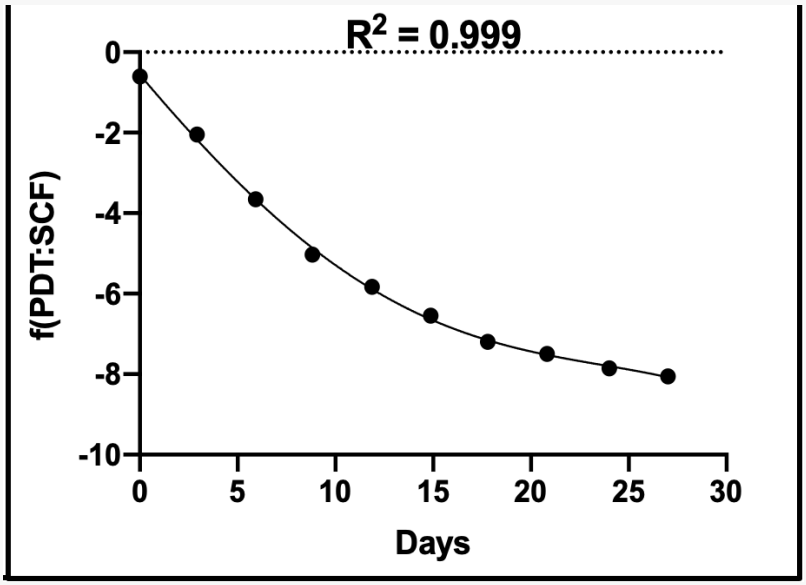
Asymmetrex® Announces Plan to Develop the First Automated Electronic Cell Counter for Therapeutic Stem Cells

Asymmetrex® announces plan to develop the first therapeutic stem cell counter based on new report of validation of rapid stem cell-counting technology

BOSTON, MASSACHUSETTS, UNITED STATES, December 14, 2022 /EINPresswire.com/ -- Today, after peer-reviewed publication of new validations of rapid-counting algorithms for commercial preparations of therapeutic blood stem cells, Boston stem cell biotechnology company Asymmetrex@ announces that in 2023 it will begin development of the first automated electronic cell counter for routine determination of the dosage of therapeutic stem cells.



Asymmetrex's now validated rapid stem cell-counting algorithms enable the development of the first automated electronic stem cell counters.

On December 13, Asymmetrex's newest report on its kinetic stem cell (KSC) counting technology for determining the dosage of therapeutic stem cells was published online in the Journal of Stem Cell Therapy and Transplantation. The company's scientists used commercial preparations of cord blood stem cells and adult blood stem cells to validate its recently reported mathematical equations for calculation of the dosage of therapeutic stem cells.

> "It's time for us to develop the first automated electronic cell counter for therapeutic stem cells."
> *Asymmetrex® CEO James Sherley*

Blood stem cells, called hematopoietic stem cells, are only one of the many kinds of cells found in the heterogeneous preparations of tissue cells used for approved stem cell transplant treatments and for experimental treatments in stem cell and gene therapy clinical trials. Because no method has been available for routinely determining the dosage of blood stem cells, a high

percentage of cord blood stem cell transplants prove to have an inadequate dosage of stem cells. The need for a way to determine the dosage of stem cells also impacts adult blood stem cell transplants, for which there are not enough donors. If the dosage of donor samples were known, more patients might be transplanted with the same donations.

In the new report, dosage determinations with the rapid-counting algorithms are compared to the only preexisting method for estimating the dosage of blood stem cells. Called the SCID mouse repopulating cell assay, that method requires injection of a tested sample into 30-40 genetically engineered mice, which must be maintained for 16 weeks and then have their tissue cells examined by trained technicians using expensive equipment. Asymmetrex® CEO, Dr. James Sherley, says, "It's no surprise that although the SCID mouse assay has been around for nearly twenty years, it has not solved the problem of needing a convenient way to count stem cells routinely." Asymmetrex's rapid-counting calculators require only conventional cell count data from a 72-hour culture of a test sample to determine the stem cell dosage.

In addition to the reported studies, Asymmetrex® recently completed a three-site inter-lab evaluation of its KSC counting technology. Based on the quality of those analyses, the company has been authorized by the American Society for Testing and Materials to assemble a working group to begin developing an application for the cell culture procedures for KSC counting to become a regenerative medicine industry standard.

CEO Sherley says, "We are ready now. It's time for us to develop the first automated electronic cell counter for therapeutic stem cells." The planned counter instrument also has many applications in stem cell science, stem cell biomanufacturing, and pharmaceutical drug development. The company has been offering access to its first generation of rapid stem cell-counting calculators on its website since October of this year. The algorithms that underpin these first calculators, and hundreds of more like them in the future, are the proprietary technology that enables the development of the planned automated electronic stem cell counters. The company is now preparing to begin raising non-dilutive and equity investment capital in early 2023 to start development.

About Asymmetrex®

Asymmetrex®, LLC is a Massachusetts life sciences company with a focus on developing technologies to advance stem cell medicine. The company's U.S. and U.K. patent portfolio contains biotechnologies that solve the two main technical problems – stem cell-specific quantification and stem cell expansion – that have stood in the way of more-effective use of human adult tissue stem cells for regenerative medicine and drug development. Asymmetrex markets kinetic stem cell (KSC) counting, the first technology for determination of the dose and quality of tissue stem cell preparations for use in stem cell transplantation medicine and pre-clinical drug evaluations. Asymmetrex® is a member company of the Advanced Regenerative Manufacturing Institute (ARMI)|BioFabUSA. The company's development of online calculators for rapid stem cell counting has been funded by R&D grants from ARMI|BioFabUSA and the

National Heart, Lung, and Blood Institute.

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