



DIVISION OF
CORPORATION FINANCE

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

March 11, 2011

Brett Reynolds
Chief Financial Officer
Synovis Life Technologies, Inc.
2575 University Avenue W.,
St. Paul, Minnesota 55114-1024

Re: Synovis Life Technologies, Inc.
Form 10-K for fiscal year ended October 31, 2010
Filed January 5, 2011
File No. 0-13907

Dear Mr. Reynolds:

We have reviewed your filing 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 within ten business days by providing the requested information, or by advising us when you will provide the requested response. 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 the information you provide in response to these comments, we may have additional comments.

Form 10-K for fiscal year ended October 31, 2010

Note 5 – Supplemental Net Revenue Information, page 40

1. We note from your response to prior comment one that you believe your operating segments exhibit similar economic characteristics. We further note that your Ortho and Wound segment does not exhibit similar revenue growth, gross margins or operating margins, but that in three to five years you expect Ortho and Wound to exhibit similar economic characteristics. We further note that your future expectation is dependent on your current and expected investments in the Ortho and Wound segment. Please address the following:
 - Given that that it appears that your segments are in different stages of their life cycles and the future returns of your investments in your Ortho and Wound segment are uncertain, please explain to us in greater detail how you concluded

that the Ortho and Wound segment will exhibit similar economic characteristics to your other segments.

- Tell us whether you expect the Surgical and Microsurgical segments to continue to exhibit the same economic characteristics in three to five years when the Ortho and Wound segment have similar revenue growth results.

You may contact Eric Atallah, Staff Accountant at (202) 551-3663 or me at (202) 551-3643 if you have questions regarding comments on the financial statements and related matters. In this regard, do not hesitate to contact Martin James, Senior Assistant Chief Accountant at (202) 551-3643 with any questions.

Sincerely,

Kevin L. Vaughn
Accounting Branch Chief