

Cardium Therapeutics, Inc.  
Form 424B5  
February 17, 2010  
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**The information in this preliminary prospectus supplement is not complete and may be changed. A registration statement relating to the securities has become effective under the Securities Act of 1933, as amended. This preliminary prospectus supplement and the accompanying prospectus are not an offer to sell these securities and they are not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.**

**Filed Pursuant to Rule 424(b)(5)  
File No. 333-147947**

**SUBJECT TO COMPLETION**

**DATED: February 17, 2010**

PRELIMINARY PROSPECTUS SUPPLEMENT

(To Prospectus dated December 19, 2007)

**Up to \$10,000,000 of Units**

**With Each Unit Consisting of Ten Shares of Common Stock and**

**a Warrant to Purchase Five Shares of Common Stock**

**\$ Per Unit**

We are offering up to \$10,000,000 of units, each unit consisting of ten shares of our common stock, par value \$0.0001 per share, and a warrant to purchase five shares of our common stock. Each warrant entitles its holder to purchase five shares of our common stock at an exercise price of \$ per share and will be exercisable at any time on or after six months from the date of issuance for a period of five years from that date. Units will not be issued or certificated. The units will separate immediately and the common stock and warrants will be issued separately and the common stock will trade separately. The units are being offered and sold at a price of \$ per unit. The price per unit is being allocated as \$ per share of common stock and \$0.01 per warrant.

This is a reasonable best efforts offering by us, with Dawson James Securities, Inc. acting as our exclusive placement agent. We have entered into a letter agreement with the placement agent, relating to the units offered by this prospectus supplement. The placement agent is not purchasing or selling any securities pursuant to this prospectus supplement or the accompanying prospectus, nor is it required to sell any specific number or dollar amount of the securities offered hereby, but will use its reasonable best efforts to arrange for the sale of the securities being offered. See the section entitled "Plan of Distribution" beginning on page S-17 of this prospectus supplement for more information regarding these arrangements. The placement agent will receive compensation for sales of the securities offered hereby at a fixed commission rate of 7.0% of the gross proceeds of the offering. We also agreed to issue the placement agent warrants to purchase the number of shares of common stock equal to 5.0% of the aggregate shares of common stock sold in this offering at an exercise price of 125% of the offering price described herein. The warrants issued to the placement agent will be exercisable upon the six month anniversary of their date of issuance through December 19, 2012.

At the election of us and Dawson James Securities, Inc., we may elect to increase the aggregate offering amount in this offering by up to 20%, not to exceed \$12,000,000 in the aggregate.

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We have not arranged to place the funds received from this offering in an escrow, trust or similar account. We will open and maintain an account at the clearing agent designated by Dawson James Securities, Inc. to facilitate the transactions contemplated by the letter agreement. At the closing of the offering, purchasers will make payments directly to that account and we will issue and deliver the securities. We expect the closing to occur on or about March 5, 2010. Our common stock is traded on the NYSE Amex under the symbol **CXM**. We do not intend to apply for listing of the warrants on any securities exchange. On February 16, 2010, the closing sale price of our common stock was \$0.69 per share.

**Investing in our common stock involves risks. Before investing in our common stock you should carefully consider the risk factors described in Risk Factors in this prospectus supplement beginning on page S-9, and in other documents incorporated by reference, including our Annual Report on Form 10-K for our fiscal year ended December 31, 2008.**

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

We urge you to carefully read this prospectus supplement and the accompanying prospectus which will describe the terms of the offering before you make your investment decision.

### **DAWSON JAMES SECURITIES, INC.**

The date of this prospectus supplement is February , 2010

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In making your investment decision, you should rely only on the information contained in or incorporated by reference in this prospectus supplement and in the accompanying prospectus. Neither Cardium Therapeutics nor the placement agent has authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. Neither Cardium Therapeutics nor the placement agent is making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted.

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**ABOUT THIS PROSPECTUS SUPPLEMENT**

Unless otherwise stated or the context otherwise requires, references in this prospectus supplement or the accompanying prospectus to Cardium, we, our, us or similar references are to Cardium Therapeutics, Inc. and its consolidated subsidiaries.

This document consists of two parts. The first part is this prospectus supplement, which describes the specific terms of this offering and other matters relating to us. The second part is the accompanying prospectus, which gives more general information about securities we may offer from time to time, some of which may not apply to this offering. This prospectus supplement and the accompanying prospectus are part of a shelf registration statement that we filed with the Securities and Exchange Commission (or the SEC) using the SEC's shelf registration rules.

You should read both this prospectus supplement and the accompanying prospectus together with additional information described in this prospectus supplement in the section titled Where You Can Find More Information. If there is any inconsistency between the information in this prospectus supplement and the accompanying prospectus, you should rely on the information contained in this prospectus supplement.

Any statement made in this prospectus supplement, in the accompanying prospectus or in any document incorporated or deemed to be incorporated by reference in this prospectus supplement or the accompanying prospectus will be deemed to be modified or superseded for purposes of this prospectus supplement to the extent that a statement contained in this prospectus supplement or in any other subsequently filed document that is also incorporated or deemed to be incorporated by reference in this prospectus supplement or the accompanying prospectus modifies or supersedes that statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus supplement or the accompanying prospectus.

The information in this prospectus supplement is accurate as of the date on the front cover. You should not assume that the information contained in this prospectus supplement or in the accompanying prospectus is accurate as of any date other than the date on the front of the applicable document, or that information incorporated by reference is accurate as of any date other than the date of the document incorporated by reference. Our business, financial condition, results of operations and prospects or other important facts or circumstances may have changed since those dates.

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**FORWARD-LOOKING STATEMENTS AND IMPORTANT FACTORS**

The Private Securities Litigation Reform Act of 1995 provides a safe harbor for forward-looking statements. This prospectus supplement, the accompanying prospectus, and the documents incorporated herein or therein by reference contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the Securities Act) and Section 21E of the Securities Exchange Act of 1934, as amended (the Exchange Act). Additionally, we or our representatives may, from time to time, make other written or verbal forward-looking statements. In this prospectus supplement, and the documents incorporated by reference herein, we discuss plans, expectations and objectives regarding our business, financial condition and results of operations. Without limiting the foregoing, statements that are in the future tense, and all statements accompanied by terms such as believe, project, expect, trend, estimate, forecast, assume, intend, plan, target, preliminary, will likely result, will continue, and variations thereof and similar terms are intended to be forward-looking statements as defined by federal securities laws. We caution you not to place undue reliance on forward-looking statements, which are based upon assumptions, expectations, plans and projections. Forward-looking statements are subject to risks and uncertainties, including those identified in the Risk Factors included in this prospectus supplement and in the documents incorporated by reference herein, that may cause actual results to differ materially from those expressed or implied in the forward-looking statements. Forward-looking statements speak only as of the date when they are made. Except as required by applicable law, we do not undertake any obligation to update forward-looking statements to reflect events, circumstances, changes in expectations, or the occurrence of unanticipated events after the date of those statements. We intend that all forward-looking statements made will be subject to safe harbor protection of the federal securities laws pursuant to Section 27A of the Securities Act and Section 21E of the Exchange Act.

Forward-looking statements are based upon, among other things, our assumptions with respect to:

future financial and operating results;

our ability to fund operations and business plans, and the timing of any funding or corporate development transactions we may pursue;

the timing, conduct and outcome of discussions with regulatory agencies, regulatory submissions and clinical trials, including the timing for completion of enrollment in clinical studies;

our beliefs and opinions about the safety and efficacy of our products and product candidates and the results of our clinical studies and trials;

our 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, devices or key product components, or to provide other services, of an acceptable quality on a cost-effective basis;

our ability to enter into acceptable relationships with one or more development or commercialization partners to advance the commercialization of new products and product candidates and the timing of any product launches; our growth, expansion and acquisition strategies, the success of such strategies, and the benefits we believe can be derived from such strategies;

our intellectual property rights and those of others, including actual or potential competitors;

the outcome of litigation matters;

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our personnel, consultants and collaborators;

operations outside the United States;

current and future economic and political conditions;

overall industry and market performance;

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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.

You should consider the limitations on, and risks associated with, forward-looking statements and not unduly rely on the accuracy of predictions contained in such forward-looking statements. As noted above, these forward-looking statements speak only as of the date when they are made. Moreover, in the future, we may make forward-looking statements through our senior management that involve the risk factors and other matters described in our most recent Annual Report on Form 10-K and in this prospectus supplement, as well as other risk factors subsequently identified, including, among others, those identified in our filings with the SEC in our Quarterly Reports on Form 10-Q and our Current Reports on Form 8-K.

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### **SUMMARY**

*The following summary is provided solely for your convenience. It is not intended to be complete. You should read carefully this entire prospectus supplement, the accompanying prospectus and all the information included or incorporated by reference herein or therein carefully, especially the risks discussed in the section titled Risk Factors beginning on page S-5 of this prospectus supplement and in the documents incorporated by reference herein.*

### **Our Business**

We are a medical technology company primarily focused on the development and commercialization of novel therapeutics and medical devices for cardiovascular and other diseases. Since we were initially funded in October 2005, we have made three strategic acquisitions and assembled a portfolio of innovative late-stage cardiovascular and regenerative medicine product candidates. We have established a pipeline of innovative products that are divided into two operating units, Cardium Biologics and Tissue Repair Company.

