

November 28, 2007

Mail Stop 6010

Maurice R. Ferré, M.D.
President and Chief Executive Officer
MAKO Surgical Corp.
2555 Davie Road
Ft. Lauderdale, FL 33317

**Re: MAKO Surgical Corp.
Registration Statement on Form S-1
Filed November 14, 2007
File No. 333-146162**

Dear Dr. Ferré:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Our Market, page 2.

1. We note your response to our prior comment 2. Your new disclosure on page 2 states that the survey “did not independently verify the validity of the data.” Please tell us why you believe such disclosure reflects the statements made in the report. For example, the survey stated that it was based on estimates and further that they were “unable to” rather than “did not independently” verify such data.

Use of Proceeds, page 36

2. We reissue prior comment 4. You have disclosed several purposes for this offering. For investors to evaluate the offering in light of those purposes, Regulation S-K Item 504 requires that you disclose the approximate amount intended to be used for each disclosed purpose. See instruction 7 to Item 504. Also, please address the last sentence of Item 504.

Intellectual Property, page 77

3. Please tell us were you have disclosed the information in your response to prior comment 22 that you cannot use the computer-assisted surgery intellectual property on a standalone basis.

Note 4. Related Parties, page F-21

Acquisition of Assets From Predecessor, page F-21

4. Please refer to prior comment 22. We note in your response that you did not assign a value to the license that was contributed by Z-KAT related to the intellectual property rights for the field of orthopedics. It appears that since Z-KAT contributed a specific portion of its intellectual property rights to MAKO and MAKO's business and operations are based on the use of those rights, the intellectual property should be recorded. Please tell us the historical cost recorded by Z-KAT and the other uses of the intellectual property outside the field of orthopedics. Also, revise to record a reasonable allocation of the historical cost of the license and subsequent amortization or tell us why assigning an amount to the license is not appropriate. Refer to accounting literature that supports your position.

As appropriate, please amend your registration statement in response to these comments. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

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 all information required under the Securities Act of 1933 and that they have provided all information investors require for an informed investment decision. 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 the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, 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.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in connection with our review of your filing or in response to our comments on your filing.

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. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

You may contact Kevin Kuhar at (202) 551-3662 or in his absence, Angela Crane at (202) 551-3554 if you have questions regarding comments on the financial statements and related matters. Please contact Jay Mumford at (202) 551-3637 or me at (202) 551-3617 with any other questions.

Sincerely,

Russell Mancuso
Branch Chief

cc: (via Fax): Stuart A. Barr