

FORM 5

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

| OMB APPROVAL | |
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| OMB Number: | 3235-0362 |
| Estimated average burden hours per response: | 1.0 |

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

Form 3 Holdings Reported.

Form 4 Transactions Reported.

ANNUAL STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934 or Section 30(h) of the Investment Company Act of 1940

| | | |
|---|--|---|
| 1. Name and Address of Reporting Person * <u>Lieu Hsiao</u> (Last) (First) (Middle) <u>C/O NILE THERAPEUTICS, INC.</u> <u>115 SANSOME STREET, SUITE #310</u> (Street) <u>SAN FRANCISCO CA 94104</u> (City) (State) (Zip) | 2. Issuer Name and Ticker or Trading Symbol <u>Nile Therapeutics, Inc. [NLTX]</u> | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner X Officer (give title below) Other (specify below) <u>VP, Clinical Research</u> |
| | 3. Statement for Issuer's Fiscal Year Ended (Month/Day/Year) <u>12/31/2011</u> | |
| | 4. If Amendment, Date of Original Filed (Month/Day/Year) | |

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

| 1. Title of Security (Instr. 3) | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, if any (Month/Day/Year) | 3. Transaction Code (Instr. 8) | 4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5) | | | 5. Amount of Securities Beneficially Owned at end of Issuer's Fiscal Year (Instr. 3 and 4) | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) |
|---------------------------------|--------------------------------------|--|--------------------------------|---|------------|-------|--|--|---|
| | | | | Amount | (A) or (D) | Price | | | |

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any (Month/Day/Year) | 4. Transaction Code (Instr. 8) | 5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) | | 6. Date Exercisable and Expiration Date (Month/Day/Year) | | 7. Title and Amount of Securities Underlying Derivative Security (Instr. 3 and 4) | 8. Price of Derivative Security (Instr. 5) | 9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4) | 10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 11. Nature of Indirect Beneficial Ownership (Instr. 4) | |
|--|--|--------------------------------------|--|--------------------------------|--|-----|--|-----------------|---|--|--|---|--|-------|
| | | | | | (A) | (D) | Date Exercisable | Expiration Date | | | | | | Title |
| Stock Option (Right to Buy) | \$4.45 | 11/21/2011 | | 4A | 25,000 | | (I) | 03/10/2018 | Common Stock | 25,000 | \$0 | 71,623 | D | |

Explanation of Responses:

1. On 03/10/08, the Reporting Person was granted an option to purchase up to 100,000 shares of common stock of the Issuer. Up to 1/4 of the shares subject to the option may vest annually based on the achievement of certain performance milestones as determined by the Compensation Committee of the Board of Directors (the "Committee") of the Issuer. On 1/19/09, the Committee determined that options for the prorated period ending 12/31/08 would vest in the amount of 9,123 shares, with options to purchase 11,151 shares being forfeited. On 1/19/10, the Committee determined that options for the period ending 12/31/09 would vest in the amount of 12,500 shares, with options to purchase 12,500 shares being forfeited. On 12/17/10, the Committee determined that options for the period ending 12/31/10 would vest in the amount of 25,000 shares. On 11/21/11, the Committee determined that options for the period ending 12/31/11 would vest in the amount of 25,000 shares.

Remarks:

/s/ Daron Evans as Attorney-in-Fact for Hsiao D. Lieu pursuant to Power of Attorney previously filed. 02/14/2012

** Signature of Reporting Person Date

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

* If the form is filed by more than one reporting person, see Instruction 4 (b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, see Instruction 6 for procedure.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.