed accordingly.

The Company's net deferred tax asset consisted of the following at December 31, 2007 and 2006:

December 31,	2007	2006
Deferred tax asset:		
Net operating loss carryforwards	$ 17,701,546	$ 35,042,524
Intangible assets	370,930	150,574
Inventory reserves	259,322	645,018
Accrued expenses	830,097	259,322
Other	2,191	2,191
Total deferred tax assets	19,164,086	36,099,629
Deferred tax liability:		
Property and equipment	(13,401)	(6,629)
Subtotal	19,150,685	36,093,000
Less: Valuation allowance	(19,150,685)	(36,093,000)
Net deferred tax asset	$ —	$ —

As a result of the Company's significant operating loss carryforwards and the corresponding valuation allowance, no income tax benefit was recorded at December 31, 2007, 2006 or 2005. The provision for income taxes using the statutory federal tax rate as compared to the Company's effective tax rate is summarized as follows:

December 31,	2007	2006	2005
Tax benefit at statutory rate	(34.0)%	(34.0)%	(34.0)%
State income taxes	(8.8)%	(8.8)%	(8.8)%
Valuation allowance	42.8%	42.8%	42.8%
Total income tax provision	0.0%	0.0%	0.0%

NOTE 11—Stockholders' Equity

Common Stock

Cardium was incorporated in Delaware on December 22, 2003. On December 31, 2003, we sold 1,700,000 shares of our common stock to our founders and executives for $17,000. On April 1, 2005, we issued an additional 3,800,000 shares of our common stock (of which 3,650,000 shares were issued to our co-founders and the remainder was issued to another employee of Cardium), in exchange for services and reimbursement of expenses valued at $38,000.

On May 19, 2005, our Board of Directors and stockholders approved an increase in our authorized shares of common stock from 5,500,000 shares to 100,000,000 shares and a change in the par value of our shares of common stock from $0.001 to $0.0001.

On May 20, 2005, we issued 350,000 shares of our common stock to our co-founders in exchange for services and reimbursement of expenses valued at $3,500. On July 1, 2005, we sold 2,000,000 shares of our common stock for $20,000 to one of our founders.

On October 20, 2005, we completed a reverse merger with Aries Ventures Inc., a publicly-traded "shell" company, whereby a newly formed and wholly-owned subsidiary of Aries was merged with and into Cardium. At the time of the reverse merger, Cardium had 7,850,000 shares of its common stock outstanding and Aries had 2,032,226 shares of its common stock outstanding. In connection with the reverse merger, a three year warrant to purchase 400,000 shares of our common stock at an exercise price of $1.75 per share was issued to an Aries stockholder who held of record or beneficially more than 45% of the outstanding common stock of Aries before the reverse merger, as consideration for such stockholder's agreement not to sell any of such stockholder's shares for a specified period of time.

Concurrently with the reverse merger, we closed a private placement of 19,325,651 shares of common stock at a purchase price of $1.50 per share and received net proceeds of $25,542,389. Investors who invested at least $1,000,000 in shares of common stock received a three-year warrant to buy 10% of the number of shares of common stock purchased in the private placement, at an exercise price of $1.75 per share. Warrants to purchase 424,263 shares of common stock, in the aggregate, were issued to such investors.

In October 2005, one of our executive officers was issued 41,924 shares of our common stock as repayment for advances totaling $62,882 that had been made to fund our early start-up costs.

On March 8, 2006, as described in Note 3 above, we acquired substantially all of the assets of Innercool Therapies, Inc. As partial consideration, we issued to the seller 2,500,000 shares of our common stock.

During 2006, 108,592 shares of common stock were issued when warrants to purchase 216,554 shares of common stock were exercised in cashless transactions, whereby a portion of the respective warrants representing the right to purchase 107,962 shares of common stock, in the aggregate, was cancelled as the method of payment for the exercise of the warrants. Also during 2006, 332,411 shares of common stock were issued upon the exercise of a warrant for which Cardium received $498,598 as payment of the exercise price.

During 2007, 128,487 shares of common stock were issued when warrants to purchase 240,336 shares of common stock were exercised in cashless transactions, whereby a portion of the respective warrants representing the right to purchase 111,849 shares of common stock, in the aggregate, was cancelled as the method of payment for the exercise of the warrants.

All warrants exercised in 2006 and 2007 had an exercise price of $1.50 per share.

On March 9, 2007, we closed a private placement of 8,636,000 shares of common stock at a purchase price of $2.50 per share and received net proceeds of approximately $20 million. Investors received five-year warrants to buy up to 35% of the number of shares of common stock purchased in the private placement, at an exercise price of $3.75 per share. Warrants to purchase approximately 3,022,600 shares of common stock, in the aggregate, were issued to such investors. These warrants had a price protection provision which was triggered on January 31, 2008 (see Note 14) and therefore were reduced to an exercise price of $2.00.

In connection with the private placement, we incurred selling commissions, and expenses payable to the placement agent, totaling approximately $1,480,300, and legal, accounting and other fees and expenses totaling approximately $100,000 In addition, a five-year warrant to purchase 518,160 shares of our common stock was issued to the placement agent at an exercise price of $3.78 per share.

In November 2007, we entered into a Loan and Security Agreement with Life Sciences Capital, LLC whereby we obtained debt financing in the principal amount of $5 million to be used for general working capital purposes. The proceeds were immediately made available to us under this credit agreement. In connection with this financing, we issued a warrant to Life Sciences Capital, LLC to purchase 93,333 shares of our common stock at an exercise price of $3.75. We also recorded deferred financing costs in the amount of $108,500 in connection with this debt financing.

Option Activity

We have an equity incentive plan that was established in 2005 under which 5,665,856 shares of our common stock have been reserved for issuance to employees, non-employee directors and consultants of the Company. In November 2005, options to purchase 2,095,000 shares of our common stock, in the aggregate, were granted under the plan. The options vest over three years, have a ten year term and have an exercise price of $1.95 per share.

