

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

August 5, 2010

Joshua Kazam Chief Executive Officer Nile Therapeutics, Inc. 4 West 4th Ave. Suite 400 San Mateo, California 94402

Re: Nile Therapeutics, Inc.

Form 10-K for the Fiscal Year Ended December 31, 2009

Filed March 3, 2010 File No. 001-34058

Dear Mr. Kazam:

We have limited our review to only your financial statements and related disclosures and do not intend to expand our review to other portions of your document. In our comment, we ask you to amend your filing.

Please respond to this letter within ten business days by amending your filing, or by advising us when you will amend your filing. If you do not believe that an amendment is necessary based on your facts and circumstances, please tell us why in your response. Please furnish us a letter on EDGAR under the form type label CORRESP that keys your response to our comment.

After reviewing any amendment to your filing and the information you provide in response to this comment, we may have additional comments.

<u>Item 9A(T)</u>. Controls and Procedures

Management's Annual Report on Internal Control Over Financial Reporting, page 55

- 1. Please amend your filing to address the following:
 - You disclose that your disclosure controls and procedures are designed based on criteria established in Internal Control Integrated framework issued by the Committee of Sponsoring Organizations of the Treadway Commission, or COSO Framework. Please revise to state, if true, that your internal controls over financial reporting are designed based on the criteria established by the Internal Control Integrated framework issued by the Committee of Sponsoring Organizations of the Treadway Commission, or COSO Framework. Refer to Item 308(a)(2) of Regulation S-K
 - You disclose that you believe that your present internal control program has been effective at a reasonable assurance level to ensure that your financial reporting has not been materially misstated. Please revise to state, if true, that you assessed the effectiveness of your internal control over financial reporting as of the end of your

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most recent fiscal year, and state whether internal control over financial reporting was effective as of that date. Refer to Item 308(a)(3) of Regulation S-K.

• You disclose that you will review, and where necessary, enhance your internal control design and documentation, management review, and ongoing risk assessment as part of your internal control program, including implementing the requirements of Section 404 of the Sarbanes-Oxley Act of 2002. Please clarify exactly what requirements your company had not implemented as of December 31, 2009.

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 the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. 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 responding to our comment, please provide a written 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.

You may contact Staci Shannon, Staff Accountant, at (202) 551-3374 or Joel Parker, Accounting Branch Chief, at (202) 551-3651 if you have questions regarding this comment. In this regard, do not hesitate to contact me at (202) 551-3679 with any other questions.

Sincerely,

Jim B. Rosenberg Senior Assistant Chief Accountant