UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of Earliest Event Reported): April 2, 2012

StemCells, Inc.

(Exact name of registrant as specified in its charter)

Delaware	000-19871	94-3078125
(State or other jurisdiction of incorporation)	(Commission File Number)	(I.R.S. Employer Identification No.)

7707 Gateway Blvd, Suite 140, Newark, California	94560
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: 510.456.4000

Not Applicable

Former name or former address, if changed since last report

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

[ ] Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
[ ] Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
[ ] Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
[ ] Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

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Item 8.01 Other Events.

On April 2, 2012, StemCells, Inc. (the "Company") issued a press release announcing summary trial results from the Company's clinical study of its HuCNS-SC cells (purified human neural stem cells) in patients with Pelizaeus-Merzbacher disease, a rare hypo-myelination disorder in children. A copy of this press release is attached hereto as Exhibit 99.1.

The data from the study provide evidence of progressive and durable donor-cell derived myelination in all four patients who underwent transplantation with the Company's proprietary HuCNS-SC cells. In addition, clinical assessment revealed small but measureable gains in motor and/or cognitive function in three of the four patients; the fourth patient remained clinically stable.

A summary of the trial results were presented on Saturday, March 31, at the 2012 European Leukodystrophy Association (ELA) Families/Scientists Meeting in Paris by the study's principal investigator, David H. Rowitch, M.D., Ph.D., UCSF professor of pediatrics and neurological surgery, chief of neonatology at UCSF Benioff Children's Hospital, member of the Eli and Edythe Broad Center of Regeneration Medicine and Stem Cell Research at UCSF, and a Howard Hughes Medical Institute investigator.

The Company will host a live conference call and webcast today, April 2, at 11:00 AM Eastern Time (8:00 AM Pacific Time) to discuss the summary trial results. Interested parties are invited to listen to the call over the Internet via the Investors section of the Company's website at http://investor.stemcellsinc.com/phoenix.zhtml?c=86230&p=irol-irhome. An archived version of the webcast will be available for replay on the Company's website beginning approximately two hours following the conclusion of the live call and continuing for a period of 30 days.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

Exhibit 99.1 Press Release, dated April 2, 2012, announcing trial results from the Company's clinical study of HuCNS-SC cells in patients with Pelizaeus-Merzbacher disease.

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SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

StemCells, Inc.

April 2, 2012

By: /s/ Kenneth Stratton

Name: Kenneth Stratton
Title: General Counsel

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Exhibit Index

Exhibit No.	Description
99.1	Press Release, dated April 2, 2012, announcing trial results from the Company's clinical study of HuCNS-SC cells in patients with Pelizaeus-Merzbacher disease.

STEMCELLS, INC'S MILESTONE CLINICAL TRIAL IN PELIZAEUS-MERZBACHER DISEASE SHOWS EVIDENCE OF MYELINATION FOLLOWING HUMAN NEURAL STEM CELL TRANSPLANTATION

Trial Provides Proof-of-Concept for Cell-Based Therapy in a Myelination Disorder
Company to Host Conference Call Today to Discuss Summary Results

NEWARK, CA (April 2, 2012) – StemCells, Inc. (Nasdaq: STEM) today announced preliminary evidence of progressive and durable donor-cell derived myelination in all four patients who underwent transplantation with the Company's proprietary HuCNS-SC® cells (purified human neural stem cells) in its clinical trial for Pelizaeus-Merzbacher disease (PMD), a rare hypo-myelination disorder in children. In addition, clinical assessment revealed small but measureable gains in motor and/or cognitive function in three of the four patients; the fourth patient remained clinically stable. The study was conducted by researchers at the University of California, San Francisco (UCSF).

A summary of the trial results were presented Saturday, March 31, at the 2012 European Leukodystrophy Association (ELA) Families/Scientists Meeting in Paris. The findings are being submitted for publication in a peer-reviewed scientific journal.

"The results from this Phase I study are meaningful and important," said study investigator Nalin Gupta, MD, PhD, UCSF associate professor of neurological surgery and pediatrics and chief of pediatric neurological surgery at UCSF Benioff Children's Hospital. "The safety and clinical outcomes a year after transplantation in this Phase I study, combined with durable radiological signals of myelin formation, provide objective evidence of a biological effect of HuCNS-SC transplantation that addresses the fundamental basis of the pathology in the brain of PMD patients. We also wish to recognize the families' contribution to this study. These advances would not be possible without their willingness to participate in this clinical research."

Patients with PMD have a defective gene, which leads to insufficient myelin in the brain. The disease occurs only in males, and those with the most severe form of the disease, connatal PMD, are significantly disabled from birth and usually die, within the first decade of life. The study was the first to test transplantation of neural stem cells as a potential treatment for a myelination disorder. Myelin is the substance that surrounds and insulates nerve cells' communications fibers (also known as axons). Without sufficient myelination, these fibers are unable to properly transmit nerve impulses, leading to a progressive loss of neurological function, and death.

The open-label Phase I trial, conducted between February 2010 and February 2012, enrolled four patients with the connatal form of PMD, between the ages of 14 months and 5 years, and was designed to assess safety and preliminary efficacy of the intervention. The study used magnetic resonance (MR) imaging, commonly employed in other neurological diseases, to explore signs of myelination related to the transplanted neural stem cells. The HuCNS-SC transplants were surgically delivered to multiple sites within the frontal lobes of the brain. Patients also received immunosuppression for nine months following transplantation and underwent intensive follow-up neurological assessments and MR imaging for twelve months following transplantation. A separate four-year observational study will continue to monitor and report the future progress for all four patients.