During the year ended December 31, 2007, options to purchase 350,000 shares were granted under the plan. The options granted in 2007 have exercise prices ranging from $2.60 to $2.95, terms ranging from seven to ten years, and vest over approximately four years. During the year ended December 31, 2007, unvested options to purchase 100,000 shares of our common stock were cancelled and are available for future issuance under the plan. Warrants to purchase 15,000 shares were granted outside the plan during the year ended December 31, 2007 to employees and consultants of our wholly-owned subsidiaries. The warrants granted in 2007 outside the plan have an exercise price of $2.95, vest over four years and have a term of seven years. The fair value of the 2007 grants was $1.72 to $1.95 for the grants made under the plan, and $1.95 for the warrants granted outside of the plan.

During the year ended December 31, 2006, options to purchase 1,770,000 shares were granted under the plan. The options granted in 2006 have exercise prices ranging from $1.90 to $3.05, terms ranging from seven to ten years, and vest over approximately four years. During the year ended December 31, 2006, unvested options to purchase 295,000 shares of our common stock were cancelled and are available for future issuance under the plan. Warrants to purchase 1,734,000 shares were granted outside the plan during the year ended December 31, 2006 to employees and consultants of our wholly-owned subsidiaries. The warrants granted in 2006 outside the plan have exercise prices ranging from $2.05 to $3.10, vest over three to four years and have a term of seven to ten years. The fair value of the 2006 grants was $1.15 to $2.02 for the grants made under the plan, and $1.15 to $2.05 for the warrants granted outside of the plan.

The following is a summary of stock option and warrant activity under our equity incentive plan and warrants issued outside of the plan to employees and consultants, during the years ended December 31, 2007, 2006 and 2005:

	Number of Options or Warrants	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life (in years)	Aggregate Intrinsic Value
Balance outstanding, December 31, 2004	—	$ —	—	—
Granted	2,095,000	1.95	8.9	—
Exercised	—	—	—	—
Expired	—	—	—	—
Balance outstanding, December 31, 2005	2,095,000	$ 1.95	8.9	—
Granted	3,504,000	2.51	8.1	—
Exercised	—	—	—	—
Cancelled	(295,000)	2.85	9.1	—
Expired	—	—	—	—
Balance outstanding, December 31, 2006	5,304,000	$ 2.27	8.4	—
Granted	365,000	2.83	6.6	—
Exercised	—	—	—	—
Cancelled	(177,500)	2.52	7.9	—
Expired	—	—	—	—
Balance outstanding, December 31, 2007	5,491,500	$ 2.30	7.3	$ 1,611,375
Exercisable, December 31, 2007	2,758,302	$ 2.20		

At December 31, 2007 the weighted-average exercise price of outstanding options was $2.30 and the weighted-average remaining contractual life was 7.6 years. At December 31, 2007, and 2006 the number of options exercisable were 2,758,302, and 1,069,947 respectively, and the weighted-average exercise prices of those options were $2.20, and $2.08, respectively. At December 31, 2005 there were no exercisable options.

The following table sets forth information regarding options and warrants outstanding at December 31, 2007:

	Options and Warrants Outstanding			Options and Warrants Exercisable	
Range of exercise prices	Number outstanding	Weighted-average remaining contractual life	Weighted-average exercise price	Number exercisable	Weighted-average exercise price
$1.00 – 2.00	2,150,000	7.78	$ 1.95	1,466,898	$ 1.95
2.01 – 3.00	3,270,500	7.11	2.51	1,270,946	2.48
3.01 – 4.00	71,000	5.79	3.05	20,458	3.05
	5,491,500	7.36	$ 2.30	2,758,302	$ 2.20

The following is a summary of unvested options and warrants as of December 31, 2007, and changes during the years ended December 31, 2007 and 2006:

	Number of Options or Warrants	Weighted Average Grant Date Fair Value
Unvested balance outstanding, December 31, 2005	2,095,000	$ 1.17
Granted	3,504,000	1.38
Vested	(1,069,947)	1.25
Expired	—	—
Cancelled	(295,000)	1.70
Unvested balance outstanding, December 31, 2006	4,234,053	$ 1.40
Granted	365,000	1.92
Vested	(1,688,355)	1.34
Expired	—	—
Cancelled	(177,500)	1.39
Unvested balance outstanding, December 31, 2007	2,733,198	$ 1.48

Warrants

Concurrently with the reverse merger in October 2005, the Company closed a private placement of 19,325,651 shares of its common stock at a purchase price of $1.50 per share and received net proceeds of $25,542,389. In connection therewith, National Securities Corporation, the placement agent, received a five-year warrant to purchase 2,032,555 shares of our common stock at an exercise price of $1.50 per share. The warrant was fully exercisable when issued. As of December 31, 2007 warrants to purchase 1,243,254 shares of our common stock were still outstanding.

Investors who invested at least $1,000,000 in shares of common stock also received a three-year warrant to buy 10% of the number of shares of common stock purchased at an exercise price of $1.75 per share. Warrants to purchase 424,263 shares of common stock, in the aggregate, were issued to such investors. As of December 31, 2007, all of these warrants were outstanding.

At the closing of the reverse merger, a three-year warrant to purchase 400,000 shares of Aries Ventures common stock at an exercise price of $1.75 per share was issued to an Aries Ventures stockholder who held of record or beneficially more than 45% of the outstanding common stock of Aries Ventures prior to the reverse merger. The warrant was issued as consideration for his agreement, subject to certain exceptions, not to sell any of his shares of Aries Ventures common stock for a period of approximately five months from the effective time of the reverse merger. As of December 31, 2007, this warrant remained outstanding.