#### ***Cardium Biologics***

Our lead product candidate from our Cardium Biologics unit is Generx (alferminogene tadenovec, Ad5FGF-4), which is being developed as a potential treatment for myocardial ischemia (insufficient blood flow within the heart muscle) due to coronary heart disease. Generx represents a new therapeutic class of cardiovascular biologics designed to promote collateral angiogenesis, a natural process of blood vessel growth within the heart muscle, to increase blood supply to ischemic areas of the heart following a one-time intracoronary administration.

The FDA has cleared Generx for a Phase 3 clinical study in the U.S. for women with late stage coronary artery disease who are unresponsive to traditional drug therapy and are not appropriate candidates for mechanical revascularization (angioplasty/stents or by-pass surgery). However, in view of published results from an independent 10-year study among men and women with chronic coronary heart disease showing that improved collateral circulation was associated with approximately 66% lower cardiac mortality (Circulation 116:975-983, 2007), and prior studies showing that a one-time infusion of Generx has the potential to achieve improved coronary collateral circulation in both men and women at levels approximately equivalent to bypass surgery as measured by SPECT imaging (Journal of American College of Cardiology 42(8):1339-1347, 2003), we believe that Generx could potentially be developed as a cost effective front-line therapy for patients with coronary artery disease in the large markets of newly-industrializing countries who often do not have access to costly procedures such as bypass surgery. We also believe that having such additional clinical evidence confirming the safety and effectiveness of Generx for improving coronary collateral circulation in men and women with severe coronary artery disease could potentially be used to optimize and broaden commercial development pathways in the U.S. and other industrialized countries.

#### ***Tissue Repair Company***

On December 3, 2009 our Tissue Repair Company subsidiary filed a 510(k) premarket notification with the U.S. Food and Drug Administration (FDA) for its collagen-based Excellagen topical gel for wound healing of diabetic foot ulcers and potentially other wounds. Our 510(k) filing covers ExcellagenXL and ExcellagenFX, advanced wound care management medical devices comprising customized protein-based gels designed for topical application by health care professionals for patients with dermal wounds, which can include diabetic ulcers, pressure ulcers, venous ulcers, tunneled/undermined wounds, surgical and trauma wounds, second degree burns, and other types of wounds. The 510(k) submission is based in part on positive findings



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from our Phase 2b Matrix clinical study, reported on October 14, 2009, demonstrating substantial improvements in wound healing responses in patients with non-healing diabetic foot ulcers following one or two applications of Excellagen<sup>®</sup>, an enhanced, customized collagen-based gel matrix. ExcellagenXL<sup>®</sup> is designed for use by health care professionals in a clinical setting and as an adjunct to standard of care topical wound therapy, which in the case of diabetic ulcers typically includes surgical debridement and off-loading. The ExcellagenFX<sup>®</sup> kit is designed for use by health care providers in a clinical setting in the treatment of larger soft tissue or tunneling wounds that may occur with pressure, venous and diabetic ulcers, as well as surgical wounds. The ExcellagenFX<sup>®</sup> flowable matrix product allows for deeper administration and direct intimate contact with the wound bed in these more complex, irregular and difficult to access wounds.

For the Excellerate<sup>®</sup> product candidate, which comprises a mixture of our collagen-based gel with a biologic encoding a stimulatory growth factor (PDGF-B), we plan to introduce a combined formulation that allows for longer term stability without the need to maintain the biologic separately at -70 degrees centigrade, and to introduce an easier to use single-syringe product candidate into clinical studies designed to further evaluate the safety and effectiveness of Excellerate<sup>®</sup>, and to allow for repeat dosing of Excellerate<sup>®</sup> for wounds that are responding to treatment but have not yet achieved complete closure.

### ***Recent Developments and Plans***

Since December 31, 2008, we (i) completed the sale of Innercool Therapies to Royal Philips Electronics (ii) completed the Matrix Phase 2b clinical study for the Excellerate topical gel, our collagen-based, Gene Activated Matrix product candidate for wound healing of diabetic foot ulcers (iii) identified Excellagen topical gel, as a potentially new, customized collagen-based product candidate, based on additional data from our Matrix Phase 2b clinical study, for advanced wound care management by physicians for patients topical wounds that include diabetic ulcers, as well as pressure ulcers, venous ulcers surgical and trauma wounds and other types of wounds, (iv) submitted a 510(k) premarket notification filing with the FDA seeking marketing clearance of its Excellagen<sup>®</sup> and (v) announced the Company's new orthobiologics initiative that will seek to leverage positive pre-clinical research and our Gene Activated Matrix technology platform, developed by our wholly-owned subsidiary The Tissue Repair Company, for the potential healing of non-union bone fractures and/or spinal fusion.

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

complete the 510(k) registration process for Excellagen<sup>®</sup> and then advance Excellagen<sup>®</sup> into a product distribution or other commercialization arrangement;

advance the Generx<sup>®</sup> product candidate into confirmatory studies designed to further demonstrate the safety and effectiveness of Generx<sup>®</sup> for the improvement of myocardial blood flow, and pursue potential commercialization partnerships for newly-industrializing countries;

finalize a commercially improved pre-mixed version of the Excellerate<sup>®</sup> product candidate to be advanced into confirmatory studies designed to demonstrate the safety and effectiveness of Excellerate<sup>®</sup> for the potential treatment of non-healing diabetic ulcers and potentially other wounds;

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.

Our business is focused on the acquisition and strategic development of product opportunities or businesses having the potential to address significant unmet medical needs, and definable pathways to commercialization, partnering or other monetization following the achievement of corresponding development objectives. Consistent



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with our overall business strategy, as our product opportunities and businesses are advanced and corresponding valuations established, we intend to consider various corporate development transactions designed to place our product candidates into larger organizations or with partners having existing commercialization, sales and marketing resources, and a need for innovative products. Such transactions could involve the sale, partnering or other monetization of particular product opportunities or businesses.

*Additional Information.* More detailed information about our products, product candidates, our intended efforts to develop our products and our business strategy is included in our Annual Report on Form 10-K for the year ended December 31, 2008.

Our principal executive offices are located at 12255 El Camino Real, Suite 250, San Diego, California 92130 and our telephone number is (858) 436-1000.

We maintain a website at <http://www.cardiumthx.com>. The information contained on our website is not incorporated by reference in this prospectus supplement or the accompanying prospectus, and you should not consider it a part of this prospectus supplement or the accompanying prospectus.

For additional information about us, you should refer to the information described in **Where You Can Find More Information** in this prospectus supplement.

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**The Offering**

|   |   |
|---|---|
| Issuer:   | Cardium Therapeutics, Inc.  |
| Securities Offered:   | Up to            units. Each unit will consist of ten shares of our common stock, \$0.0001 par value per share, and a warrant to purchase five shares of our common stock. In addition, we will issue warrants to purchase up to an additional            shares of our common stock to the placement agent, at an exercise price of \$            per share.   |
| Offering Price:   | \$            per unit. The price per unit is being allocated as \$ per share of common stock and \$0.01 per warrant.   |
| Description of Warrants:  | The warrants will be exercisable at a price of \$            per share of common stock at any time on or after the six month anniversary of the date of issuance for a period of five years from that date.   |
| Number of shares of common stock to be outstanding after this offering <sup>(1)</sup> : | Up to            shares, which does not include            shares of common stock issuable upon exercise of the warrants included in the offered units or the shares of common stock issuable upon exercise of the placement agent warrants.  |
| Manner of Offering  | Reasonable best efforts offering that may be made from time to time through our placement agent, Dawson James Securities, Inc. See Plan of Distribution on page S-13.   |
| No Minimum  | There is no minimum for this offering. We have not arranged to place the funds received from this offering in an escrow, trust or similar account. We will open and maintain an account at the clearing agent designated by Dawson James Securities, Inc. to facilitate the transactions contemplated by the letter agreement. At the closing of the offering, purchasers will make payments directly to that account and we will issue and deliver the securities. |
| Use of Proceeds:  | We intend to use the net proceeds from this offering for general corporate purposes, which may include the development and commercialization of our product candidates, repayment of indebtedness, and the acquisitions of businesses, products, technologies or licenses that are complementary to our business. See Use of Proceeds on page S-14.   |

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NYSE Amex Symbol

CXM

Risk Factors:

Investing in our common stock involves risks. See the section titled Risk Factors beginning on page S-9 of this prospectus supplement and in the documents incorporated by reference herein for a discussion of factors you should carefully consider before deciding to invest in our common stock.

(1) The number of shares of our common stock to be outstanding immediately after this offering is based on 55,182,174 shares of our common stock outstanding as of February 10, 2010. That number does not include the shares issuable upon exercise or conversion of the following derivative securities outstanding on that date: (i) up to 23,561,356 shares of common stock issuable upon exercise of warrants, which are exercisable at prices ranging from \$1.30 to \$3.78 per share; (ii) 4,025,000 shares of common stock issuable upon exercise of options and employee warrants, of which approximately 2,560,200 shares are exercisable; and (iii) 2,321,169 shares of common stock available for future grants under our stock option plans.