At the one-year interval, MR imaging showed changes compatible with increased myelination in the region of the transplantation. The MR signs of myelination persisted after the withdrawal of immunosuppression at nine months and were also found to progress over time. The development of new myelin signals is unprecedented in patients with connatal PMD and is consistent with HuCNS-SC engraftment.

"The finding of myelin formation in this first exploratory study is indeed very encouraging," said Stephen Huhn, MD, FACS, FAAP, Vice President and Head of the CNS Program at StemCells, Inc. "We believe that the results of this trial provide proof-of-concept and a compelling rationale for the Company to begin planning for a controlled Phase II study in PMD. These results may also have implications for other leukodystrophies, as well as more common myelin disorders including transverse myelitis, multiple sclerosis and periventricular white matter injury seen in Cerebral Palsy. We are very pleased to be working with investigators at UCSF and deeply appreciate the critical research expertise they have dedicated to the trial."

Conference Call

StemCells will host a live conference call and webcast today, April 2, at 11:00 AM Eastern Time (8:00 AM Pacific Time) to discuss the summary trial results. Interested parties are invited to listen to the call over the Internet via the Investors section of the Company's website at http://investor.stemcellsinc.com/phoenix.zhtml?c=86230&p=irol-irhome. An archived version of the webcast will be available for replay on the Company's website beginning approximately two hours following the conclusion of the live call and continuing for a period of 30 days.

About StemCells, Inc.

StemCells, Inc. is engaged in the research, development, and commercialization of cell-based therapeutics and tools for use in stem cell-based research and drug discovery. The Company's lead therapeutic product candidate, HuCNS-SC cells (purified human neural stem cells), is currently in development as a potential treatment for a broad range of central nervous system disorders. In addition to the recently completed Phase I clinical trial in PMD, the Company is conducting a Phase I/II clinical trial in chronic spinal cord injury in Switzerland and has received authorization from the FDA to initiate a Phase I/II clinical trial in dry age-related macular degeneration (AMD). The Company is also continuing to pursue preclinical studies of HuCNS-SC cells in Alzheimer's disease. Further information about StemCells is available at http://www.stemcellsinc.com.

About UCSF

UCSF is a leading university dedicated to promoting health worldwide through advanced biomedical research, graduate-level education in the life sciences and health professions, and excellence in patient care.

About UCSF Benioff Children's Hospital

UCSF Benioff Children's Hospital creates an environment where children and their families find compassionate care at the forefront of scientific discovery, with more than 150 experts in 50 medical specialties serving patients throughout Northern California and beyond. The hospital admits about 5,000 children each year, including 2,000 babies born in the hospital. For more information, visit www.ucsfbenioffchildrens.org.

Apart from statements of historical fact, the text of this press release constitutes forward-looking statements within the meaning of the U.S. securities laws, and is subject to the safe harbors created therein. These statements include, but are not limited to, statements regarding the future business operations of StemCells, Inc. (the "Company"); the timing and prospect associated with beginning to detect potential clinical benefit from the use of the Company's HuCNS-SC cells; the prospect for continued clinical development of the Company's HuCNS-SC cells in CNS disorders; the timing and nature of the final data from the Company's Phase I clinical study in PMD; and the adequacy of our existing supply of HuCNS-SC cells to complete our ongoing and planned clinical trials. These forward-looking statements speak only as of the date of this news release. The Company does not undertake to update any of these forward-looking statements to reflect events or circumstances that occur after the date hereof. Such statements reflect management's current views and are based on certain assumptions that may or may not ultimately prove valid. The Company's actual results may vary materially from those contemplated in such forward-looking statements due to risks and uncertainties to which the Company is subject, including uncertainties with respect to the fact that additional trials will be required to confirm the safety and demonstrate the efficacy of the Company's HuCNS-SC cells for the treatment of spinal cord injury, PMD or any other condition; uncertainties about whether myelination formed by donor cells, if any, will have any biologic effect; uncertainties about whether preliminary data in any Phase I clinical study will prove to be reproducible or biologically meaningful in any future clinical study; risks whether the FDA or other applicable regulatory agencies will permit the Company to continue clinical testing in spinal cord injury, PMD or in future clinical trials of proposed therapies for other diseases or conditions such as age-related macular degeneration; uncertainties about the design of future clinical trials and whether the Company will receive the necessary support of a clinical trial site and its institutional review board to pursue future clinical trials in spinal cord injury, PMD, age-related macular degeneration, or in proposed therapies for other diseases or conditions; uncertainties regarding the Company's ability to obtain the increased capital resources needed to continue its current and planned research and development operations, including such operations of the Company for non-therapeutic applications, and to conduct the research, preclinical development and clinical trials necessary for regulatory approvals; uncertainties about the Company's ability to secure funding from any governmental agency, such as the California Institute of Regenerative Medicine; uncertainty as to whether HuCNS-SC cells and any products that may be generated in the future in the Company's cell-based programs will prove safe and clinically effective and not cause tumors or other adverse side effects; uncertainties regarding whether results in preclinical research in animals will be indicative of future clinical results in humans or whether data generated in clinical studies of one disease or condition will be predictive of outcomes in other diseases or conditions; uncertainties regarding the Company's manufacturing capabilities given its increasing preclinical and clinical commitments; uncertainties regarding the validity and enforceability of the Company's patents; uncertainties as to whether the Company will become profitable; and other factors that are described under the heading "Risk Factors" disclosed in Part I, Item 1A in the Company's Annual Report on Form 10-K for the year ended December 31, 2011 and in its subsequent reports on Form 10-Q and Form 8-K.

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