On March 9, 2007, we closed a private placement of 8,636,000 shares of common stock at a purchase price of $2.50 per share and received net proceeds of $20,093,364. Investors received five-year warrants to buy up to 35% of the number of shares of common stock purchased in the private placement, at an exercise price of $3.75 per share. Warrants to purchase approximately 3,022,600 shares of common stock, in the aggregate, were issued to such investors. In addition, a five-year warrant to purchase 518,160 shares of our common stock was issued to the placement agent at an exercise price of $ 3.78 per share. As of December 31, 2007, all of these warrants remained outstanding.

In November 2007, we entered into a Loan and Security Agreement with Life Sciences Capital, LLC whereby we obtained debt financing in the principal amount of $5 million to be used for general working capital purposes. The proceeds were immediately made available to us under this credit agreement. In connection with this financing, we issued a warrant to Life Sciences Capital, LLC to purchase 93,333 shares of our common stock at an exercise price of $3.75. At December 31, 2007, this warrant remained outstanding.

The following table summarizes warrant activity for the years ended December 31, 2007, 2006 and 2005:

	Number of Warrants	Exercise Price	Weighted Average Remaining Contractual Life (in years)
Balance outstanding, December 31, 2004	—	$ —	—
Warrants issued	2,856,818	$1.50-$1.75	2-4
Warrants exercised	—	—	—
Warrants expired	—	—	—
Warrants cancelled	—	—	—
Balance outstanding, December 31, 2005	2,856,818	$1.50-$1.75	2-4
Warrants issued	—	—	—
Warrants exercised	(548,965)	1.50	2-4
Warrants expired	—	—	—
Warrants cancelled	—	—	—
Balance outstanding, December 31, 2006	2,307,853	$1.50-$1.75	2-4
Warrants issued	3,634,093	3.75-3.78	4
Warrants exercised	(128,487)	1.50	3
Warrants expired	—	—	—
Warrants cancelled	(111,849)	1.50	3
Balance outstanding, December 31, 2007	5,701,610	$ 1.50-3.78	1-4
Warrants exercisable at December 31, 2007	5,701,610	$ 1.50-3.78	1-4

The table above does not include warrants issued to employees and consultants as they are included under “Option Activity” above.

NOTE 12—Reverse Merger Transaction

On October 20, 2005, we completed a reverse merger with Aries Ventures Inc., a publicly-traded “shell” company, whereby a newly formed and wholly-owned subsidiary of Aries was merged with and into Cardium. For financial reporting purposes, Cardium was the acquirer in the merger and the merger was accounted for as a reverse merger. At the time of the reverse merger, Cardium had 7,850,000 shares of its common stock outstanding and Aries had 2,032,226 shares of its common stock outstanding.

Concurrently with the reverse merger, we closed a private placement of 19,325,651 shares of common stock at a purchase price of $1.50 per share and received net proceeds of $25,542,389. Investors who invested at least $1,000,000 in shares of common stock received a three-year warrant to buy 10% of the number of shares of common stock purchased in the private placement, at an exercise price of $1.75 per share. Warrants to purchase 424,263 shares of common stock, in the aggregate, were issued to such investors.

In connection with the private placement, we incurred selling commissions, marketing allowances and management fees payable to the placement agent totaling approximately $3,049,000, and legal, accounting and other fees and expenses totaling approximately $397,000. In addition, five-year warrants to purchase 2,032,555 shares of our common stock were issued to the placement agent at an exercise price of $1.50 per share.

NOTE 13—Stockholder Rights Plan

On July 10, 2006, Cardium's Board of Directors approved the adoption of a Stockholder Rights Plan ("Rights Plan") with the intention to protect against potential takeover tactics that are not in the best interest of Cardium and its stockholders, such as acquisitions of control without paying all stockholders a fair premium, coercive tender offers and inadequate offers. The Rights Plan was not adopted in response to any specific effort to acquire control of Cardium and it is not intended to prevent an offer that the Board of Directors concludes is in the best interests of Cardium and its stockholders. Pursuant to the Rights Plan, Cardium issued a dividend of one right for each share of its common stock held by stockholders of record as of the close of business on July 21, 2006. The rights are not immediately exercisable and will become exercisable only upon the occurrence of certain events. In general, if a person or group acquires, or announces a tender or exchange offer that would result in the acquisition of 15% or more of Cardium's common stock while the Rights Plan remains in place, then, unless the rights are redeemed by Cardium for $0.001 per right, the rights will become exercisable by all rights holders except the acquiring person or group, for 0.001 of a share of newly created Series A Preferred Stock of the Company at an exercise price of $40.00. Until the rights become exercisable, the rights will be represented by, and will automatically trade with, the Company's common stock certificates.

The Rights Plan will be reviewed and evaluated every three years by a committee of independent directors of Cardium's Board of Directors to consider whether the plan continues to be in the best interests of Cardium and its stockholders. The Rights Plan may be amended or revoked by Cardium at any time and unless earlier terminated or amended, the rights will expire on July 10, 2016.

NOTE 14—Subsequent Events

On January 31, 2008, we completed a registered direct offering of our common stock that resulted in the sale of 2,655,000 shares, in the aggregate, of our common stock at a purchase price of $2.00 per share, and five year warrants to purchase an additional 929,250 shares of our common stock at an exercise price of $2.00. The warrants were fully exercisable when issued. We received gross proceeds of approximately $5,300,000, before placement agent fees and offering expenses of approximately $300,000. In addition, it is anticipated that the placement agent will receive a warrant to purchase approximately 159,300 shares of our common stock on substantially the same terms as the warrants issued to investors, subject to obtaining certain regulatory approvals.

NOTE 15—Supplemental Financial Data (unaudited)

The following table presents selected unaudited financial results for each of the eight quarters during the two-year period ended December 31, 2007. In the opinion of management, this unaudited information has been prepared on the same basis as the audited information and includes all adjustments (consisting of only normal recurring adjustments) necessary for the fair statement of the financial information for the periods presented.

