WEISSMAN IRVING

Form 5

February 12, 2010

FORM 5

OMB APPROVAL

3235-0362

1.0

OMB UNITED STATES SECURITIES AND EXCHANGE COMMISSION Number: January 31,

Washington, D.C. 20549 Check this box if no longer subject to Section 16.

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response...

Form 4 or Form 5 obligations may continue. See Instruction

ANNUAL STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, 1(b). Form 3 Holdings Section 17(a) of the Public Utility Holding Company Act of 1935 or Section Reported

Form 4

30(h) of the Investment Company Act of 1940

Transactions Reported

| 1. Name and Address of Reporting Person ** WEISSMAN IRVING | | | 2. Issuer Name and Ticker or Trading Symbol STEMCELLS INC (STEM) | 5. Relationship of Reporting Person(s) to Issuer | | | |
|--|---------------------------------------|--------------------|--|--|--|--|--|
| (Last) C/O STEMC PORTER DE | · · · · · · · · · · · · · · · · · · · | (Middle) , 3155 | STEMCELLS INC [STEM] 3. Statement for Issuer's Fiscal Year Ended (Month/Day/Year) 12/31/2009 | (Check all applicable) _X_ Director 10% Owner Officer (give title below) Other (specify below) | | | |
| | (Street) | | 4. If Amendment, Date Original Filed(Month/Day/Year) | 6. Individual or Joint/Group Reporting (check applicable line) | | | |

PALO ALTO, CAÂ 94304

(State)

(Zip)

(City)

X Form Filed by One Reporting Person Form Filed by More than One Reporting

| | | | | | | • | · · | , | • |
|--------------------------------------|--------------------------------------|---|---|---|--------|------|---|--|---|
| 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. Securitie (A) or Disp (Instr. 3, 4 a | osed o | f(D) | 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) |
| Common Stock | 12/30/2009 | 12/30/2009 | $G_{\underline{(1)}}$ | 154,320 | D | \$0 | 339,416 (2) | D | Â |
| Common Stock | 12/30/2009 | 12/30/2009 | G(3) | 85,032 | A | \$0 | 190,111 | I | family trust (4) |
| | | | | | | | | | |

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

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 control number.

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

SEC 2270 (9-02)

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

| 1. Title of | 2. | 3. Transaction Date | 3A. Deemed | 4. | 5. | 6. Date Exerc | cisable and | 7. Title | and | 8. Price of | |
|-------------|-------------|---------------------|--------------------|-------------|------------|---------------|-------------|-----------|--------------|-------------|--|
| Derivative | Conversion | (Month/Day/Year) | Execution Date, if | Transaction | Number | Expiration Da | ate | Amour | nt of | Derivative | |
| Security | or Exercise | | any | Code | of | (Month/Day/ | Year) | Underl | ying | Security | |
| (Instr. 3) | Price of | | (Month/Day/Year) | (Instr. 8) | Derivative | e | | Securit | ies | (Instr. 5) | |
| | Derivative | | | | Securities | | | (Instr. : | 3 and 4) | | |
| | Security | | | | Acquired | | | | | | |
| | | | | | (A) or | | | | | | |
| | | | | | Disposed | | | | | | |
| | | | | | of (D) | | | | | | |
| | | | | | (Instr. 3, | | | | | | |
| | | | | | 4, and 5) | | | | | | |
| | | | | | | | | | Amount | | |
| | | | | | | | | | | | |
| | | | | | | Date | Expiration | | or Number | | |
| | | | | | | Exercisable | Date | | of | | |
| | | | | | (A) (D) | | | | | | |
| | | | | | (A) (D) | | | i | Shares | | |

of D

Is

Reporting Owners

| Reporting Owner Name / Address | Relationships | | | | | | | |
|--|---------------|-----------|---------|-------|--|--|--|--|
| • | Director | 10% Owner | Officer | Other | | | | |
| WEISSMAN IRVING C/O STEMCELLS, INC. 3155 PORTER DRIVE PALO ALTO, CA 94304 | ÂX | Â | Â | Â | | | | |

Signatures

/s/ Ken Stratton, attorney-in-fact 02/12/2010

**Signature of Reporting Person Date

Explanation of Responses:

- * 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).
- (1) This transaction involved gifts of securities by the reporting person to his children and grandchildren, either directly or to trusts established for thier benefit, as well as to certain charitable organizations.
- (2) Includes 10,000 restricted stock units, vesting 100% on October 1, 2010, the one year anniversary of the grant.
- This transaction involved gifts of securities by the reporting person to trusts established for the benefit of either a family member of his or a minor who shares the reporting person's household. The reporting person disclaims beneficial ownership of the shares held in these trusts, and this report should not be deemed an admission that the reporting person is the beneficial owner of these shares for purposes of Section 16 or for any other purpose.
- (4) 190,111 shares held in trust as to which Dr. Weissman disclaims beneficial ownership.

Note: File three copies of this Form, one of which must be manually signed. If space provided is insufficient, *see* Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.

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