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**RISK FACTORS**

*Your investment in our shares of common stock is subject to certain risks. This prospectus supplement does not describe all of those risks. You should consult your own financial and legal advisors about the risks entailed by an investment in our shares of common stock and the suitability of your investment in our shares of common stock in light of your particular circumstances. For a discussion of some of the factors you should carefully consider before deciding to purchase any of our shares of common stock that may be offered, please read "Risk Factors" in the documents incorporated by reference herein, as well as those risk factors included below. Additional risks and uncertainties not currently known to us or that we currently deem immaterial may also adversely affect our business and operations. If any of the matters described in the risk factors were to occur, our business, financial condition, results of operations, cash flows or prospects could be materially adversely affected. In such case, you could lose all or a portion of your investment.*

**Risks Related to the Offering**

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

Because the price per share of our common stock being offered is substantially higher than the book value per share of our common stock, you will suffer substantial dilution in the net tangible book value of the common stock you purchase in this offering. Based on an assumed offering price to the public of \$            per share, if you purchase shares of common stock in this offering, and without regard to the potential exercise of the warrants offered hereby, you will suffer immediate and substantial dilution of \$            per share in the net tangible book value of the common stock. See the section entitled "Dilution" below for a more detailed discussion of the dilution you will incur if you purchase common stock in this offering.

*We may not realize all of the net proceeds from this offering.*

This is a reasonable best efforts offering that may be made from time to time through our placement agent. There is no minimum for this offering and the placement agent is not obligated to purchase all of the units. We may not be able to sell all of the units. If we do not receive all of the net proceeds from this offering, we may not be able to implement our business plan and may be required to seek alternative financing in order to implement such business plan.

*The warrants are not immediately exercisable.*

The warrants being offer in this offering, which are exercisable for \$            per share of common stock, cannot be exercised until 181 days after the date of issuance and will expire on the fifth anniversary of their initial exercise date. If the market price of our common stock does not exceed the exercise price of the warrants during the period in which the warrants are exercisable, the warrant may not have any value.

*There is no public market for the warrants.*

There is no established public trading market for the warrants being offered in this offering, and we do not expect a market to develop. In addition, we do not intend to apply for listing the warrants on any securities exchange or automated quotation system. Without an active market, the liquidity of the warrants will be limited.

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### **Risks Related to Our Business**

*Our product candidates require regulatory approvals, and in some cases additional prior development or testing, 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, we will not be able to generate revenues and cash flows from operations, and we may have to curtail or cease our operations.*

Our Excellagen collagen-based product candidates are expected to be regulated under an FDA 510(k) premarketing notification procedure allowing us or a commercialization partner to market and sell once 510(k) marketing clearance is obtained. There can be no assurance that marketing clearance will be achieved in a timely manner or at all, or that the FDA will not require additional studies or information to be provided for the 510(k) filing to be considered both complete and acceptable.

Our other product candidates require additional research and development, clinical testing and regulatory clearances before we can market them. To our knowledge, 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 rely on third party clinical research organizations to manage our clinical trials. Under this business model, we have less control over the clinical trials and may experience delays or errors in our clinical trials that could adversely affect our business, financial results and commercial prospects.*

To obtain regulatory approvals for new products, 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 currently rely on third party clinical research organizations to assist us in designing, administering and assessing the results of those trials. In relying on those third parties, we are dependent upon them to timely and accurately perform their services. We have experienced, and in the future may experience, delays in our clinical trials. Any such delay will result in additional costs, and





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defer any prospective opportunities to monetize the product candidate. 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 third party organizations do not accurately collect and assess the trial data we may discontinue development of viable product candidates or continue allocating resources to the development and marketing of product candidates that are not efficacious. Either outcome could result in significant financial harm to our company and damage to our reputation.

***If we are unable to enter into successful sales, marketing and distribution agreements with third parties, we may not be able to successfully commercialize our products.***

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In order to commercialize any products successfully, we expect to principally rely on collaborations or other arrangements with third parties to sell, market and distribute our products. To the extent that we enter into licensing, distributorship, co-promotion, co-marketing or other collaborative arrangements, our product revenues are likely to be lower than if we directly marketed and sold our products, and any revenues we receive will depend upon the efforts of third parties, whose efforts may not meet our expectations or be successful.

For example, we expect to depend upon the efforts of third parties to promote and sell our Excellagen products if and when they achieve FDA 510(k) marketing clearance, as well our Generx product if it should achieve regulatory approval, but there can be no assurance that the efforts of such third parties will meet our expectations or result in any significant product sales. While third parties would be largely responsible for the timing and extent of sales and marketing efforts, they may not dedicate sufficient resources to our product opportunities, and our ability to cause them to devote additional resources or to otherwise promote sales of our

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products may be limited. In addition, commercialization efforts could be negatively impacted by the delay or failure to obtain additional supportive data for our products. In some cases, third party partners could be responsible for conducting additional clinical trials to obtain such data and our ability to increase the efforts and resources allocated to these trials may be limited.

*We sold all of the assets and business of our InnerCool Therapies, Inc. in July 2009 and may face claims for damages from the buyer if representations and warranties that we have made in connection with that sale have provided the buyer of those assets with certain indemnification rights.*

On July 10, 2009 we entered into an Asset Purchase Agreement with Phillips Electronics North America Corporation ( Phillips ), pursuant to which we sold to Phillips certain assets and liabilities of our Innercool Therapies, Inc. subsidiary. The sale closed on July 24, 2009. In connection with the transaction, Phillips assumed only certain specified liabilities relating to the business. We retained responsibility for all other liabilities of the business, including contingent and unknown claims that may have existed at the time of sale. Also, in connection with the sale we made certain representations and warranties to Phillips that are standard for such transactions, including representations regarding the condition of the Innercool Therapies assets and liabilities. We have agreed to indemnify Phillips for any damages arising from the breach of any of those representations and warranties, as well as any breach of any covenant under the Asset Purchase Agreement. Our liability for breach of certain representations is contractually capped at \$3.5 million; however, claims for damages arising out of certain Excepted Representations or any covenant under the Asset Purchase Agreement are not subject to the contractual limitation. Under the terms of the Asset Purchase Agreement, we deposited \$1,125,000 of the proceeds from the sale into an escrow account to act as security for our indemnification obligations. We may, however, receive claims in excess of the funds in escrow. Any substantial indemnification claim under the Asset Purchase Agreement, or the defense of any such claim, could result in substantial costs, which would impair our financial condition and disrupt our ability to operate our remaining business.

***Additional Risks Related to our Business, Industry and an Investment in our Common Stock***

*We have been in noncompliance with certain listing requirements of the NYSE Amex and a delisting from the exchange could adversely affect the price of our common stock.*

Our common stock is currently listed on the NYSE Amex (the Exchange ). To maintain that listing, we must comply with the applicable listing standards of the Exchange. On December 28, 2009, we received notice from the staff of the Exchange that, based on their review of publicly available information, we do not currently meet certain of the Exchange s continued listing standards as set forth in Part 10 of the Exchange s Company Guide. In particular, the Exchange noted we are not considered to be in compliance with (i) Section 1003(a)(i) of the Company Guide because we reported stockholders equity of less than \$2,000,000 and losses from continuing operations and net losses in two of our three most recent fiscal years, and (ii) Section 1003(a)(iv) of the Company Guide because we reported stockholders equity of less than \$4,000,000 and losses from continuing operations and net losses in three of our most recent fiscal years.

The Exchange has asked us to supplement our previously-filed plan of compliance (the Plan ) advising the Exchange of the actions we have taken or will take to regain compliance with Sections 1003(a)(i) and 1003(a)(ii) of the Company Guide by June 23, 2010. Prior to the January 27, 2010 deadline, we provided a supplement to the Plan to the Exchange which is based in large part on increasing stockholders equity through an additional equity raise such as this offering.

Since our noncompliance is fundamentally related to the level of our stockholders equity, which would be substantially improved in connection with the successful completion of this offering, we expect that we should be able to regain compliance in accordance with our supplement to the Plan. However, if this offering does not raise substantial net proceeds, if our Plan supplement is rejected, if we are not in compliance with the continued listing standards at the end of the Plan period, or we do not make progress consistent with the Plan during such period,

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then the Exchange could initiate delisting proceedings. If our common stock were delisted from the Exchange, we believe our common stock would likely be traded on the OTC Bulletin Board or the Pink Sheets, which may reduce the liquidity of, and may adversely affect the price of, our common stock.

***Additional Risks***

For a discussion of additional risks associated with our business, our industry and an investment in our common stock, see the section entitled Risk Factors in our most recent Annual Report on Form 10-K, as filed with the SEC on March 26, 2009.

**Table of Contents****USE OF PROCEEDS**

We intend to use the net proceeds from the sale of securities offered in this prospectus supplement for general corporate purposes, which may include the development and commercialization of our product candidates, repayment of indebtedness, and the acquisitions of businesses, products, technologies or licenses that are complementary to our business.

**CAPITALIZATION**

The following table summarizes our cash and cash equivalents and capitalization as of September 30, 2009 on an actual and adjusted basis to reflect the sale of \$10 million of units in this offering and after deducting placement agent fees and estimated offering expenses paid by us (excluding any proceeds received upon exercise of warrants).