Year Ended December 31, 2007	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Revenues	$ 309,331	$ 229,472	$ 364,330	$ 683,386
Gross profit (loss)	$ 62,766	$ (28,705)	$ 45,396	$ 158,727
Loss from operations	$ (5,926,244)	$ (6,629,409)	$ (6,214,717)	$ (7,033,508)
Net loss	$ (5,839,849)	$ (6,401,181)	$ (6,067,969)	$ (7,012,771)
Net loss per common share—basic and diluted	$ (0.17)	$ (0.16)	$ (0.15)	$ (0.16)

Year Ended December 31, 2006	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Revenues	$ 39,342	$ 209,438	$ 134,062	$ 373,295
Gross loss	$ (13,986)	$ (19,052)	$ (29,052)	$ (135,967)
Loss from operations	$ (2,774,072)	$ (3,784,402)	$ (5,599,117)	$ (7,151,550)
Net loss	$ (2,554,291)	$ (3,573,038)	$ (5,425,620)	$ (7,040,216)
Net loss per common share—basic and diluted	$ (0.09)	$ (0.11)	$ (0.17)	$ (0.22)

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

We maintain certain disclosure controls and procedures. They are designed to ensure that material information is: (1) gathered and communicated to our management, including our principal executive and financial officers, on a timely basis; and (2) recorded, processed, summarized, reported and filed with the SEC as required under the Securities Exchange Act of 1934, as amended.

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2007. Based on

such evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective for their intended purpose described above.

Internal Control Over Financial Reporting

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting for the Company. Internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America. Internal control over financial reporting includes policies and procedures for maintaining records that in reasonable detail accurately and fairly reflect our transactions; providing reasonable assurance that transactions are recorded as necessary for the preparation of our financial statements; providing reasonable assurance that receipts and expenditures of the Company are made in accordance with management authorization; and providing reasonable assurance that unauthorized acquisition, use or disposition of Company assets that could have a material effect on our financial statements would be prevented or detected on a timely basis. Because of inherent limitations, internal control over financial reporting is not intended to provide absolute assurance that a misstatement of our financial statements would be prevented or detected.

Management conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation, management concluded that the Company's internal control over financial reporting was effective as of December 31, 2007. Marcum & Kliegman LLP, our independent registered public accounting firm, has issued an attestation report on our internal control over financial reporting as of December 31, 2007. Their report is included under Item 8 above.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting during the quarter ended December 31, 2007 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE

The information for this item is incorporated by reference to the sections "Our Board of Directors," "Our Executive Officers," "Section 16(a) Beneficial Ownership Reporting Compliance," and "Code of Ethics" in our definitive proxy statement for our Annual Meeting of Stockholders to be held on June 5, 2008, to be filed on or before April 29, 2008.

ITEM 11. EXECUTIVE COMPENSATION

The information for this item is incorporated by reference to the sections "Director Compensation" and "Executive Officer Compensation" in our definitive proxy statement for our Annual Meeting of Stockholders to be held on June 5, 2008, to be filed on or before April 29, 2008.

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

The information for this item is incorporated by reference to the sections "Stock Holdings of Certain Owners and Management" and "Securities Authorized for Issuance Under Equity Compensation Plans" in our definitive proxy statement for our Annual Meeting of Stockholders to be held on June 5, 2008, to be filed on or before April 29, 2008.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

The information for this item is incorporated by reference to the section "Certain Relationships and Related Transactions" in our definitive proxy statement for our Annual Meeting of Stockholders to be held on June 5, 2008, to be filed on or before April 29, 2008.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information for this item is incorporated by reference to the sections "Audit Fees," "Audit-Related Fees," "Tax Fees," "All Other Fees" and "Pre-Approval Policies and Procedures" in our definitive proxy statement for our Annual Meeting of Stockholders to be held on June 5, 2008, to be filed on or before April 29, 2008.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

The following documents are filed as part of this report:

(1) **Financial Statements.** The financial statements listed below are included under Item 8 of this report:

- Consolidated Balance Sheets as of December 31, 2007 and 2006;
- Consolidated Statements of Operations for the years ended December 31, 2007, 2006 and 2005 and for the period from December 22, 2003 (inception) to December 31, 2007;
- Consolidated Statements of Stockholders' Equity years ended December 31, 2007, 2006 and 2005;
- Consolidated Statements of Cash Flows for the years ended December 31, 2007, 2006 and 2005 and for the period from December 22, 2003 (inception) to December 31, 2007; and
- Notes to Consolidated Financial Statements.

(2) **Financial Statement Schedules.** The following financial statement schedules are included under Item 8 of this report: None.

(3) **Exhibits.** The following exhibit index shows those exhibits filed with this report and those incorporated by reference:

EXHIBIT INDEX

Exhibit Number	Description	Incorporated By Reference To
2.1	Agreement and Plan of Merger dated as of October 19, 2005 and effective as of October 20, 2005, by and among Aries Ventures Inc., Aries Acquisition Corporation and Cardium Therapeutics, Inc.	Exhibit 2.1 of our Current Report on Form 8-K dated October 20, 2005, filed with the commission on October 26, 2005
2.2	Certificate of Merger of Domestic Corporation as filed with the Delaware Secretary of State on October 20, 2005	Exhibit 2.1 of our Current Report on Form 8-K dated October 20, 2005, filed with the commission on October 26, 2005
2.3	Agreement and Plan of Merger dated January 17, 2006, between Aries Ventures Inc. and Cardium Therapeutics, Inc.	Exhibit 2.4 of our Registration Statement on Form SB-2 (File No. 333-131104), filed with the commission on January 18, 2006
2.4	Certificate of Merger, as filed with the Delaware Secretary of State on January 17, 2006	Exhibit 2.5 of our Registration Statement on Form SB-2 (File No. 333-131104), filed with the commission on January 18, 2006

