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August 9, 2010

VIA EDGAR

Mr. Jim B. Rosenberg
Securities and Exchange Commission
Division of Corporation Finance
100 F Street N.E.
Washington, D.C. 20549

**Re: Nile Therapeutics, Inc. (the "Company")
Form 10-K for the Year Ended December 31, 2009
Filed March 3, 2010
File No. 001-34058**

Dear Mr. Rosenberg:

On behalf of the Company, this letter is being submitted in response to the letter dated August 5, 2010 from the Securities and Exchange Commission (the "Commission") in which the staff of the Commission (the "Staff") commented on the Form 10-K.

For the Staff's convenience, the Staff's comments have been stated below in their entirety, with the Company's responses to a particular comment set out immediately underneath it. The headings and numbered paragraphs in this letter correspond to the headings and numbered paragraphs in the comment letter from the Staff.

Item 9A(T). Controls and Procedures
Managements 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.**
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The Company confirms that its internal controls over financial reporting are designed based on the criteria established by the Internal Control framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company also represents that it will conform its disclosure in this regard in future reports.

- **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 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.**

The Company represents that, under the supervision and with the participation its management, including its Chief Executive Officer and Chief Financial Officer, it conducted an assessment of the effectiveness of the Company's internal control over financial reporting based on the criteria established by the Internal Control framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and that, based on such assessment, the Company's management concluded that its internal control over financial reporting was effective as of December 31, 2009. The Company also represents that it will make such disclosure in its future reports.

- **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 what requirements your company had not implemented as of December 31, 2009.**

The Company was only referring to the fact that its internal control over financial reporting had not been attested to by its auditors and that its auditors did not provide, and the Company did not include in its Form 10-K, an attestation report on the Company's internal control over financial reporting, in accordance with Item 308(b) of Regulation S-K. As a smaller reporting company, the Company was not, of course, subject to the requirements of Item 308(b). The Company will, to the extent true and to the extent Item 308(b) continues not to apply to the Company, make clear in its future filings that its annual report does not include an attestation report from its auditors and that the Company was not required to include such a report.

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On behalf of the Company, it hereby acknowledges the following:

- The Company is responsible for the adequacy and accuracy of the disclosure in the filings;
- Staff comments or changes to disclosure in response to Staff comments do not foreclose the Commission from taking any action with respect to the filings; 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.

Please contact the undersigned at (650) 458-2678, or Christopher Melsha, the Company's counsel, at (612) 492-7369, if you have any questions with respect to the responses contained in this letter.

Very truly yours,

Nile Therapeutics, Inc.

/s/ Daron Evans

Daron Evans
Chief Financial Officer

cc: Ms. Staci Shannon
Mr. Joshua A. Kazam
Mr. Christopher J. Melsha, Esq.