You should read this information in conjunction with Management's Discussion and Analysis of financial Condition and Results of Operations and our financial statements and notes thereto that are incorporated by reference in this prospectus supplement and the accompanying prospectus.

| (in thousands)   | September 30, 2009 |               |
|--|--------------------|---------------|
|  | Actual             | As Adjusted   |
| Cash and cash equivalents  | \$ 4,418,910       | \$ 13,618,910 |
| Short-term debt, net of debt discount of \$348,806 at September 30, 2009:  | \$ 3,635,661       | \$ 3,635,661  |
| Stockholders' deficiency:  |                    |               |
| Common stock, \$0.0001 par value, 200,000,000 shares authorized; 50,430,248 shares issued and outstanding, historical and 5,043 shares issued and outstanding, as adjusted | 5,043              |               |
| Additional paid-in capital   | 67,926,756         |               |
| Deficit accumulated during developmental stage   | (85,541,759)       | (85,541,759)  |
| Total stockholders' deficiency   | \$ (17,609,960)    | \$            |
| Total capitalization   | \$ (13,974,299)    | \$            |

**DIVIDEND POLICY**

We have never paid cash dividends and have no current plans to pay any dividends on our common stock.

**DILUTION**

If you invest in our common stock, your interest will be diluted by an amount equal to the difference between the public offering price and the net tangible book value per share of common stock after this offering.

We calculate net tangible book value per share by dividing our net tangible book value (total assets less intangible assets and total liabilities) by the number of outstanding shares of common stock. Net tangible book value at September 30, 2009, was \$( ), or \$( ) per share of common stock. After giving effect to the sale of 5,043 shares of common stock offered by this prospectus supplement at a price of \$ per share, and without regard to the potential exercise of warrants offered hereby, and after deducting estimated offering expenses and sales commissions payable by us, our adjusted net tangible book value at September 30, 2009 (assuming no exercise of the over-allotment option) would have been \$( ), or \$( ) per share of common stock. This

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represents an immediate increase in net tangible book value of \$ \_\_\_\_\_ per share to existing shareholders and an immediate and substantial dilution of \$ \_\_\_\_\_ per share to new investors. The following table illustrates this per share dilution:

|   |    |
|---|----|
| Public offering price per shares of common stock  | \$ |
| Net tangible book value (deficit) per share at September 30, 2009   | \$ |
| Increase in net tangible book value per share attributable to offering                                    | \$ |
| As adjusted net tangible book value per share as September 30, 2009, after giving effect to this offering | \$ |
| Dilution per share to new investors in this offering  | \$ |

The exercise of outstanding options having an exercise price less than the public offering price will increase dilution to new investors.

**DESCRIPTION OF SECURITIES TO BE OFFERED**

*The following is a brief summary of the material terms and provisions of the common stock and warrants issuable in this offering. The summary of the warrants is subject to and qualified in its entirety by, the form of warrant. We urge you to review the form of warrant which will be filed as an exhibit to a Current Report on Form 8-K with the SEC in connection with this offering, for a complete description of the terms and conditions applicable to the warrants. This prospectus supplement also relates to the offering of the shares of our common stock to be issued upon exercise, if any, of the warrants issues to the investors in this offering.*

**Description of Common Stock**

The material terms and provisions of our common stock are described under the caption **Description of Common Stock** starting on page 9 of the accompanying prospectus.

**Description of Warrants**

For each unit purchased, each purchaser will receive a warrant to purchase five shares of common stock. The exercise price per share of common stock under each warrant will be \$ \_\_\_\_\_. Each warrant may be exercised any time on or after the six month anniversary of the date of issuance and until the five year anniversary of the date it first became exercisable.

*Exercise.* Holders of the warrants may exercise their warrants to purchase shares of our common stock for cash by delivering an exercise notice, appropriately completed and duly signed, and payment of the exercise price for the number of shares to which the warrant is being exercised. In addition, the holders may exercise warrants by means of a cashless exercise if, at any time of exercise, there is no effective registration statement registering, or no current prospectus available for, the issuance of the shares underlying the warrants. This option entitles the warrant holder to elect to receive fewer shares of common stock without paying the cash exercise price. The number of shares to be issued would be determined by a formula based on the total number of shares to which the warrant holder is entitled, the market value of the common stock on the date of exercise and the applicable exercise price of the warrants. Warrants may be exercised in whole or in part for full shares of common stock. The shares of common stock issuable on exercise of the warrants will be, when issued in accordance with the warrants, duly and validly authorized, issued and fully paid and non-assessable. We will authorize and reserve at least that number of shares of common stock equal to the number of shares of common stock issuable upon exercise of all outstanding warrants.

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*Buy-in Compensation.* We provide certain buy-in rights to a holder if we fail to deliver the shares of common stock underlying the warrants by the date on which delivery of such stock certificate is required by the warrant. The buy-in rights apply if the holder is required to purchase (in an open market transaction or otherwise) shares of our common stock to deliver in satisfaction of a sale by the holder of the shares that the holder anticipated receiving from us upon exercise of the warrant. In this event, we will:

pay cash to the holder in an amount equal to the buy-in price, meaning (i) the holder's total purchase price (including brokerage commissions, if any) for the shares of common stock so purchased less (ii) the amount obtained by multiplying the number of such shares and the price at which the sell order was executed; and

at the holder's discretion, either reinstate the portion of the warrant and equivalent number of shares for which exercise was not honored or deliver to the holder the number of shares of common stock that would have been issued had we timely delivered the warrant shares.

*Fundamental Transaction.* If, at any time while the warrant is outstanding, (1) we effect any merger or consolidation with or into another person or entity, (2) we effect any sale of all or substantially all of our assets in one or a series of related transactions, (3) any tender offer or exchange offer approved or authorized by our board of directors (whether by us or another person or entity) is completed pursuant to which holders of common stock are permitted to tender or exchange their shares for other securities, cash or property, or (4) we effect any reclassification of the common stock or any compulsory share exchange pursuant to which the common stock is effectively converted into or exchanged for other securities, cash or property (in any such case, a Fundamental Transaction), then the holder shall have the right thereafter to receive, upon exercise of the warrant, the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of the number of shares then issuable upon exercise of the warrant. Notwithstanding the foregoing, upon a Fundamental Transaction that is an all cash transaction, a transaction under Rule 13e-3 of the Securities Act of 1934, as amended, or involving a person or entity not traded on a national securities exchange, we or our successor shall pay within 30 days after the consummation of the Fundamental Transaction, cash in an amount equal to the value of the warrant as determined in accordance with the Black-Scholes Option Pricing Model obtained from the `OV` function on Bloomberg L.P. using the price on the day immediately preceding the Fundamental Transaction, a risk free interest rate, and an expected volatility equal to the 100 day volatility obtained from the `HVT` function on Bloomberg L.P. determined as of the trading day immediately following the public announcement of the applicable Fundamental Transaction.

*Certain Adjustments.* The exercise price of the warrants is subject to adjustment upon the occurrence of specific events, including stock dividends, stock splits, combinations of our common stock, and if we make or issue to holders of our common stock and not warrant holders a dividend or other distribution payable in securities of the company other than shares of common stock, or in cash or other property.

*Additional Provisions.* The above summary of certain terms and provisions of the warrants is qualified in its entirety by reference to the detailed provisions of the warrants, the form of which will be filed as an exhibit to a Current Report on Form 8-K that will be incorporated herein by reference.

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**PLAN OF DISTRIBUTION**

We are offering units consisting of ten shares of common stock, \$0.0001 par value, and a warrant to purchase five shares of common stock for \$ \_\_\_\_\_ per unit. The terms of the warrants are described above under the caption Description of Warrants. Pursuant to a letter agreement, we have engaged Dawson James Securities, Inc. to act as our exclusive placement agent on a reasonable best efforts basis. The placement agent is not purchasing or selling any securities pursuant to this prospectus supplement or the accompanying prospectus, nor is it required to sell any specific number or dollar amount of the securities offered hereby. Therefore, we may not sell the entire amount of units offered pursuant to this prospectus supplement.

Confirmations and definitive prospectuses will be delivered, or otherwise made available, to all purchasers who agree to purchase units, informing purchasers of the closing date as to such units. With respect to certain investors, at our election, we may enter into separate written purchase agreements for the purchase and sale of the units offered hereunder. We currently anticipate the closing of the sale of the common stock and warrants on or about March 5, 2010. Purchasers will also be informed of the date and manner in which they must transmit the purchase price for their units.

On such closing date, the following will occur:

we will receive funds in the amount of the aggregate purchase price of the securities being sold by us on such closing date;

we will deliver the warrants and shares of common stock being sold on such closing date in book-entry form; and

we will pay the placement agent, a placement agent fee in accordance with the terms of our letter agreement.

