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February 21, 2007

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Mr. Eric C. McPhee
Staff Accountant
Division of Corporation Finance
United States Securities and Exchange Commission
100 F. Street, N.E.
Washington, D.C. 20549

RE: Orthodontix, Inc.
Current Report on Form 8-K, filed February 7, 2007
File No. 000-27836

Ladies and Gentlemen:

On behalf of our client, Orthodontix, Inc., a Florida corporation (the "Company"), transmitted herewith are responses to the Staff's comments to the Current Report on Form 8-K, filed February 7, 2007 (the "Form 8-K"), which comments were set forth in the Staff's letter dated February 13, 2007 (the "Comment Letter") to David Aviezer, Ph.D. of the Company.

For ease of reference, we have noted the Staff's comments in bold faced type and the responses in regular type. The Company plans to file Amendment No. 1 to the Form 20-F ("Amendment No. 1"), which includes changes that principally reflect responses to the Staff's comments as set forth in this letter below.

1. **Please revise the Form to comply with Item 403(a)(1)(ii) of Regulation S-K which requires a statement indicating whether the principal accountant's report on the financial statements was qualified as to uncertainty, audit scope, or accounting principles, and a description of each such qualification.**

In response to the Staff's comments, we will amend the Form 8-K so that the disclosure regarding the principal accountant's report on the Company's financial statements set forth therein is in compliance with Item 403(a)(1)(ii) of Regulation S-K. In particular, the amended disclosure will indicate that the financial statements on which the principal accountants reported were not modified or qualified as to uncertainty, audit scope, or accounting principles.

2. **In addition, Item 204(a)(1)(iv) of Regulation S-K requires a statement whether during the registrant's two most recent fiscal years and any subsequent interim period through the date of resignation, declination or dismissal there were any disagreements with the former accountant on any matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedure, which disagreement(s), if not resolved to the satisfaction of the former accountant, would have caused it to make reference to the subject matter of the disagreement(s) in connection with its reports. In the event of disagreement(s) and/or reportable event(s), provide the specific disclosures required by Item 304(a)(1)(iv) and (v) of Regulation S-K.**

The Company's principal independent accountants, Sherb & Company, LLC ("Sherb"), were first engaged on September 29, 2005. Accordingly, we will amend the Form 8-K to reflect the dates of Sherb's engagement during which Sherb was responsible for auditing the Company's financial statements. Furthermore, we will amend the disclosure in the Form 8-K to comply with the language of Regulation S-K by stating that there were no disagreements between the Company and Sherb on any matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedure, which disagreements, if not resolved to the satisfaction of Sherb, would have caused Sherb to make reference to the subject matter of the disagreements in connection with its report and there were no reportable events within the meaning of Regulation S-K.

3. **To the extent that you make changes to the Form 8-K to comply with our comments, please obtain and file an updated Exhibit 16 letter from the former accountant stating whether the accountant agrees with the statements made in your revised Form 8-K. Refer to Item 304(a) of Regulation S-K.**

As required under Item 304(a) of Regulation S-K, we will attach an updated letter from Sherb stating that Sherb agrees with the statements made in the amended Form 8-K.

Please note that the Company has authorized us to inform you that it acknowledges that the Company is responsible for the adequacy and accuracy of the disclosure in the filing; that 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 that 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.

Please call the undersigned at the telephone number set forth above or Joseph Magnas at (212) 336-4170 with any question or comment you may have regarding the responses set forth herein. In addition, please send all written correspondence directly to the undersigned and Joseph Magnas of Morrison & Foerster LLP, 1290 Avenue of the Americas, New York, New York 10104, telecopy (212) 468-7900, with copies to David Aviezer, Ph.D., the Company's Chief Executive Officer, at 2 Snunit Street, Science Park, P.O.B. 455, Carmiel 20100, Israel, telecopy +972-4-988-9489.

Sincerely,

/s/ James R. Tanenbaum
James R. Tanenbaum

cc: David Aviezer, Ph.D.
Yossi Maimon