FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

| STATEMENT | OF CHANGES | IN BENEFICIAL | OWNERSHIP |
|-----------|------------|---------------|------------------|

| | OMB APPF | ROVAL |
|---|----------------------|-----------|
| | OMB Number: | 3235-0287 |
| | Estimated average bu | ırden |
| ı | hours por rosponso: | 0.5 |

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

| Name and Address of Reporting Person* Stratton Kenneth Blair | | | | | 2. Issuer Name and Ticker or Trading Symbol STEMCELLS INC [STEM] | | | | | | | | | (Che | ck all applic | onship of Reporting all applicable) Director Officer (give title | | Person(s) to Issuer 10% Owner Other (specify | |
|--|---|--|---|---|--|---|--------|--------------------|---|-----------|---|--|--|---|---|---|-------------------------------------|--|--|
| (Last) (First) (Middle) C/O STEMCELLS, INC. 3155 PORTER DRIVE | | | 06 | 3. Date of Earliest Transaction (Month/Day/Year) 06/01/2010 | | | | | | | | | X Officer (give title Other (specify below) General Counsel | | | | | | |
| (Street) PALO ALTO CA 94304 | | | _ 4. | 4. If Amendment, Date of Original Filed (Month/Day/Year) | | | | | | | | 6. Inc Line) | · | | | | | | |
| (City) | (S | | (Zip) | - Dowin | , a tiv. | | | . ^ . | aina d | Dia | | f av D | | العاماء | Oursed | | | | |
| 1. Title of Security (Instr. 3) | | | 2. Trans Date | 2. Transaction | | 2A. Deemed Execution Date, if any (Month/Day/Year) | | 3. Transaction Dis | | 4. Securi | ed of, or Benefic Securities Acquired (A) posed Of (D) (Instr. 3, 4 | | a) or | 5. Amour Securitie Beneficia Owned F | ally following | Form (D) o | : Direct r Indirect str. 4) | 7. Nature of Indirect Beneficial Ownership | |
| | | | | | | | | | Code | v | Amount | (A) (D) | or F | Price | Reported Transaction(s) (Instr. 3 and 4) | | | | (Instr. 4) |
| Common Stock | | | 06/01 | 1/201 | /2010 | | | A | | 200,00 | 00,000 A | | \$0.00 | 312, | 2,274 ⁽¹⁾ | | D | | |
| Common Stock | | | | | | | | | | | | | 1,936 | | | Ι . | By 401(k) Plan ⁽²⁾ | | |
| | | - | Table II - | | | | | | | | osed of, onvertil | | | | Owned | | | | |
| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Da if any (Month/Day/ | Date, | 4. Transa Code (1 8) | | | | 6. Date Exercisa Expiration Date (Month/Day/Yea | | ! | 7. Title and Amo of Securities Underlying Derivative Secu (Instr. 3 and 4) | | urity | 8. Price of Derivative Security (Instr. 5) | 9. Number derivative Securities Beneficial Owned Following Reported Transactio (Instr. 4) | e C S F Illy C | 10. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 11. Nature of Indirect Beneficial Ownership (Instr. 4) |
| | | | | | Code | v | (A) | (D) | Date Exercisab | | Expiration Date | Title | or Nu of | mber ares | | | | | |
| Stock Option (right to | \$1.02 | 06/01/2010 | | | A | | 50,000 | | 06/01/201 | 1 0 | 06/01/2020 | Commo Stock | ⁿ 50 | ,000 | \$0.00 | 50,000 ⁽ | (3) | D | |

Explanation of Responses:

- 1. Includes (1) 200,000 restricted stock units, with 50,000 vesting on each of June 1, 2011, June 1, 2012, June 1, 2013, and June 1, 2014; (2) 70,000 restricted stock units, vesting 23,333 on each of May 15, 2010, May 15, 2011 and May 15, 2012; and (3) 27,500 restricted stock units, vesting on March 10, 2011.
- 2. Includes shares held in 401(k) account in accordance with issuer's employer-match policies.
- 3. Employee stock option; vests 1/4 on the first anniversary of the grant and 1/48 per month thereafter.

Remarks:

/s/ Ken Stratton

06/24/2010

Date

** Signature of Reporting Person

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.