Exhibit Number	Description	Incorporated By Reference To
3(i)	Second Amended and Restated Certificate of Incorporation of Cardium Therapeutics, Inc. as filed with the Delaware Secretary of State on January 13, 2006	Exhibit 3(i) of our Registration Statement on Form SB-2 (File No. 333-131104), filed with the commission on January 18, 2006
3(ii)	Amended and Restated Bylaws of Cardium Therapeutics, Inc. as adopted on January 12, 2006	Exhibit 3(ii) of our Registration Statement on Form SB-2 (File No. 333-131104), filed with the commission on January 18, 2006
3(iii)	Certificate of Designation of Series A Junior Participating Preferred Stock	Exhibit 3.2 of our Registration Statement on Form 8-A, filed with the commission on July 11, 2006
4.1	Form of Warrant issued to Lead Investors and Mark Zucker	Exhibit 4.2 of our Current Report on Form 8-K dated October 20, 2005, filed with the commission on October 26, 2005
4.2	Form of Warrant issued to employees and consultants of Innercool Therapies, Inc.	Exhibit 4.1 of our Current Report on Form 8-K dated March 8, 2006, filed with the commission on March 14, 2006
4.3	Form of Common Stock Certificate for Cardium Therapeutics, Inc.	Exhibit 4.5 of our Annual Report on Form 10-KSB for the fiscal year ended December 31, 2005, filed with the commission on March 31, 2006
4.4	Form of Rights Agreement dated as of July 10, 2006, between Cardium Therapeutics, Inc. and Computershare Trust Company, Inc., as Rights Agent	Exhibit 4.1 of our Registration Statement on Form 8-A, filed with the commission on July 11, 2006
4.5	Form of Rights Certificate	Exhibit 4.2 of our Registration Statement on Form 8-A, filed with the commission on July 11, 2006
4.6	Form of Warrant issued to purchasers in 2007 private financing	Exhibit 4.1 of our Current Report on Form 8-K dated March 6, 2007, filed with the commission on March 6, 2007
4.7	Form of Warrant issued to Oppenheimer & Co. Inc. as Placement Agent in 2007 financing	Exhibit 4.7 of our Annual Report on Form 10-KSB for the fiscal year ended December 31, 2006, filed with the commission on March 15, 2007
4.8	Form of Warrant issued to purchasers in January 2008 financing	Exhibit 4.1 of our Current Report on Form 8-K dated January 30, 2008, filed with the commission on January 31, 2008

Exhibit Number	Description	Incorporated By Reference To
10.1	Transfer, Consent to Transfer, Amendment and Assignment of License Agreement effective as of August 31, 2005, by and among New York University, Collateral Therapeutics, Inc. and Cardium Therapeutics, Inc.	Exhibit 10.1 of our Current Report on Form 8-K dated October 20, 2005, filed with the commission on October 26, 2005
10.2	Transfer, Consent to Transfer, Amendment and Assignment of License Agreement effective as of August 31, 2005, by and among Yale University, Schering Aktiengesellschaft and Cardium Therapeutics, Inc.	Exhibit 10.2 of our Current Report on Form 8-K dated October 20, 2005, filed with the commission on October 26, 2005
10.3	Transfer, Consent to Transfer, Amendment and Assignment of License Agreement effective as of July 31, 2005, by and among the Regents of the University of California, Collateral Therapeutics, Inc. and Cardium Therapeutics, Inc.	Exhibit 10.3 of our Current Report on Form 8-K dated October 20, 2005, filed with the commission on October 26, 2005
10.4	Transfer, Consent to Transfer, Amendment and Assignment of License Agreement effective as of July 31, 2005, by and among the Regents of the University of California, Collateral Therapeutics, Inc. and Cardium Therapeutics, Inc.	Exhibit 10.4 of our Current Report on Form 8-K dated October 20, 2005, filed with the commission on October 26, 2005
10.5	Technology Transfer Agreement effective as of October 13, 2005, by and among Schering AG, Berlex, Inc., Collateral Therapeutics, Inc. and Cardium Therapeutics, Inc.	Exhibit 10.5 of Aries' Current Report on Form 8-K dated October 20, 2005, filed with the commission on October 26, 2005
10.6	Amendment to the Exclusive License Agreement for "Angiogenesis Gene Therapy" effective as of October 20, 2005, between the Regents of the University of California and Cardium Therapeutics, Inc.	Exhibit 10.6 of our Current Report on Form 8-K dated October 20, 2005, filed with the commission on October 26, 2005
10.7	Amendment to License Agreement effective as of October 20, 2005, by and between New York University and Cardium Therapeutics, Inc.	Exhibit 10.7 of our Current Report on Form 8-K dated October 20, 2005, filed with the commission on October 26, 2005
10.8	Second Amendment to Exclusive License Agreement effective as of October 20, 2005, by and between Yale University and Cardium Therapeutics, Inc.	Exhibit 10.8 of our Current Report on Form 8-K dated October 20, 2005, filed with the commission on October 26, 2005
10.9	2005 Equity Incentive Plan as adopted effective as of October 20, 2005*	Exhibit 10.9 of our Current Report on Form 8-K dated October 20, 2005, filed with the commission on October 26, 2005

