



DIVISION OF
CORPORATION FINANCE

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

October 8, 2010

Mr. P. Ron Ellis
President and Chief Executive Officer
Endocyte, Inc.
3000 Kent Avenue, Suite A1-100
West Lafayette, IN 47906

**Re: Endocyte, Inc.
Amendment No. 1 to Registration Statement on Form S-1
Filed September 28, 2010
File No. 333-168904**

Dear Mr. Ellis:

We have reviewed Amendment No. 1 to your registration statement filed September 28, 2010 and have the following 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. If 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.

Amendment No. 1 to Registration Statement on Form S-1

General

1. Please note that our comments on your request for confidential treatment will be provided under separate cover.
2. Please refer to your response to Comment 6. Please revise the graphics page that follows the Prospectus Cover Page to provide a more prominent legend (i.e., top of page, boldface, larger font, etc.).

Business

Patents and Proprietary Rights, page 92

3. We note your response to Comment 23 and reissue the comment. Confidential treatment may only be granted for information that is both not material to an investor, and the disclosure of which would cause competitive harm to the company's business and financial condition. The information requested in our comment related to range of royalty rates are considered material to an investor and are therefore not the appropriate subject for confidential treatment. In addition, your confidential treatment request related to the actual royalty rate. Please expand your disclosure to provide the range of royalty rates within 10 percentage points (i.e. single digits, teens, twenties, etc.) that are payable to Purdue based on sales of products.

Use of Proceeds

4. We note your response to Comment 14 and reissue the comment in part. Please revise your expanded disclosure to specifically describe the extent to which the proceeds will cover the scheduled Phase III PROC trial as well as a second Phase III trial, if required by the FDA. If you will need to raise additional funds for a second Phase III study, please so disclose.

Management's discussion and Analysis of Financial Condition and Results of Operations
Critical Accounting Policies and Significant Judgments and Estimates
Stock-based Compensation, page 48

5. We acknowledge your response to prior Comment 15. Please address the following:
 - You stated that you determined the fair value of your common stock based on scenarios that assumed that EC145 was in phase 3 of development. Please disclose why you determined the fair value of your stock assuming that EC145 was in phase 3 when you do not expect to begin phase 3 clinical development until early 2011;
 - Disclose how the number of pipeline products and their development phases were considered in selecting "similar" companies; and
 - You stated that since you consider the stage of development to be a strong driver of value you did not limit the disease area to oncology companies in determining the fair value of your common stock. Please tell us how you factored in differences in product market size and potential market saturation in selecting "similar" companies not limited to the disease area of oncology to determine the fair value of your common stock.

To the extent the items above were considered and a difference exists, please tell us how you adjusted your valuation based on these differences and quantify the adjustments to your valuation. If you did not adjust for the differences between you and the similar companies please explain why an adjustment was not necessary.

Management

Executive Officers and Directors, page 97

6. Please refer to your response to Comment 25.
 - Please expand your disclosure to describe the business experience of Mr. Brauer from April 2006 through the present.
 - Please expand your disclosure to describe the business experience of Mr. Shannon from September 2008 through January 2009, and from April 2010 through the present.

Please refer to Item 401(e)(1) of Regulation S-K.

Compensation Discussion and Analysis

Performance-driven Compensation, page 108

Short-Term Incentives (Cash Bonuses), page 110

7. We note your response to Comment 28 and reissue the comment in part. You disclose on page 111 that “performance goals are defined at the beginning of each fiscal year” and “bonus payouts were awarded based on company and individual performance.” Please identify the company and individual goals that were set at the beginning of the fiscal year, and explain the assessment of the Compensation Committee, Board of Directors, etc. with regard to the achievement of these company and individual goals.

Long-Term Incentives (Equity Awards), page 111

8. Please refer to your response to Comment 29. You disclose on page 112 that the size of equity awards is discretionary and is determined based on company performance relative to established goals, individual performance relative to established goals and individual benchmarked equity ownership levels. Please expand your discussion to disclose how the considerations related to benchmarking entered into the amounts of equity awards granted, or resulted in adjustment to such rewards.

Mr. P. Ron Ellis
Endocyte, Inc.
October 8, 2010
Page 4

You may contact Keira Nakada at (202) 551-3659 or Gus Rodriguez at (202) 551-3752 if you have questions regarding comments on the financial statements and related matters. Please contact Rose Zukin at (202) 551-3239 or me at (202) 551-3710 with any other questions.

Sincerely,

Jeffrey P. Riedler
Assistant Director

cc: David J. Segre, Esq.
Wilson Sonsini Goodrich & Rosati P.C
650 Page Mill Road
Palo Alto, CA 94304