



DIVISION OF
CORPORATION FINANCE

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

September 8, 2017

James Kinley
Chief Financial Officer
Medicure Inc.
2-1250 Waverly Street
Winnipeg, Manitoba, Canada R3T 6C6

Re: Medicure Inc.
Form 20-F for the Year Ended December 31, 2016
Filed April 27, 2017
File No. 001-31995

Dear Mr. Kinley:

We have limited our review of your filing to the financial statements and related disclosures 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 these comments within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing your response to these comments, we may have additional comments.

Form 20-F for the year ended December 31, 2016

Financial Statements

Note 4. Business combinations, page 129

1. You disclosed in your prior filings that the long-term derivative associated with your Apicore option rights was re-valued every period. As of September 30, 2016 the value of this derivative was \$13,084. Please address the following:
 - Provide us with the terms of the various option rights you obtained upon your initial investment in Apicore;
 - Describe for us the valuation technique and significant inputs used in determining the fair value of your Apicore options for each period;
 - Explain to us what caused the fair value of these options to increase to \$20.8 million at December 31, 2016 resulting in a gain of \$20.6 million in 2016.

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2. In your disclosure on page 131, you indicate that you acquired \$101.7 million of intangible assets from Apicure. Please identify for us the specific intangible assets acquired and their amounts, and describe for us how you determined the fair value of each asset. Tell us why you do not disaggregate these assets or provide more detail of the components of these assets in your disclosure.
3. You disclose that the 400,000 remaining Apicure options outstanding (without an employee put feature) have been recorded in equity as a non-controlling interest. Provide us references to the authoritative literature on which you base classification of these options outstanding as a non-controlling interest.
4. You state "The Apicore Series A-1 preferred shares are redeemable by the holder after December 31, 2019 in three annual installments at the greater of the fair value of the shares at the redemption date and the net assets of the Company." Explain to us what you mean by the net assets of the Company and how you considered the provision of "greater of the fair value of the shares and the net assets of the company" in your accounting for the Series A-1 preferred shares.

In closing, we remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

You may contact Lisa Vanjoske at (202) 551-3614 or Angela Connell at (202) 551-3426 with any questions.

Division of Corporation Finance
Office of Healthcare & Insurance