Exhibit Number	Description	Incorporated By Reference To
10.10	Employment Agreement dated as of October 20, 2005 by and between Aries Ventures Inc. and Christopher Reinhard*	Exhibit 10.10 of our Current Report on Form 8-K dated October 20, 2005, filed with the commission on October 26, 2005
10.11	Employment Agreement dated as of October 20, 2005 by and between Aries Ventures Inc. and Tyler Dylan*	Exhibit 10.11 of our Current Report on Form 8-K dated October 20, 2005, filed with the commission on October 26, 2005
10.12	Office Lease between Cardium and Kilroy Realty, L.P. dated as of September 30, 2005 and commencing on November 1, 2005	Exhibit 10.12 of our Annual Report on Form 10-KSB for the fiscal year ended September 30, 2005, filed with the commission on December 22, 2005
10.13	Yale Exclusive License Agreement between Yale University and Schering Aktiengesellschaft dated September 8, 2000	Exhibit 10.13 of our Annual Report on Form 10-KSB for the fiscal year ended September 30, 2005, filed with the commission on December 22, 2005
10.14	Research and License Agreement between New York University and Collateral Therapeutics, Inc. dated March 24, 1997 (with amendments dated April 28, 1998 and March 24, 2000)	Exhibit 10.14 of our Annual Report on Form 10-KSB for the fiscal year ended September 30, 2005, filed with the commission on December 22, 2005
10.15	Exclusive License Agreement for "Angiogenesis Gene Therapy" between the Regents of the University of California and Collateral Therapeutics, Inc. dated as of September 27, 1995 (with amendments dated September 19, 1996, June 30, 1997, March 11, 1999 and February 8, 2000)	Exhibit 10.15 of our Annual Report on Form 10-KSB for the fiscal year ended September 30, 2005, filed with the commission on December 22, 2005
10.16	Placement Agency Agreement dated July 1, 2005 by and between Cardium Therapeutics, Inc. and National Securities Corporation	Exhibit 1.1 of our Current Report on Form 8-K dated October 20, 2005, filed with the commission on October 26, 2005
10.17	Asset Purchase Agreement dated as of March 8, 2006, by and among Cardium Therapeutics, Inc., Innercool Therapies, Inc. (a Delaware corporation), and Innercool Therapies, Inc. (a California corporation) (without schedules)	Exhibit 10.1 of our Current Report on Form 8-K dated March 8, 2006, filed with the commission on March 14, 2006
10.18	Executive Employment Agreement dated March 8, 2006 by and between Innercool Therapies, Inc. and Michael Magers*	Exhibit 10.19 of our Annual Report on Form 10-KSB for the fiscal year ended December 31, 2005, filed with the commission on March 31, 2006

Exhibit Number	Description	Incorporated By Reference To
10.19	Master License Agreement effective as of December 1, 1999, by and between SurModics, Inc. and Innercool Therapies, Inc.	Exhibit 10.20 of our Annual Report on Form 10-KSB for the fiscal year ended December 31, 2005, filed with the commission on March 31, 2006
10.20	Lease dated August 12, 1997, by and between R.G. Harris Co., and Elizabeth G. Harris, Henry K. Workman and Don C. Sherwood, Trustees of the Harris Family Revocable Trust (as landlord) and Copper Mountain Networks, Inc. (as tenant)	Exhibit 10.21 of our Annual Report on Form 10-KSB for the fiscal year ended December 31, 2005, filed with the commission on March 31, 2006
10.21	Lease Amendment No. 1 effective as of August 1, 1999, by and among R.G. Harris Co., and Elizabeth G. Harris, Henry K. Workman and Don C. Sherwood, Trustees of the Harris Family Revocable Trust (as landlord), Copper Mountain Networks, Inc. (as tenant), and Neurothermia, Inc. (as assignee)	Exhibit 10.22 of our Annual Report on Form 10-KSB for the fiscal year ended December 31, 2005, filed with the commission on March 31, 2006
10.22	Assignment, Assumption and Consent effective as of October 2, 1999, by and among Copper Mountain Networks, Inc., Neurothermia, Inc., and R.G. Harris Co., and Elizabeth G. Harris, Henry K. Workman and Don C. Sherwood, Trustees of the Harris Family Revocable Trust	Exhibit 10.23 of our Annual Report on Form 10-KSB for the fiscal year ended December 31, 2005, filed with the commission on March 31, 2006
10.23	Lease Amendment No. 2 effective as of October 16, 2002, by and between E.G. Sirrah, LLC, as successor-in-interest to R.G. Harris Co., and Elizabeth G. Harris, Henry K. Workman and Don C. Sherwood, Trustees of the Harris Family Revocable Trust, and Innercool Therapies, Inc. (formerly known as Neurothermia, Inc.)	Exhibit 10.24 of our Annual Report on Form 10-KSB for the fiscal year ended December 31, 2005, filed with the commission on March 31, 2006
10.24	Sublease dated August 30, 2005, by and between Innercool Therapies, Inc., and Acadia Pharmaceuticals Inc.	Exhibit 10.25 of our Annual Report on Form 10-KSB for the fiscal year ended December 31, 2005, filed with the commission on March 31, 2006
10.25	Asset Purchase Agreement dated as of August 11, 2006, by and among Cardium Therapeutics, Inc., Cardium Biologics, Inc. (a Delaware corporation), and Tissue Repair Company (a Delaware corporation)	Exhibit 10.26 of our Current Report on Form 8-K dated August 11, 2006, filed with the commission on August 15, 2006