We have agreed to pay the placement agent a cash fee equal to 7.0% of the gross proceeds of the offering, reimburse certain expenses of the placement agent incurred in connection with the offering, and to issue warrants to the placement agent to purchase the number of shares of common stock equal to 5.0% of the aggregate shares of common stock sold in this offering, excluding the shares that may be issued upon exercise of the warrants, at an exercise price of 125% of the unit price described herein. As a result, assuming all \$10,000,000 of the securities offered pursuant to this prospectus supplement are issued and sold by us, we will pay the placement agent a cash fee equal to approximately \$700,000 and issue the placement agent warrants to purchase an aggregate of \_\_\_\_\_ shares of common stock. The warrants issued to the placement agent will be substantially identical to the warrants offered by this prospectus supplement except that the warrants issued to the placement agent will have an exercise price per share of 125% of the public offering price, or \$ \_\_\_\_\_, and the expiration date of such warrants shall be December 19, 2012. Pursuant to FINRA Rule 5110(g), for a period of six months after the issuance date of the placement agent warrant, neither the placement agent warrant nor any warrant shares issued upon exercise of the placement agent warrant shall be sold, transferred, assigned, pledged, or hypothecated, or be the subject of any hedging, short sale, derivative, put, or call transaction that would result in the effective economic disposition of the securities by any person for a period of 180 days immediately following the date of effectiveness or commencement of sales of this offering, except the transfer of any security:

- (i) by operation of law or by reason of reorganization of the Company;
- (ii) to any FINRA member firm participating in the offering and the officers or partners thereof, if all securities so transferred remain subject to the lock-up restriction set forth above for the remainder of the time period;
- (iii) if the aggregate amount of securities of the Company held by the holder of the placement agent warrant or related person do not exceed 1% of the securities being offered;



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- (iv) that is beneficially owned on a pro-rata basis by all equity owners of an investment fund, provided that no participating member manages or otherwise directs investments by the fund, and participating members in the aggregate do not own more than 10% of the equity in the fund; or
- (v) the exercise or conversion of any security, if all securities received remain subject to the lock-up restriction set forth above for the remainder of the time period.

In no event will the maximum commission or discount to be received by any Financial Industry Regulatory Authority (FINRA) member or independent broker-dealer exceed 8% for the sale of the securities registered herein.

The estimated offering expenses payable by us, in addition to the placement agent's fees, are \$100,000, which include legal, accounting and printing costs and various other fees associated with registering the units and listing the common stock.

The following table sets forth the cash fee to be paid to the placement agent for this offering on a per unit basis and assuming all \$10,000,000 of the units offered hereby are sold at closing.

|                      | Per Unit | Maximum Total |
|----------------------|----------|---------------|
| Placement Agent Fees | \$       | \$ 700,000    |

We have agreed to indemnify the placement agent against certain liabilities, including liabilities under the Securities Act of 1933, as amended or the Securities Act. We may also be required to contribute to payments the placement agent may be required to make in respect of such liabilities.

The letter agreement with the placement agent will be filed as an exhibit to a Current Report on Form 8-K that will be filed with the SEC in connection with the consummation of this offering.

The placement agent may be deemed to be an underwriter within the meaning of Section 2(a)(11) of the Securities Act and any commission received by them and any profit realized on the resale of the securities sold by them while acting as principal might be deemed to be underwriting discounts or commissions under the Securities Act. As underwriters, the placement agents would be required to comply with the requirements of the Securities Act and the Securities Exchange Act of 1934, as amended, or the Exchange Act, including, without limitation, Rule 10b-5 and Regulation M under the Exchange Act. These rules and regulations may limit the timing of purchases and sales of shares of common stock and warrants to purchase shares of common stock by the placement agent. Under these rules and regulations, the placement agents may not engage in any stabilization activity in connection with our securities; and may not bid for or purchase any of our securities or attempt to induce any person to purchase any of our securities, other than as permitted under the Exchange Act, until they have completed their participation in the distribution.

The placement agent may, from time to time in the future, engage in transactions with and perform services for us in the ordinary course of its business, but we have no present arrangements or understandings to do so.

**LEGAL MATTERS**

Sheppard, Mullin, Richter & Hampton LLP, San Diego, California, will issue an opinion about the validity of the issuance of securities offered by this prospectus supplement.

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**EXPERTS**

Marcum & Kliegman LLP, independent registered public accounting firm, has audited our consolidated financial statements and schedule included in our Annual Report on Form 10-K for the year ended December 31, 2008, as set forth in their report, which is incorporated by reference in this prospectus supplement and elsewhere in the registration statement. Our financial statements and schedules are incorporated by reference in reliance on Marcum & Kliegman LLP's report, given on their authority as experts in accounting and auditing.

**WHERE YOU CAN FIND MORE INFORMATION**

We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy any document we file with the SEC (including exhibits to such documents) at the SEC's Public Reference Room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You may obtain additional information about the Public Reference Room by calling the SEC at 1-800-SEC-0330. In addition, the SEC maintains a site on the Internet at <http://www.sec.gov/> that contains reports, proxy statements and other information that we file electronically with the SEC.

This prospectus supplement and accompanying prospectus are part of a registration statement that we filed with the SEC. This prospectus supplement does not contain all of the information contained in the registration statement, including the exhibits to the registration statement. You can obtain a copy of the registration statement from the SEC at the address listed above or from the SEC's web site.

**INCORPORATION OF CERTAIN INFORMATION BY REFERENCE**

We are incorporating by reference information into this prospectus supplement. This means that we are disclosing important information to you by referring you to another document that has been filed separately with the SEC. The information incorporated by reference is considered to be part of this prospectus supplement, and information that we file later with the SEC will automatically update and supersede the information contained in documents filed earlier with the SEC or contained in this prospectus supplement. We incorporate by reference in this prospectus supplement the documents listed below and any future filings made by us with the SEC under Section 13(a), 13(c), 14 and 15(d) of the Securities Exchange Act of 1934 after the initial filing of this prospectus supplement and prior to the time that we sell all of the securities offered by this prospectus supplement and the accompanying prospectus (except in each case the information contained in such documents to the extent furnished and not filed):

our Annual Report on Form 10-K for the year ended December 31, 2008;

our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2009, June 30, 2009 and September 30, 2009;

our Current Reports on Form 8-K filed on March 27, 2009, March 30, 2009, April 16, 2009, May 8, 2009, June 16, 2009, June 29, 2009, July 13, 2009, July 15, 2009, July 21, 2009, July 29, 2009, August 4, 2009, August 13, 2009, August 25, 2009, August 31, 2009, September 15, 2009, October 5, 2009, October 15, 2009, October 20, 2009, October 21, 2009, November 4, 2009, November 13, 2009, December 4, 2009, December 15, 2009 and January 4, 2010;

our Definitive Proxy Statement on Schedule 14A, filed with the SEC on April 29, 2009; and

The description of our common stock contained in our Registration Statement on Form 8-A, filed with the SEC on August 1, 2007, including all amendments or reports filed for the purpose of updating such description.

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You may obtain copies, without charge, of documents incorporated by reference in this prospectus supplement, by requesting them in writing or by telephone from us as follows:

Dennis M. Mulroy, Chief Financial Officer

Cardium Therapeutics, Inc.

12255 El Camino Real, Suite 250

San Diego, California 92130

(858) 436-1000

Exhibits to the filings will not be sent, unless those exhibits have been specifically incorporated by reference in this prospectus supplement.

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**\$50,000,000**

**Common Stock**

**Preferred Stock**

**Debt Securities**

**Warrants**

**Units**

We may offer under this prospectus from time to time, at prices and on terms to be determined at or prior to the time of the offering, up to \$50,000,000 of any combination of the securities described in this prospectus, either individually or in units. We may also offer common stock or preferred stock upon conversion of the debt securities, common stock upon conversion of the preferred stock, or common stock, preferred stock or debt securities upon the exercise of warrants. We will provide you with specific terms of any offering in one or more supplements to this prospectus. You should read this prospectus and any prospectus supplement, as well as any documents incorporated by reference into this prospectus or any prospectus supplement, carefully before you invest.

Our common stock is traded on the American Stock Exchange under the symbol **CXM**. On December 6, 2007, the closing sale price of our common stock was \$2.45 per share. You are urged to obtain current market quotations for the common stock. Prospective purchasers of our securities are urged to obtain current information as to the market prices of our securities, where applicable.

**Investing in our securities involves a high degree of risk. Before deciding whether to invest in our securities, you should consider carefully the risks that we have described in this prospectus under the caption Risk Factors starting on page 7. We may include specific risk factors in supplements to this prospectus under the caption **Risk Factors**. This prospectus may not be used to offer or sell our securities unless accompanied by a prospectus supplement.**

Our securities may be sold directly by us to investors, through agents designated from time to time or to or through underwriters or dealers. For additional information on the methods of sale, you should refer to the section entitled **Plan of Distribution** in this prospectus. If any underwriters are involved in the sale of our securities with respect to which this prospectus is being delivered, the names of such underwriters and any applicable commissions or discounts and over-allotment options will be set forth in a prospectus supplement. The price to the public of such securities and the net proceeds that we expect to receive from such sale will also be set forth in a prospectus supplement.

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

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The date of this prospectus is December 19, 2007

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**ABOUT THIS PROSPECTUS**

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, utilizing a shelf registration process. Under this shelf registration process, we may offer shares of our common stock and preferred stock, various series of debt securities and/or warrants to purchase any of such securities, either individually or in units, in one or more offerings, with a total value of up to \$50,000,000. This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities under this prospectus, we will provide a prospectus supplement that will contain specific information about the terms of that offering.

This prospectus does not contain all of the information included in the registration statement. For a more complete understanding of the offering of the securities, you should refer to the registration statement, including its exhibits. The prospectus supplement may also add, update or change information contained or incorporated by reference in this prospectus. However, no prospectus supplement will fundamentally change the terms that are set forth in this prospectus or offer a security that is not registered and described in this prospectus at the time of its effectiveness. This prospectus, together with the applicable prospectus supplements and the documents incorporated by reference into this prospectus, includes all material information relating to this offering. **You should carefully read this prospectus, the applicable prospectus supplement, the information and documents incorporated herein by reference and the additional information under the heading *Where You Can Find More Information* before making an investment decision.**

You should rely only on the information we have provided or incorporated by reference in this prospectus or any prospectus supplement. We have not authorized anyone to provide you with information different from that contained or incorporated by reference in this prospectus. No dealer, salesperson or other person is authorized to give any information or to represent anything not contained or incorporated by reference in this prospectus. You must not rely on any unauthorized information or representation. This prospectus is an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. You should assume that the information in this prospectus or any prospectus supplement is accurate only as of the date on the front of the document and that any information we have incorporated herein by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus or any sale of a security.

