

## **Asymmetrex Plans to Report Results From Adult Stem Cell Technology Development Milestone Studies At End of Summer**

*It is a summer of anticipation for Boston's stem cell medicine biotechnology start-up Asymmetrex. The company has key milestone studies underway for continued development of its unique portfolio of adult tissue stem cell biotechnologies for regenerative medicine and drug development.*

Boston, MA ([PRWEB](#)) July 29, 2015 -- [Asymmetrex, LLC](#) founder and director James L. Sherley says the company is making good progress in evaluating the full range of capabilities of its unique cache of technologies for identifying, quantifying, and producing adult tissue stem cells. Adult tissue stem cells perform the day-to-day renewal and repair of normal tissues and organs. This property makes them the essential therapeutic factor in regenerative medicine treatments developed to restore diseased or injured tissues. The essential role of adult tissue stem cells in maintaining normal tissues also makes them important determinants of drug safety.

Despite the widely understood importance of adult tissue stem cells for advancing biomedicine, in the past, implementation of this knowledge has been largely unachievable because of long-standing technology barriers. In many cases, adult tissue stem cells have been difficult to identify, impossible to count, and difficult to produce in therapeutic quantities. These significant technical challenges have limited regenerative medicine treatments to only a few tissue stem cell types and essentially precluded evaluation of drug candidate effects on critical tissue stem cell types.

Says Sherley, "Asymmetrex seeks to catalyze a new era of stem cell biomedicine." The company plans to achieve catalysis by reaching a tipping point for the widespread use of its patented technologies for identifying, counting, and producing adult tissue stem cells from many different human tissues. In addition, because Asymmetrex's technologies are based on universal tissue stem cell principles, they also have application for animal research and veterinary medicine.

Director Sherley notes two studies that the company is pursuing this summer that will be completed by early fall and one that will continue until next April, or longer if needed. For its development of adult tissue stem cell production technologies, Asymmetrex is conducting a series of standard pharmaceutical analyses of mature liver cell properties for cells produced from the company's expanded human liver stem cells. Asymmetrex has a patented technology for producing human liver stem cells in pound quantities. Establishing that the expanded liver stem cells can be used to make similarly large quantities of differentiated cells with mature liver functions is an important milestone. This achievement would advance the tissue stem cell expansion technology to applications for pharmaceutical drug evaluations and liver cell transplantation therapies for liver failure patients.

The second summer study is an evaluation of a new technology developed with partner [AlphaSTAR Corporation](#). AlphaSTEM technology is a proprietary human cell culture-computer simulation technology that can estimate and monitor tissue stem cell number, viability, and function for many different human tissues. AlphaSTEM technology could be used to estimate stem cell dose and determine stem cell quality for regenerative medicine stem cell transplantation therapies. Neither of these capabilities currently exists.

A major commercialization thrust of the two partner companies is the use of AlphaSTEM technology to identify tissue stem cell-toxic drug candidates before expensive pre-clinical animal studies and clinical trials.

Estimates indicate that, with widespread adoption, the technology could save the U.S. pharmaceutical industry as much as \$4 billion each year by preventing expensive testing of drug candidates that would ultimately fail because of toxicity against tissue stem cells. The current study is an evaluation of a panel of known stem cell-activating, stem cell-toxic, and neutral agents designed to begin estimating the predictive power of AlphaSTEM technology.

The third, year-long or greater, study might also yield new developments as soon as the end of the summer. Asymmetrex's most recent patent (U.S. 9,081,008) is for a unique set of biomarkers with sufficient specificity to enable counting of adult tissue stem cells for the first time. In April, the company launched a [crowdsourcing campaign](#) to engage investigators worldwide in evaluating its most specific biomarker – called H2A.Z asymmetry – for counting adult tissue stem cells that are the focus of their research or clinical studies. H2A.Z is a chromosome factor involved in selective gene regulation. In functioning adult tissue stem cells reported to date, it displays a unique pattern that can be used to identify and count tissue stem cells.

Director Sherley is scheduled to discuss the cellular basis of Asymmetrex's biomarkers for counting tissue stem cells and give an update on the progress of the H2A.Z asymmetry crowdsourcing campaign at the 8th International [Epigenetics, Stem Cells, Sequencing & SNIps-2015 Meeting](#) from August 24-25 in Boston. The outcomes from the two summer studies will be reported at [BioPharm America 2015](#), September 15-17, in Boston.

About [Asymmetrex](#)

Asymmetrex, LLC is a Massachusetts life sciences company with a focus on developing technologies to advance stem cell medicine. Asymmetrex's founder and director, James L. Sherley, M.D., Ph.D. is an internationally recognized expert on the unique properties of adult tissue stem cells. The company's patent portfolio contains biotechnologies that solve the two main technical problems – production and quantification – that have stood in the way of successful commercialization of human adult tissue stem cells for regenerative medicine and drug development. In addition, the portfolio includes novel technologies for isolating cancer stem cells and producing induced pluripotent stem cells for disease research purposes. Currently, Asymmetrex's focus is employing its technological advantages to develop facile methods for monitoring adult stem cell number and function in clinically important human tissues.



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