FORM 4

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

ngton, D.C. 20549	OMB APPROVAL

OMB Number: 3235-0287 Estimated average burden hours per response 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 2. Issuer Name and Ticker or Trading Symbol 5. Relationship of Reporting Person(s) to Issuer 1. Name and Address of Reporting Person' (Check all applicable) STEMCELLS INC [STEM] PERLMUTTER ROGER M Director 10% Owner Officer (give title Other (specify 3. Date of Earliest Transaction (Month/Day/Year) below) below) (Last) (First) (Middle) 12/14/2004 C/O STEMCELLS, INC. 3155 PORTER DRIVE 4. If Amendment, Date of Original Filed (Month/Day/Year) 6. Individual or Joint/Group Filing (Check Applicable (Street) Form filed by One Reporting Person PALO ALTO 94304 CA Form filed by More than One Reporting Person (City) (State) (Zip) Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned 4. Securities Acquired (A) or Disposed Of (D) (Instr. 3, 4 and 5) 2. Transaction 2A. Deemed 1. Title of Security (Instr. 3) 5. Amount of 6. Ownership 7. Nature of Date (Month/Day/Year) Execution Date, Securities Beneficially orm: Direct Beneficial if any Code (Instr. (D) or Indirect Ownership Owned Following (Month/Day/Year) 8) (I) (Instr. 4) (Instr. 4) Reported (A) or Transaction(s) Code Amount Price (D (Instr. 3 and 4) Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities) 1. Title of Derivative 3. Transaction 6. Date Exercisable and 7. Title and Amount 9. Number of 3A. Deemed Execution Date. 5. Number 8. Price of Derivative 11. Nature Conversion Transaction Expiration Date (Month/Day/Year) of Securitie derivative Ownership of Indirect Security or Exercise (Month/Day/Year) if any (Month/Day/Year) Derivative Underlying Derivative Beneficial Code (Instr. Form: Direct (D) (Instr. 3) Price of 8) Securities Security (Instr. 3 and (Instr. 5) Beneficially Ownership Derivative Acquired Owned or Indirect (Instr. 4) Following Reported Security (A) or Disposed (I) (Instr. 4) of (D) (Instr 3, 4 and 5) Transaction(s) (Instr. 4) Amount or Number of Date Expiration Code (A) (D) Exercisable Date Title Shares

\$2.95

12/14/2005(1)

12/14/2014

Stock

Remarks:

Stock

(right to

buy)

Roger M. Perlmutter by Iris Brest, Attorney-in-Fact

 $10,000^{(1)}$

\$0.00(1)

12/14/2003

10,000

D

** 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)

12/14/2004

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

A⁽¹⁾

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.

10.000

^{1.} Compensated non-employee directors receive an initial option for 20,000 shares of the Company's common stock on appointment to the Board of Directors as such, and an option for 10,000 shares on each anniversary of appointment, with a strike price equal to the closing price of the stock on such date (or the last preceding business day if such day is not a business day); initial options vest 1/3 on each of the first three anniversaries of appointment, and annual options vest on the first anniversary of each such option. Dr. Perlmutter was appointed to the Board on December 14, 2000.