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FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

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

| OMB APPR | ROVAL |
|----------------------|-----------|
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| Estimated average burden | |

| 1. Name and Addres | ss of Reporting Perso | n* | 2. Issuer Name and Ticker or Trading Symbol <u>STEMCELLS INC</u> [STEM] | | tionship of Reporting Pers all applicable) Director | on(s) to Issuer 10% Owner |
|-----------------------|-----------------------|----------|--|------------|---|------------------------------|
| | | | | X | Officer (give title below) | Other (specify below) |
| STEMCELLS, INC. | | (Middle) | 3. Date of Earliest Transaction (Month/Day/Year) 03/10/2010 | | CFO | below) |
| 3155 PORTER I | DRIVE | | 4. If Amendment, Date of Original Filed (Month/Day/Year) | 6 Indiv | idual or Joint/Group Filing | (Check Applicable |
| (Street) PALO ALTO | СА | 94304 | · · · · · · · · · · · · · · · · · · · | Line) X | Form filed by One Repo Form filed by More than Person | rting Person |
| (City) | (State) | (Zip) | | | | |

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. Transa Code (8) | | 4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5) | | 5. Amount of Securities Beneficially Owned Following Reported | 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 | Transaction(s) (Instr. 3 and 4) | | (1150.4) |
| Common Stock | 11/20/2009 | | S | | 3,647 | D | \$1.09 | 370,367 | D | |
| Common Stock | 03/10/2010 | | F | | 38,750 | D | \$1.22 | 331,617(1) | D | |

 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. 5. Number of Code (Instr. 8) Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) | | , Transaction Code (Instr. | | Transaction Code (instr. 8) Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) | | Expiration Date (Month/Day/Year) ed | | 7. Title Amour Securi Underl Deriva Securi and 4) | nt of ties ying tive ty (Instr. 3 | 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 | Date Exercisable | Expiration Date | | | Title | Amount or Number of Shares | | | | | | |

Explanation of Responses:

1. Includes (1) 226,667 restricted stock units, with 1/4 of those vesting on each of the four anniversaries following the May 15, 2009 grant date and (2) 68,750 restricted stock units, vesting on March 10, 2011.

/s/ Ken Stratton, attorney-in-

fact

03/12/2010

** 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.