

As filed with the Securities and Exchange Commission on July 18, 2008

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

**POST-EFFECTIVE AMENDMENT NO. 1
TO**

FORM S-3

**REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

StemCells, Inc.

(Exact Name of Registrant as Specified in Its Charter)

Delaware
(State or Other Jurisdiction of Incorporation)

94-3078125
(I.R.S. Employer Identification No.)

**3155 Porter Drive
Palo Alto, CA 94304
(650) 475-3100**

(Address, including zip code, and telephone number, including area code of principal executive offices)

**Kenneth B. Stratton, Esq.
General Counsel
StemCells, Inc.
3155 Porter Drive
Palo Alto, CA 94304
(650) 475-3100**

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Please send copies of all communications to:

**Geoffrey Davis, Esq.
Ropes & Gray LLP
One International Place
Boston, Massachusetts 02110
(617) 951-7000**

Approximate date of commencement of proposed sale to the public **Not Applicable**

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, as amended (the "Securities Act") other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer (Do not check if a smaller reporting company)

Smaller reporting company



DEREGISTRATION OF UNSOLD SECURITIES

This Post-Effective Amendment No. 1 ("Post-Effective Amendment No. 1") relates to the Registration Statement on Form S-3 of the Registrant (File No. 333-128797) (the "Registration Statement") pertaining to the shelf registration of an indeterminate number of shares of the Registrant's common stock, \$0.01 par value per share ("Common Stock"), up to a total dollar amount of \$100,000,000, which was filed with the Securities and Exchange Commission on October 3, 2005, as amended by pre-effective Amendment No. 1 on November 3, 2005.

In accordance with the Registrant's undertaking in Part II, Item 17(c)(3) of the Registration Statement, this Post-Effective Amendment No. 1 hereby amends the Registration Statement to deregister any shares of Common Stock registered pursuant to the Registration Statement and not otherwise sold thereunder.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Post-Effective Amendment No. 1 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Palo Alto, State of California, on July 18, 2008.

STEMCELLS, INC.

By: /s/ Martin M. McGlynn
Name: Martin M. McGlynn
Title: President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this Post-Effective Amendment No. 1 has been signed below by the following persons in the capacities indicated and on the dates indicated.

<u>/s/ Martin M. McGlynn</u> Martin M. McGlynn	President and Chief Executive Officer and Director (principal executive officer)	July 18, 2008
<u>/s/ Rodney K.B. Young</u> Rodney K.B. Young	Chief Financial Officer (principal financial officer)	July 18, 2008
<u>/s/ George Koshy</u> George Koshy	Chief Accounting Officer (principal accounting officer)	July 18, 2008
<u>*</u> Eric H. Bjerkholt	Director	July 18, 2008
<u>*</u> Ricardo B. Levy, Ph.D.	Director	July 18, 2008
<u>/s/ Desmond H. O'Connell, Jr.</u> Desmond H. O'Connell, Jr.	Director	July 18, 2008
<u>*</u> Roger M. Perlmutter, M.D., Ph.D.	Director	July 18, 2008
<u>*</u> John J. Schwartz, Ph.D.	Director, Chairman of the Board	July 18, 2008
<u>*</u> Irving L. Weissman, M.D.	Director	July 18, 2008

*By: /s/ Martin M. McGlynn
Martin M. McGlynn
Attorney-in-fact