



DIVISION OF
CORPORATION FINANCE

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

January 20, 2011

Donald B. Wingerter, Jr.
Chief Executive Officer
Ampio Pharmaceuticals, Inc.
5445 DTC Parkway, P4
Greenwood Village, Colorado 80111

**Re: Ampio Pharmaceuticals, Inc.
Registration Statement on Form S-4
Filed January 7, 2011
Registration Statement on Form S-4/A
Filed January 13, 2011
File No. 333-170595**

Dear Mr. Wingerter:

We have limited our review of your registration statement to those issues we have addressed in our comments. In some of our comments, 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 comments apply 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 these comments, we may have additional comments.

General

1. Please confirm that your next amendment will include the following information:
 - Audited financial statements for the company and its subsidiaries for the fiscal year ended December 31, 2010;
 - Updated financial information for DMI BioSciences, Inc. for the three months ended December 31, 2010 and 2009;
 - Updated pro forma financial information;
 - Updated disclosure in the Management's Discussion and Analysis of Financial Condition and Results of Operations for both the company and DMI BioSciences, Inc.;

- Updated executive compensation information for the company reflecting financial and compensation data for the fiscal year ended December 31, 2010; and
 - Updated fairness opinion from Bluestone Investment Banking Group, LLC and corresponding updated disclosure.
2. Please file as an exhibit to the registration statement a tax opinion supporting your discussion of the tax consequences of the transaction to DMI BioSciences, Inc. shareholders starting on page 78, in accordance with Item 601(b)(8) of Regulation S-K.

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.

Donald B. Wingerter, Jr.
Ampio Pharmaceuticals, Inc.
January 20, 2011
Page 3

Please contact Laura Crotty at (202) 551-3563, Daniel Greenspan, Special Counsel, at (202) 551-3623 or me at (202) 551-3715 with any other questions.

Sincerely,

Jeffrey P. Riedler
Assistant Director

cc: Robert W. Walter, Esq. (Richardson & Patel, LLP)