**This prospectus may not be used to consummate sales of our securities, unless it is accompanied by a prospectus supplement.** To the extent there are inconsistencies between any prospectus supplement, this prospectus and any documents incorporated by reference, the document with the most recent date will control.

References to Cardium, we, us or our refer to Cardium Therapeutics, Inc.

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**PROSPECTUS SUMMARY**

*This summary highlights certain information about Cardium and its business. This summary does not contain all of the information that is important to an investment decision. You should carefully read the entire prospectus and any prospectus supplement, including Risk Factors beginning below on page 7, before deciding to invest in our common stock.*

**Our Business**

We are a medical technology company primarily focused on the development and commercialization of novel biologic therapeutics and medical devices for cardiovascular and ischemic disease. Since we were initially funded in October 2005, we have made three strategic acquisitions and assembled a portfolio of innovative late-stage cardiovascular and regenerative medicine product candidates, together with medical devices having U.S. Food and Drug Administration ( FDA ) clearances that are marketed and sold through our direct sales force. We have established a pipeline of innovative products that are divided into three operating units, Cardium Biologics, InnerCool Therapies, Inc. and the Tissue Repair Company.

As our current products and product candidates become successfully advanced, we intend to continue to pursue opportunistic acquisitions designed to enhance long-term stockholder value. At the same time, as technologies and product candidates are advanced and businesses are further developed, we may consider various corporate development transactions to enhance and monetize stockholder value such as corporate partnerings, spin-out transactions and equity distribution.

**Cardium Biologics**

The following describes the leading product candidates in Cardium Biologic s drug development pipeline:

***Generx<sup>TM</sup> (alferminogene tadenovec)***. Our lead product candidate, Generx, is a late-stage DNA-based growth factor therapeutic that is 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). Generx 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. 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. Cardium commenced a Phase 3 clinical study in the first half of 2007 that will be 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. 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.

***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) which



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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. To further confirm the utility of the Corgentin approach and establish its commercialization potential, we are conducting 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.

***Genvascor [Ad5eNOS].*** Genvascor is 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.

### **Innercool Therapies**

Our InnerCool Therapies subsidiary is focused on the emerging field of temperature modulation or therapeutic hypothermia, 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'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 in order 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.

Studies for additional indications with InnerCool's Celsius Control System are expected to be conducted in collaboration with the National Institutes of Health and other collaborating institutions. Potential future applications of the technology include endovascular cooling for cardiac arrest, acute ischemic stroke and myocardial infarction (heart attack), and acute traumatic injury. We plan to accelerate the commercialization of the Celsius Control System and broaden and expand its temperature modulation technology into other medical indications and applications. Since its acquisition by Cardium, InnerCool's sales force has been expanded, a new cGMP manufacturing facility has been secured to increase production capabilities, and a next-generation console for the Celsius Control System has been developed, which is expected to be launched in 2008. InnerCool also recently launched CoolBlue, a new external temperature modulation system, which is designed to provide a complementary tool for use in less-acute patients and in clinical settings that do not require very rapid cooling or re-warming, or which are best suited to prolonged temperature management.

### **Tissue Repair Company**

Excellerate™ is the lead product candidate of the Tissue Repair Company, our wholly-owned subsidiary. Excellerate is a DNA-activated collagen gel for topical treatment formulated with an adenovector delivery carrier encoding human platelet-derived growth factor-B (PDGF-B) and 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. Excellerate is initially being developed as a single administration for the treatment of non-healing, neuropathic diabetic foot

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ulcers. Based on the prior pre-clinical and toxicology database and results from the Phase 1/2 clinical study, Excellerate was advanced into a randomized, double-blind, placebo-controlled, multi-center Phase 2b clinical study in the second half of 2007.

Excellerate is based on Tissue Repair Company's Gene Activated Matrix™ technology, which is a technology 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. Gene Activated Matrix technology consists of a biocompatible matrix comprising a gene or DNA vector encoding a growth factor or other therapeutic protein. Other potential applications of Gene Activated Matrix technology include therapeutic angiogenesis (cardiovascular ischemia, peripheral arterial disease) and orthopedic products, including hard tissue (bone) and soft tissue (ligament, tendon, cartilage) repair.

## **Corporate Information**

Our principal executive offices are located at 3611 Valley Centre Drive, Suite 525, San Diego, California 92130, and our telephone number is (858) 436-1000. Our website is located at [www.cardiumthx.com](http://www.cardiumthx.com). Information on our website is not part of this prospectus.

## **Offerings Under This Prospectus**

Under this prospectus, we may offer shares of our common stock and preferred stock, various series of debt securities and/or warrants to purchase any of such securities, either individually or in units, with a total value of up to \$50,000,000, from time to time at prices and on terms to be determined by market conditions at the time of offering. This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities under this prospectus, we will provide a prospectus supplement that will describe the specific amounts, prices and other important terms of the securities, including, to the extent applicable:

designation or classification;

aggregate principal amount or aggregate offering price;

maturity, if applicable;

rates and times of payment of interest or dividends, if any;

redemption, conversion or sinking fund terms, if any;

voting or other rights, if any;

conversion prices, if any; and

important United States federal income tax considerations.

The prospectus supplement also may add, update or change information contained in this prospectus or in documents we have incorporated by reference into this prospectus. However, no prospectus supplement will fundamentally change the terms that are set forth in this prospectus or offer a security that is not registered and described in this prospectus at the time of its effectiveness.

**This prospectus may not be used to consummate a sale of any securities unless it is accompanied by a prospectus supplement.**



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We may sell the securities directly to investors or to or through agents, underwriters or dealers. We, and our agents or underwriters, reserve the right to accept or reject all or part of any proposed purchase of securities. If we offer securities through agents or underwriters, we will include in the applicable prospectus supplement:

the names of those agents or underwriters;

applicable fees, discounts and commissions to be paid to them;

details regarding over-allotment options, if any; and

the net proceeds to us.

### *Common Stock.*

We may issue shares of our common stock from time to time. The holders of common stock are entitled to one vote per share on all matters to be voted upon by stockholders. Subject to preferences that may be applicable to any outstanding preferred stock, the holders of common stock are entitled to receive ratably any dividends that may be declared from time to time by our board of directors out of funds legally available for that purpose. In the event of our liquidation, dissolution or winding up, the holders of common stock are entitled to share ratably in all assets remaining after payment of liabilities, subject to prior distribution rights of preferred stock then outstanding.

### *Preferred Stock*

We may issue shares of our preferred stock from time to time, in one or more series. Our board of directors may determine the rights, preferences, privileges and restrictions of the preferred stock, including dividend rights, conversion rights, preemptive rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting any series or the designation of any series. Convertible preferred stock will be convertible into our common stock. Conversion may be mandatory or at your option and would be at prescribed conversion rates. If we sell any series of preferred stock under this prospectus and applicable prospectus supplements, we will fix the rights, preferences, privileges, qualifications and restrictions of the preferred stock of such series in the certificate of designation relating to that series. We will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from a current report on Form 8-K that we file with the SEC, the form of any certificate of designation that describes the terms of the series of preferred stock we are offering before the issuance of the related series of preferred stock. We urge you to read the prospectus supplements related to the series of preferred stock being offered, as well as the complete certificate of designation that contains the terms of the applicable series of preferred stock.

### *Debt Securities*

We may offer debt securities from time to time, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. The senior debt securities will rank equally with any other unsecured and unsubordinated debt. The subordinated debt securities will be subordinate and junior in priority of payment to certain of our other indebtedness to the extent described in a prospectus supplement. Convertible debt securities will be convertible into or exchangeable for our common stock or our other securities. Conversion may be mandatory or at your option and would be at prescribed conversion rates.

The debt securities will be issued under one or more documents called indentures, which are contracts between us and a national banking association or other eligible party, as trustee. In this prospectus, we have summarized certain general features of the debt securities. We will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from a current report on Form 8-K that we file with the SEC, the form of any indenture or supplemental indenture and the form of any debt securities which



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describes the terms of the series of debt securities being offered. We urge you to read the prospectus supplements related to the series of debt securities being offered, as well as the complete indentures that contain the terms of the debt securities.

### *Warrants*

We may issue warrants for the purchase of common stock, preferred stock and/or debt securities, in one or more series. We may issue warrants independently or together with common stock, preferred stock and/or debt securities, and the warrants may be attached to or separate from these securities. In this prospectus, we have summarized certain general features of the warrants. We urge you, however, to read the prospectus supplements related to the particular series of warrants being offered, as well as the warrant agreements and warrant certificates that contain the terms of the warrants. Forms of the warrant agreements and forms of warrant certificates containing the terms of the warrants being offered will be incorporated by reference into the registration statement of which this prospectus is a part from a current report on Form 8-K that we file with the SEC.

We will evidence each series of warrants by warrant certificates that we will issue under a separate agreement. We will enter into the warrant agreements with a warrant agent. Each warrant agent will be a bank or trust company that we select. We will indicate the name and address of the warrant agent in the applicable prospectus supplement relating to a particular series of warrants.