Exhibit Number	Description	Incorporated By Reference To
10.26	Form of Securities Purchase Agreement, dated March 6, 2007, by an between Cardium Therapeutics, Inc. and each purchaser in 2007 private financing (agreements on substantially this form were signed by each purchaser in the financing)	Exhibit 10.1 of our Current Report on Form 8-K dated March 6, 2007, filed with the commission on March 6, 2007
10.27	Form of Lock-Up Agreement executed by each executive officer and director of Cardium Therapeutics, Inc. in connection with 2007 private financing	Exhibit 10.2 of our Current Report on Form 8-K dated March 6, 2007, filed with the commission on March 6, 2007
10.28	Placement Agent Agreement dated November 1, 2006, by and between Cardium Therapeutics, Inc. and Oppenheimer & Co. Inc.	Exhibit 10.3 of our Current Report on Form 8-K dated March 6, 2007, filed with the commission on March 6, 2007
10.29	Office Lease dated as of September 16, 2006 and commencing on January 20, 2007, by and between Cardium Therapeutics, Inc. and Jaguar Properties, L.L.C.	Exhibit 10.30 of our Annual Report on Form 10-KSB for the fiscal year ended December 31, 2006, filed with the commission on March 15, 2007
10.30	Amendment 1 effective on October 31, 2006, to Sublease dated August 30, 2005, by and between Innercool Therapies, Inc., and Acadia Pharmaceuticals Inc.	Exhibit 10.31 of our Annual Report on Form 10-KSB for the fiscal year ended December 31, 2006, filed with the commission on March 15, 2007
10.31	Amendment 2 effective as of January 2, 2007, to Sublease dated August 30, 2005, by and between Innercool Therapies, Inc., and Acadia Pharmaceuticals Inc.	Exhibit 10.32 of our Annual Report on Form 10-KSB for the fiscal year ended December 31, 2006, filed with the commission on March 15, 2007
10.32	Michigan License agreement between the Regents of the University of Michigan and Matrigen, Inc. dated July 13, 1995	Exhibit 10.33 of our Annual Report on Form 10-KSB for the fiscal year ended December 31, 2006, filed with the commission on March 15, 2007
10.33	Amendment to License agreement between the Regents of the University of Michigan and Matrigen, Inc. dated August 10, 1995	Exhibit 10.34 of our Annual Report on Form 10-KSB for the fiscal year ended December 31, 2006, filed with the commission on March 15, 2007
10.34	Second Amendment to the Michigan License agreement between the Regents of the University of Michigan and Selective Genetics, Inc. dated February 1, 2004	Exhibit 10.35 of our Annual Report on Form 10-KSB for the fiscal year ended December 31, 2006, filed with the commission on March 15, 2007

Exhibit Number	Description	Incorporated By Reference To
10.35	Third Amendment to Michigan License Agreement between the Regents of the University of Michigan, and Tissue Repair Company, and Cardium Biologics Inc. dated August 10, 2006	Exhibit 10.36 of our Annual Report on Form 10-KSB for the fiscal year ended December 31, 2006, filed with the commission on March 15, 2007
10.36	First Amendment to Lease Agreement between Cardium Therapeutics, Inc. and Kilroy Realty, L.P. dated February 15, 2007	Exhibit 10.37 of our Quarterly Report on Form 10-Q for the quarter ended March 31, 2007, filed with the commission on May 15, 2007
10.37	First Amendment dated March 16, 2007 to Employment Agreement dated as of October 20, 2005 by and between Aries Ventures Inc. and Christopher Reinhard*	Exhibit 10.38 of our Quarterly Report on Form 10-Q for the quarter ended March 31, 2007, filed with the commission on May 15, 2007.
10.38	First Amendment dated March 16, 2007 to Employment Agreement dated as of October 20, 2005 by and between Aries Ventures Inc. and Tyler Dylan*	Exhibit 10.39 of our Quarterly Report on Form 10-Q for the quarter ended March 31, 2007, filed with the commission on May 15, 2007.
10.39	Loan and Security Agreement, dated as of November 12, 2007, among Life Sciences Capital, LLC, InnerCool Therapies, Inc., Tissue Repair Company, and Cardium Therapeutics, Inc.	Exhibit 10.40 of our Quarterly Report on Form 10-Q for the quarter ended September 30, 2007, filed with the commission on November 14, 2007
10.40	Secured Promissory Note dated November 12, 2007 made by InnerCool Therapies Inc., Tissue Repair Company, and Cardium Therapeutics, Inc. for the benefit of Life Sciences Capital, LLC in the amount of $5 million	Exhibit 10.41 of our Quarterly Report on Form 10-Q for the quarter ended September 30, 2007, filed with the commission on November 14, 2007
10.41	Form of Warrant issued to Life Sciences Capital LLC	Exhibit 10.42 of our Quarterly Report on Form 10-Q for the quarter ended September 30, 2007, filed with the commission on November 14, 2007
10.42	Office Lease by and between Paseo Del Mar CA LLC and Cardium Therapeutics, Inc., effective as of November 19, 2007	Exhibit 10.43 of our Quarterly Report on Form 10-Q for the quarter ended September 30, 2007, filed with the commission on November 14, 2007
10.43	Form of Securities Purchase Agreement dated January 30, 2008, by and between Cardium Therapeutics, Inc. and each purchaser in the January 2008 financing (an agreement on substantially this form was signed by each purchaser in the financing)	Exhibit 10.1 of our Current Report on Form 8-K dated January 30, 2008, filed with the commission on January 31, 2008

Exhibit Number	Description	Incorporated By Reference To
10.44	Placement Agent Agreement dated January 30, 2008, by and between Cardium Therapeutics, Inc. and Empire Asset Management Company	Exhibit 10.2 of our Current Report on Form 8-K dated January 30, 2008, filed with the commission on January 31, 2008
10.45	First Amendment to Lease Agreement between Cardium and Kilroy Realty, L.P. dated as of February 15, 2007	Filed herewith
21	Subsidiaries of Cardium Therapeutics, Inc.	Filed herewith
23.1	Consent of Independent Registered Public Accounting Firm	Filed herewith
31.1	Rule 13a-14(a)/15d-14(a) Certification of Chief Executive Officer	Filed herewith
31.2	Rule 13a-14(a)/15d-14(a) Certification of Chief Financial Officer	Filed herewith
32	Section 1350 Certification	Filed herewith

* Indicates management contract or compensatory plan or arrangement.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, Cardium Therapeutics, Inc., the registrant, has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: March 14, 2008

CARDIUM THERAPEUTICS, INC.

By: /s/ CHRISTOPHER J. REINHARD

Christopher J. Reinhard,
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 Cardium Therapeutics, Inc., in the capacities and on the dates indicated.

