



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

August 19, 2010

Tyler M. Dylan-Hyde
Chief Business Officer
Cardium Therapeutics, Inc.
12255 El Camino Real, Suite 250
San Diego, California 92130

**Re: Cardium Therapeutics, Inc.
Registration Statement on Form S-3
Filed August 9, 2010
File No. 333-168693**

Dear Mr. Dylan-Hyde:

We have limited our review of your registration statement to the issue we have addressed in our comment. In our comment we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your registration statement and providing the requested information. Where you do not believe our comment applies to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your registration statement and the information you provide in response to this comment, we may have additional comments.

General

1. It appears that the market value of the voting and non-voting common equity held by your non-affiliate stockholders is less than \$75 million. If that is the case, please confirm whether you are filing this registration statement pursuant to Instruction I.B.6 of Form S-3 and revise the filing to include the calculation described in Instruction 7 to Item I.B.6. We note that you completed several shelf take-downs over the last 12 months. Otherwise, please provide us with an analysis supporting your conclusion that you meet the \$75 million public float requirement to use Form S-3.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Act of 1933 and all applicable Securities Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

Please contact Sebastian Gomez Abero at (202) 551-3578 or me at (202) 551-3715 with any questions.

Sincerely,

Jeffrey P. Riedler
Assistant Director

cc: James A. Mercer, III, Esq.
Sheppard Mullin Richter & Hampton LLP
12275 El Camino Real, Suite 200
San Diego, CA 92130