



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

Mail Stop 3030

August 24, 2009

Via Facsimile and U.S. Mail

Mr. James M. Stolze
Vice President and Chief Financial Officer
Stereotaxis, Inc.
4320 Forest Park Ave., Suite 100
St. Louis, Missouri 63108

Re: Stereotaxis, Inc.
Form 10-K for the Fiscal Year Ended December 31, 2008
Filed March 13, 2009
Form 8-K Dated August 6, 2009
File No. 000-50884

Dear Mr. Stolze:

We have reviewed your filing and have the following comments. We have limited our review to matters related to the issues raised in our comments. Where indicated, we think you should revise your documents in response to these comments. If you disagree, we will consider your explanation as to why our comments are 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.

Stereotaxis, Inc.
Mr. James M. Stolze
August 24, 2009
Page 2

Form 8-K dated August 6, 2009

Item 8.01 – Explanatory Note

1. You state here that “this...amends Stereotaxis, Inc.’s Annual Report on Form 10-K for the year ended December 31, 2008.” While an Item 8.01 Form 8-K can be used to provide additional information regarding events that occurred after the Form 10-K was filed, we do not believe it is an appropriate mechanism to amend a Form 10-K. As such, please revise the Form 8-K to remove the language indicating that the Form 8-K represents an amendment to the Form 10-K.

Exhibit 99.1

2. We note the audit report included herein is dated “March 12, 2009, except Note 19, as to which the date is August 6, 2009.” However, Note 19 of the consolidated financial statements included herein is labeled as “unaudited.” Please revise the financial statements to correct this inconsistency by removing the “unaudited” label from Note 19.

As appropriate, please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter that keys your responses to our comment and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your 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 Exchange Act of 1934 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.

In connection with responding to our comments, please provide, in writing, a statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments 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 our review of your filing or in response to our comments on your filing.

Stereotaxis, Inc.
Mr. James M. Stolze
August 24, 2009
Page 3

You may contact me at (202) 551-3643 if you have questions regarding these comments. In this regard, do not hesitate to contact Martin James, Senior Assistant Chief Accountant, at (202) 551-3671.

Sincerely,

Kevin L. Vaughn
Accounting Branch Chief