### *Units*

We may issue units consisting of common stock, preferred stock, debt securities and/or warrants for the purchase of common stock, preferred stock and/or debt securities in one or more series. In this prospectus, we have summarized certain general features of the units. We urge you, however, to read the prospectus supplements related to the series of units being offered, as well as the unit agreements that contain the terms of the units. We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from a current report on Form 8-K that we file with the SEC, the form of unit agreement and any supplemental agreements that describe the terms of the series of units we are offering before the issuance of the related series of units.

**Table of Contents****RISK FACTORS**

An investment in the securities offered through this prospectus involves certain risks. Before making an investment decision, you should carefully consider the specific risk factors set forth under the caption **Risk Factors** in the applicable prospectus supplement and under the caption **Risk Factors** in our filing with the Securities and Exchange Commission pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, incorporated by reference in this prospectus. To the extent that a particular offering implicates additional significant risks, we will include a discussion of those risks in the applicable prospectus supplement.

**DEFICIENCY OF EARNINGS TO FIXED CHARGES**

Our earnings were insufficient to cover fixed charges for each of the periods presented. Accordingly, the following table sets forth the deficiency of earnings to fixed charges for each of the periods presented. Because of the deficiency, the ratio information is not applicable. Amounts shown are in thousands.

|   | Nine Months<br>Ended | Year Ended December 31, |            |        |
|---|----------------------|-------------------------|------------|--------|
|   | September 30, 2007   | 2006                    | 2005       | 2004   |
| Deficiency of earnings available to cover fixed charges | \$ (18,309)          | \$ (18,593)             | \$ (5,442) | \$ (3) |

For purposes of computing the deficiency of earnings available to cover fixed charges, fixed charges represent interest expense, the portion of operating lease rental expense that is considered by us to be representative of interest and amortization of discount related to indebtedness; deficiency of earnings consists of loss before income taxes. Historically we have incurred no fixed costs.

**SPECIAL NOTE ABOUT FORWARD-LOOKING STATEMENTS**

Certain statements in this prospectus, including information incorporated by reference, are forward-looking statements within the meaning of Section 27A of the 33 Act, Section 21E of the Securities Exchange Act of 1934, as amended ( Exchange Act ), 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*, *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, are forward-looking statements.

The forward-looking statements in this prospectus speak only as of the date of this prospectus 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 prospectus 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 **Risk Factors** and elsewhere in this prospectus, as well as in other reports and documents we file with the SEC.

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**USE OF PROCEEDS**

Unless otherwise provided in the applicable prospectus supplement, we intend to use the net proceeds from the sale of securities offered hereby for general corporate purposes, which may include the development and commercialization of our product candidates and the acquisitions of businesses, products, technologies or licenses that are complementary to our business. For each offering of securities hereunder, the prospectus supplement relating to that offering will set forth our intended use of the net proceeds received from the sale of those securities.

**PLAN OF DISTRIBUTION**

We may sell the securities from time to time pursuant to underwritten public offerings, negotiated transactions, block trades or a combination of these methods. We may sell the securities through underwriters or dealers, through agents, or directly to one or more purchasers. We may distribute the securities from time to time in one or more transactions:

at a fixed price or prices, which may be changed;

at market prices prevailing at the time of sale;

at prices related to such prevailing market prices; or

at negotiated prices.

A prospectus supplement or supplements will describe the terms of the offering of the securities, including:

the name or names of the underwriters, dealers or agents, if any;

the purchase price of the securities and the proceeds we will receive from the sale;

any over-allotment options under which underwriters may purchase additional securities from us;

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

any public offering price;

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

any securities exchange or market on which the securities may be listed.

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

If underwriters are used in the sale, they will acquire the securities for their own account and may resell the securities from time to time in one or more transactions at a fixed public offering price or at varying prices determined at the time of sale. The obligations of the underwriters to



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purchase the securities will be subject to the conditions set forth in the applicable underwriting agreement. We may offer the securities to the public through underwriting syndicates represented by managing underwriters or by underwriters without a syndicate. Subject to certain conditions, the underwriters will be obligated to purchase all of the securities offered by the prospectus supplement. Any public offering price and any discounts or concessions allowed or reallocated or paid to dealers may change from time to time. We may use underwriters with whom we have a material relationship. We will describe in the prospectus supplement, naming the underwriter, the nature of any such relationship.

We may sell securities directly or through agents we designate from time to time. We will name any agent involved in the offering and sale of securities and we will describe any commissions we will pay the agent in the

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prospectus supplement. Unless the prospectus supplement states otherwise, our agent will act on a best-efforts basis for the period of its appointment.

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

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

All securities we may offer, other than common stock, will be new issues of securities with no established trading market. Any underwriters may make a market in these securities, but will not be obligated to do so and may discontinue any market making at any time without notice. We cannot guarantee the liquidity of the trading markets for any securities.

Any underwriter may engage in overallotment, stabilizing transactions, short-covering transactions and penalty bids in accordance with Regulation M under the Exchange Act. Overallotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum price. Syndicate-covering or other short-covering transactions involve purchases of the securities, either through exercise of the over-allotment option or in the open market after the distribution is completed, to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a covering transaction to cover short positions. Those activities may cause the price of the securities to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of the activities at any time.

In compliance with guidelines of the Financial Industry Regulatory Authority, or FINRA, the maximum consideration or discount to be received by any FINRA member or independent broker dealer may not exceed 8% of the aggregate amount of the securities offered pursuant to this prospectus and any applicable prospectus supplement.

### **DESCRIPTION OF COMMON STOCK**

For a description of the material terms and provisions of our common stock, please see the applicable prospectus supplement, as well as the description of our capital stock in our Registration Statement on Form 8-A filed with the SEC on August 1, 2007, which is incorporated by reference in this prospectus.

### **DESCRIPTION OF PREFERRED STOCK**

Pursuant to our certificate of incorporation, our board of directors has the authority, without further action by the stockholders (unless such stockholder action is required by applicable law or AMEX rules), to designate and issue up to 40,000,000 shares of preferred stock, par value \$0.0001 per share, in one or more series, to establish from time to time the number of shares to be included in each such series, to fix the powers, designations, rights and preferences of the shares of each wholly unissued series and any qualifications, limitations or restrictions thereon, and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding.

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We will fix the powers, designations, rights and preferences and qualifications, limitations or restrictions of the preferred stock of each series in the certificate of designation relating to that series. We will file as an exhibit to the registration statement of which this prospectus is a part, or will incorporate by reference from reports that we file with the SEC, the form of any certificate of designation that describes the terms of the series of preferred stock we are offering before the issuance of that series of preferred stock. This description will include:

the title and stated value;

the number of shares we are offering;

the liquidation preference per share;

the purchase price;

the dividend rate, period and payment date and method of calculation for dividends;

whether dividends will be cumulative or non-cumulative and, if cumulative, the date from which dividends will accumulate;

the procedures for any auction and remarketing, if any;

the provisions for a sinking fund, if any;

the provisions for redemption or repurchase, if applicable, and any restrictions on our ability to exercise those redemption and repurchase rights;

any listing of the preferred stock on any securities exchange or market;

whether the preferred stock will be convertible into our common stock, and, if applicable, the conversion price, or how it will be calculated, and the conversion period;

whether the preferred stock will be exchangeable into debt securities, and, if applicable, the exchange price, or how it will be calculated, and the exchange period;

voting rights, if any, of the preferred stock;

preemptive rights, if any;

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restrictions on transfer, sale or other assignment, if any;

whether interests in the preferred stock will be represented by depositary shares;

a discussion of any material or special United States federal income tax considerations applicable to the preferred stock;

the relative ranking and preferences of the preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs;

any limitations on issuance of any class or series of preferred stock ranking senior to or on a parity with the series of preferred stock as to dividend rights and rights if we liquidate, dissolve or wind up our affairs; and

any other specific terms, preferences, rights or limitations of, or restrictions on, the preferred stock.

If we issue shares of preferred stock under this prospectus, the shares will be fully paid and non-assessable.

The General Corporation Law of the State of Delaware, the state of our incorporation, provides that the holders of preferred stock will have the right to vote separately as a class (or, in some cases, as a series,) on an amendment of the certificate of incorporation if the amendment would change the par value or, unless the certificate of incorporation provided otherwise, the number of authorized shares of the class or change the powers, preferences or special rights of the class or series so as to adversely affect the class or series, as the case may be. This right is in addition to any voting rights that may be provided for in the applicable certificate of designation.

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Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of our common stock. Preferred stock could be issued quickly with terms designed to delay or prevent a change in control of our company or make removal of management more difficult. Additionally, the issuance of preferred stock may have the effect of decreasing the market price of our common stock.

### **DESCRIPTION OF DEBT SECURITIES**

The following description, together with the additional information we include in any applicable prospectus supplement, summarizes the material terms and provision of any debt securities that we may offer under this prospectus. While the terms we have summarized below will apply generally to any future debt securities we may offer, we will describe the particular terms of any debt securities that we may offer in more detail in the applicable prospectus supplement. The terms of any debt securities we may offer under a prospectus supplement may differ from the terms described below. For any debt securities that we may offer, an indenture (and any relevant supplemental indenture) will contain additional important terms and provisions and will be incorporated by reference as an exhibit to the registration statement that includes this prospectus, or as an exhibit to a current report on Form 8-K, incorporated by reference in this prospectus.

