

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

FORM 10-Q/A
(Amendment No. 1)

(Mark One)

QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

FOR THE QUARTERLY PERIOD ENDED JUNE 30, 2012

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

FOR THE TRANSITION PERIOD FROM _____ TO _____

Commission File Number: 001-34058

NILE THERAPEUTICS, INC.

(Exact Name Of Registrant As Specified In Its Charter)

Delaware
(State of Incorporation)

88-0363465
(I.R.S. Employer Identification No.)

4 West 4th Ave., Suite 400, San Mateo, CA 94402
(Address of principal executive offices)(Zip Code)

(650) 458-2670
(Registrant's telephone number, including area code)

Not Applicable
(Former name, former address and former fiscal year, if changed since last report)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Exchange Act during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer (Do not check if a smaller reporting company)

Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

As of August 13, 2012, there were 43,062,231 shares of common stock, par value \$0.001 per share, of Nile Therapeutics, Inc. issued and outstanding.

EXPLANATORY NOTE

Nile Therapeutics, Inc. (the "Company") is filing this Amendment No. 1 to its Form 10-Q for the quarter ended June 30, 2012, originally filed with the Securities and Exchange Commission on August 14, 2012 (the "Form 10-Q"), solely for the purpose of furnishing Exhibit 101 to the Form 10-Q in accordance with Rule 405(a)(2)(ii) of Regulation S-T.

No other changes have been made to the Form 10-Q. This Amendment No. 1 speaks as of the original filing date of the Form 10-Q, does not reflect events that may have occurred subsequent to the original filing date and does not modify or update in any way disclosures made in the original Form 10-Q.

PART II — OTHER INFORMATION

Item 6. Exhibits.

Exhibit No.	Exhibit Description
10.1	Consulting Agreement between Nile Therapeutics, Inc. and Darlene Horton, M.D., dated June 18, 2012.+
31.1	Certification of Chief Executive Officer pursuant to Securities Exchange Act Rule 13a-15(e)/15d-15(e) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.+
31.2	Certification of Chief Financial Officer pursuant to Securities Exchange Act Rule 13a-15(e)/15d-15(e) as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.+
32.1	Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.+
32.2	Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.+
101	The following financial information from Nile Therapeutics, Inc.'s Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2012, formatted in eXtensible Business Reporting Language (XBRL): (i) Condensed Balance Sheets as of June 30, 2012 and December 31, 2011, (ii) Condensed Statements of Operations for the three and six months ended June 30, 2012 and June 30, 2011, and for the period from August 1, 2005 (inception) through June 30, 2012, (iii) Condensed Statement of Stockholders' Equity for the period from August 1, 2005 (inception) through June 30, 2012, (iv) Condensed Statements of Cash Flows for the six months ended June 30, 2012 and June 30, 2011, and for the period from August 1, 2005 (inception) through June 30, 2012, and (v) Notes to Condensed Financial Statements.*

+ Previously filed.

* Pursuant to Rule 406T of Regulation S-T, the Interactive Data Files furnished herewith as Exhibit 101 shall not be deemed to be "filed" for purposes of Section 18 of the Exchange Act, or otherwise subject to the liability of that section, and shall not be deemed part of a registration statement, prospectus or other document filed under the Securities Act or the Exchange Act, except as shall be expressly set forth by specific reference in such filings.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

NILE THERAPEUTICS, INC.

Date: September 10, 2012

By: /s/ Darlene Horton, M.D.
Darlene Horton, M.D.
Chief Executive Officer
(Principal Executive Officer)

Date: September 10, 2012

By: /s/ Daron Evans
Daron Evans
Chief Financial Officer
(Principal Financial and Accounting Officer)

EXHIBIT INDEX

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