

| OMB APPROVAL | |
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STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

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

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* MURRAY D SCOTT (Last) (First) (Middle) 4620 CREEKSTONE DRIVE, SUITE 200 (Street) DURHAM NC 27703 (City) (State) (Zip) | 2. Issuer Name and Ticker or Trading Symbol ADHEREX TECHNOLOGIES INC [AMEX:ADH] | 5. Relationship of Reporting Person(s) to Issuer (Check all applicable) Director 10% Owner <input checked="" type="checkbox"/> Officer (give title below) Other (specify below) SVP, Gen Counsel & Corp Secty |
| | 3. Date of Earliest Transaction (Month/Day/Year) 04/30/2007 | |
| | | 6. Individual or Joint/Group Filing (Check Applicable Line) <input checked="" type="checkbox"/> Form filed by One Reporting Person <input type="checkbox"/> Form filed by More than One Reporting Person |

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 Following Reported Transaction(s) (Instr. 3 and 4) | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) |
|---------------------------------|--------------------------------------|--|--------------------------------|---|---|------------|-------|---|--|---|
| | | | Code | V | 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) |
|--|--|--------------------------------------|--|--------------------------------|---|--|-----|--|-----------------|---|----------------------------|--|--|---|--|
| | | | | Code | V | (A) | (D) | Date Exercisable | Expiration Date | Title | Amount or Number of Shares | | | | |
| Stock Options (Right to buy) | \$0.28 | | | | | | | 02/28/2007 | 02/28/2014 | Common Stock | 200,000 | | 200,000 | D | |
| Stock Options (Right to buy) | \$0.88 | | | | | | | 12/14/2006 | 12/14/2012 | Common Stock | 41,600 | | 41,600 | D | |
| Stock Options (Right to buy) | \$1.2 | | | | | | | 09/21/2005 | 09/21/2012 | Common Stock | 24,900 | | 24,900 | D | |
| Stock Options (Right to buy) | \$1.75 | | | | | | | 02/03/2004 | 02/12/2010 | Common Stock | 30,000 | | 30,000 | D | |
| Stock Options (Right to buy) | \$1.95 | | | | | | | 12/17/2005 | 12/17/2011 | Common Stock | 18,000 | | 18,000 | D | |
| Stock Options (Right to buy) | \$2.25 | | | | | | | 12/30/2004 | 12/30/2010 | Common Stock | 11,970 | | 11,970 | D | |
| Stock Options (Right to buy) | \$2.45 | | | | | | | 12/19/2004 | 12/19/2010 | Common Stock | 10,000 | | 10,000 | D | |
| Stock Options (Right to buy) | \$2.9 | | | | | | | 12/17/2004 | 05/21/2011 | Common Stock | 8,000 | | 8,000 | D | |
| Stock Options (Right to buy) | \$0.63 | 04/30/2007 | | A | | 900,000 | | 04/30/2007 ⁽¹⁾ | 04/30/2014 | Common Stock | 900,000 | \$0 | 900,000 | D | |

Explanation of Responses:

1. The options to which this note relates are subject to vesting in three (3) installments with one-third vesting immediately and the remaining shares vesting on the first and second anniversary of the Grant Date reported above.

D Scott Murray

05/02/2007

** 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.