With respect to any debt securities that we issue, we will issue such debt securities under an indenture, which we would enter into with the trustee named in the indenture. Any indenture would be qualified under the Trust Indenture Act of 1939.

With respect to any debt securities that we issue, we will describe in each prospectus supplement the following terms relating to a series of debt securities:

the title;

the principal amount being offered, and if a series, the total amount authorized and the total amount outstanding;

any limit on the amount that may be issued;

whether or not we will issue the series of debt securities in global form, and if so, the terms and who the depository will be;

the maturity date;

the principal amount due at maturity;

whether and under what circumstances, if any, we will pay additional amounts on any debt securities held by a person who is not a United States person for tax purposes, and whether we can redeem the debt securities if we have to pay such additional amounts;

the annual interest rate, which may be fixed or variable, or the method for determining the rate and the date interest will begin to accrue, the dates interest will be payable and the regular record dates for interest payment dates or the method for determining such dates;

whether or not the debt securities will be convertible into shares of common stock or preferred stock and, if so, the terms of such conversion;

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whether or not the debt securities will be secured or unsecured, and the terms of any secured debt;

the terms of the subordination of any series of subordinated debt;

the place where payments will be payable;

restrictions on transfer, sale or other assignment, if any;

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our right, if any, to defer payment or interest and the maximum length of any such deferral period;

the date, if any, after which and the conditions upon which, and the price at which, we may, at our option, redeem the series of debt securities pursuant to any optional or provisional redemption provisions and the terms of those redemptions provisions;

the date, if any, on which, and the price at which we are obligated, pursuant to any mandatory sinking fund or analogous fund provisions or otherwise, to redeem, or at the holder's option to purchase, the series of debt securities and the currency or currency unit in which the debt securities are payable;

whether the indenture will restrict our ability to pay dividends or will require us to maintain any asset ratios or reserves;

whether we will be restricted from incurring any additional indebtedness, issuing additional securities, or entering into a merger, consolidation or sale of our business;

a discussion of any material or special United States federal income tax considerations applicable to the debt securities;

information describing any book-entry features;

provisions for a sinking fund purchase or other analogous fund, if any;

any provisions for payment of additional amounts for taxes;

whether the debt securities are to be offered at a price such that they will be deemed to be offered at an original issue discount as defined in paragraph (a) of Section 1273 of the Internal Revenue Code of 1986, as amended;

the denominations in which we will issue the series of debt securities, if other than denominations of \$1,000 and any integral multiple thereof;

events of default;

whether we and/or the debenture trustee may change an indenture without the consent of any holders;

the form of debt security and how it may be exchanged and transferred;

description of the debenture trustee and paying agent, and the method of payments; and

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any other specified terms, preferences, rights or limitations of, or restrictions on, the debt securities and any terms that may be required by us or advisable under applicable laws or regulations.

### **DESCRIPTION OF WARRANTS**

We may issue warrants to purchase shares of our common stock, preferred stock and/or debt securities in one or more series together with other securities or separately, as described in the applicable prospectus supplement. Below is a description of certain general terms and provisions of the warrants that we may offer. Particular terms of the warrants will be described in the warrant agreements and the prospectus supplement relating to the warrants.

The applicable prospectus supplement will contain, where applicable, the following terms of and other information relating to the warrants:

the specific designation and aggregate number of, and the price at which we will issue, the warrants;

the currency or currency units in which the offering price, if any, and the exercise price are payable;

the designation, amount and terms of the securities purchasable upon exercise of the warrants;



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if applicable, the exercise price for shares of our common stock and the number of shares of common stock to be received upon exercise of the warrants;

if applicable, the exercise price for shares of our preferred stock, the number of shares of preferred stock to be received upon exercise, and a description of that series of our preferred stock;

if applicable, the exercise price for our debt securities, the amount of debt securities to be received upon exercise, and a description of that series of debt securities;

the date on which the right to exercise the warrants will begin and the date on which that right will expire or, if you may not continuously exercise the warrants throughout that period, the specific date or dates on which you may exercise the warrants;

whether the warrants will be issued in fully registered form or bearer form, in definitive or global form or in any combination of these forms, although, in any case, the form of a warrant included in a unit will correspond to the form of the unit and of any security included in that unit;

any applicable material U.S. federal income tax consequences;

the identity of any warrant agent for the warrants and of any other depositaries, execution or paying agents, transfer agents, registrars or other agents;

the proposed listing, if any, of the warrants or any securities purchasable upon exercise of the warrants on any securities exchange;

if applicable, the date from and after which the warrants and the common stock, preferred stock and/or debt securities will be separately transferable;

if applicable, the minimum or maximum amount of the warrants that may be exercised at any one time;

information with respect to book-entry procedures, if any;

the anti-dilution provisions of the warrants, if any;

any redemption or call provisions, if any;

whether the warrants are to be sold separately or with other securities as parts of units; and

any additional terms of the warrants, including terms, procedures and limitations relating to the exchange and exercise of the warrants.

The transfer agent and registrar for any warrants will be set forth in the applicable prospectus supplement.

#### **DESCRIPTION OF UNITS**

We may issue units consisting of common stock, preferred stock, debt securities and/or warrants for the purchase of common stock, preferred stock and/or debt securities in one or more series. In this prospectus, we have summarized certain general features of the units. We urge you, however, to read the prospectus supplements related to the series of units being offered, as well as the unit agreements that contain the terms of the units. We will file as exhibits to the registration statement of which this prospectus is a part, or will incorporate by reference from a current report on Form 8-K that we file with the SEC, the form of unit agreement and any supplemental agreements that describe the terms of the series of units we are offering before the issuance of the related series of units.

We will evidence each series of units by unit certificates that we will issue under a separate agreement. We will enter into the unit agreements with a unit agent. Each unit agent will be a bank or trust company that we select. We will indicate the name and address of the unit agent in the applicable prospectus supplement relating to a particular series of units.

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**LEGAL MATTERS**

The validity of the securities offered by this prospectus will be passed upon for us by our legal counsel, Fisher Thurber LLP, La Jolla, California

**EXPERTS**

Marcum & Kliegman LLP, independent registered public accounting firm, has audited our consolidated financial statements and schedule included in our Annual Report on Form 10-KSB for the year ended December 31, 2006, as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements and schedule are incorporated by reference in reliance on Marcum & Kliegman LLP's report, given on their authority as experts in accounting and auditing.

**INCORPORATION OF CERTAIN INFORMATION BY REFERENCE**

The SEC allows us to incorporate by reference information that we file with the SEC, which means that we can disclose important information to you by referring you to those documents filed separately with the SEC. The information incorporated by reference is an important part of this prospectus, and information that we subsequently file will automatically update and supersede information in this prospectus and in our other filings with the SEC.

We incorporate by reference into this prospectus the documents listed below, which we have already filed with the SEC, and any future filings we make under Sections 13(a), 13(c), 14, or 15(d) of the Exchange Act, excluding any information in those documents that is deemed by the rules of the SEC to be furnished but not filed, until this offering is completed:

- (a) Our Annual Report on Form 10-KSB for the fiscal year ended December 31, 2006, filed with the SEC on March 15, 2007;
- (b) Our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2007, filed with the SEC on May 15, 2007;
- (c) Our Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2007, filed with the SEC on August 14, 2007;
- (d) Our Quarterly Report on Form 10-Q for the fiscal quarter ended September 30, 2007, filed with the SEC on November 14, 2007;
- (e) Our Current Reports on Form 8-K, filed with the SEC on February 6, 2007, March 6, 2007, March 21, 2007, March 23, 2007, May 22, 2007, July 20, 2007, August 1, 2007, August 16, 2007, August 28, 2007, October 5, 2007, October 19, 2007, October 24, 2007 and November 14, 2007;
- (f) Our Definitive Proxy Statement on Schedule 14A, filed with the SEC on April 24, 2007; and
- (g) The description of our common stock contained in our Registration Statement on Form 8-A, filed with the SEC on August 1, 2007, including all amendments or reports filed for the purpose of updating such description.

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We will provide without charge to each person to whom a copy of this prospectus is delivered, upon written or oral request of any such person, a copy of any or all of the foregoing documents incorporated by reference in this prospectus, including any exhibits that are specifically incorporated by reference in such documents. Requests should be made to:

Dennis M. Mulroy, Chief Financial Officer

Cardium Therapeutics, Inc.

3611 Valley Centre Drive, Suite 525

San Diego, California 92130

(858) 436-1000

You should rely only on the information provided or incorporated by reference in this prospectus or any supplement to this prospectus. You should not assume that the information in this prospectus is accurate as of any date other than the date on the front cover of the document.

**WHERE YOU CAN FIND MORE INFORMATION**

We file annual, quarterly and current reports, proxy statements and other documents with the SEC. You may read and copy any document we file at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. Our SEC filings are also available to you on the SEC's Internet site at <http://www.sec.gov>. In addition, electronic copies of our most recently filed reports are available through our website at <http://www.cardiumthx.com>.

This prospectus is part of a registration statement that we filed with the SEC. This prospectus, which is a part of the registration statement, does not contain all of the information contained in the registration statement, including the exhibits to the registration statement. You can obtain a copy of the registration statement from the SEC at the address listed above or from the SEC's Internet site.