Signature	Title	Date
/s/ CHRISTOPHER J. REINHARD (Christopher J. Reinhard)	Chief Executive Officer and Chairman of the Board of Directors (principal executive officer)	March 14, 2008
/s/ DENNIS M. MULROY (Dennis M. Mulroy)	Chief Financial Officer (principal financial officer and principal accounting officer)	March 14, 2008
/s/ TYLER M. DYLAN (Tyler M. Dylan)	Director	March 14, 2008
/s/ EDWARD W. GABRIELSON (Edward W. Gabrielson)	Director	March 14, 2008
/s/ MURRAY H. HUTCHISON (Murray H. Hutchison)	Director	March 14, 2008
/s/ ANDREW M. LEITCH (Andrew M. Leitch)	Director	March 14, 2008
/s/ GERALD J. LEWIS (Gerald J. Lewis)	Director	March 14, 2008
/s/ LON E. OTREMBA (Lon E. Otremba)	Director	March 14, 2008
/s/ RONALD I. SIMON (Ronald I. Simon)	Director	March 14, 2008

EXHIBIT 31.1

Certification of Chief Executive Officer
Pursuant to
Rule 13a-14(a)/15d-14(a)

I, Christopher J. Reinhard, Chief Executive Officer of Cardium Therapeutics, Inc., certify that:

1. I have reviewed this Annual Report on Form 10-K of Cardium Therapeutics, Inc. (the registrant);
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 14, 2008

/s/ Christopher J. Reinhard
Christopher J. Reinhard, Chief Executive Officer

EXHIBIT 31.2

Certification of Chief Financial Officer
Pursuant to
Rule 13a-14(a)/15d-14(a)

I, Dennis M. Mulroy, Chief Financial Officer of Cardium Therapeutics, Inc., certify that:

1. I have reviewed this Annual Report on Form 10-K of Cardium Therapeutics, Inc. (the registrant);
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 14, 2008

/s/ Dennis M. Mulroy
Dennis M. Mulroy, Chief Financial Officer

EXHIBIT 32

Certification
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)

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), each of the undersigned officers of Cardium Therapeutics, Inc., a Delaware corporation, does hereby certify, to such officer's knowledge, that the Annual Report on Form 10-K for the fiscal year ended December 31, 2007 of Cardium Therapeutics, Inc. fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)) and that information contained in such report fairly presents, in all material respects, the financial condition and results of operations of Cardium Therapeutics, Inc.

Date: March 14, 2008 — /s/ Christopher J. Reinhard
Christopher J. Reinhard, Chief Executive Officer

Date: March 14, 2008 — /s/ Dennis M. Mulroy
Dennis M. Mulroy, Chief Financial Officer

The foregoing certification is 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-K or as a separate disclosure document.

MANAGEMENT

Christopher J. Reinhard
Chairman of the Board,
Chief Executive Officer and President

Tyler M. Dylan, Ph.D., J.D.
Director, Chief Business Officer,
General Counsel, Executive Vice President
and Secretary

Randall W. Moreadith, M.D., Ph.D.
Executive Vice President and
Chief Medical Officer

Dennis M. Mulroy, CPA
Chief Financial Officer

Gabor M. Rubanyi, M.D., Ph.D.
Chief Scientific Officer

Anthony Andrasfay
Vice President – Clinical Operations

Mark McCutchen
Vice President – Business Development

Patricia L. Novak, Ph.D.
Vice President – Program Development

Barbara K. Sosnowski, Ph.D.
Vice President – Biologics Development and
Chief Operating Officer of Tissue Repair Company

Jennifer A. Spinella, MT (ASCP), RAC
Vice President –
Regulatory Affairs and Quality Assurance

Ted Williams
Vice President – Manufacturing
and Technical Operations

Michael L. Magers
President and Chief Operating Officer
of InnerCool Therapies

BOARD OF DIRECTORS

Christopher J. Reinhard
Chairman of the Board,
Chief Executive Officer and President

Tyler M. Dylan, Ph.D., J.D.
Director, Chief Business Officer,
General Counsel, Executive Vice President
and Secretary

Edward W. Gabrielson, M.D.
Physician and Faculty Member at
John Hopkins Hospital*

Andrew W. Leitch
Retired Partner, Deloitte Touche

Murray H. Hutchison
Retired, CEO and Chairman,
International Technology Corp.

Hon. Gerald J. Lewis
Retired, California Court of Appeal
and Director of AIM Mutual Funds

Lon E. Otremba
Chief Executive Officer & Director
Access 360 Media

Ronald L. Simon, Ph.D.
Independent Consultant

**Participation by Board Member does not constitute or imply endorsement by the Johns Hopkins University or the Johns Hopkins Hospital and Health System*

CORPORATE INFORMATION

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www.innercool.com
www.t-r-co.com

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Forward-Looking Statements
Except for statements of historical fact, the matters discussed in this Annual Report contain forward-looking statements, the accuracy of which are necessarily subject to certain events, risk and uncertainties that may be outside of our control. Statements that refer to our anticipated growth, strategies, and other characterizations of future events or circumstances, including statements expressing general optimism about the development of our products, are forward-looking statements. When considering forward-looking statements, you should carefully review the risks, uncertainties and other cautionary statements set forth in the enclosed Annual Report on Form 10-KSB and other filings we make with the Securities and Exchange Commission that could cause actual events to differ materially from those expressed or implied by the forward-looking statements.

Trademarks
 Cardium Therapeutics™ and Generx™ are trademarks of Cardium Therapeutics, Inc. Tissue Repair™, Gene Activated Matrix™, GAM™ and Excellarate™ are trademarks of the Tissue Repair Company. InnerCool Therapies®, InnerCool®, Celsius Control System™, Accutrol™, CoolBlue™ and RapidBlue™ are trademarks of InnerCool Therapies, Inc.

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