

News Release

HepaLife™ Achieves 20-Fold Increase in Cell Production for Bioartificial Liver While Reducing Labor 4-Fold

Boston, MA - July 31 , 2008 - HepaLife Technologies, Inc. (OTCBB: HPLF) (FWB: HL1) (WKN: 500625), developing the first-of-its-kind bioartificial liver device intended for the treatment of liver failure announced today significant process improvements for cell manufacturing and storage, important factors in cost-efficiently producing enough cell-based liver devices for in-vivo trials, and ultimately, clinical application.

Efficient large-scale manufacturing of HepaLife's patented PICM-19 liver stem cells is a key consideration in the operation of the Company's bioartificial liver, since scientists anticipate that tens of billions of cells will be needed inside the device's bioreactor system.

"Efficient cell manufacturing protocols in combination with improved storage capabilities provide us with important tools in moving us towards clinical and commercial success," explained Mr. Frank Menzler, President and CEO of HepaLife Technologies, Inc. "We are very pleased with the enhanced production of our patented PICM-19 cells, an especially important achievement as we move towards in vivo studies."

HepaLife researchers have achieved important cell-production improvements including a 20-fold increase in output, and a concurrent reduction in labor intensive cell maintenance by four-fold. The improved cell growth process make use of FDA cGMP (U.S. Food and Drug Administration's current Good Manufacturing Practice) compliant technology, an important factor in allowing the Company to readily transfer the manufacturing of its PICM-19 cells to third-party contract manufacturers.

Using the new cell production technology, HepaLife researchers initiated pilot production of PICM-19 cells, which showed desirable liver function characteristics such as ammonia utilization, urea production rates and drug detoxification activities. HepaLife researchers hope to further optimize cryopreservation protocols for these cells in order to provide for better storage and improved viability when thawed for use in liver support treatment.

In ongoing tests, HepaLife's proprietary PICM-19 liver stem cells inside the bioartificial liver have been perfused with cell culture media, blood plasma and whole blood, an environment designed to better mimic natural conditions for animal and human clinical trials in preparation for anticipated in vivo studies.

Intended for the treatment of liver failure, the HepaLife™ Bioartificial Liver device consists of three basic components: (1) a plasma filter, separating the patient's blood into blood plasma

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HepaLife reports process improvements and blood cells; (2) the bioreactor, a unit filled with the patented PICM-19 liver stem cell line which biologically mimics the liver's function; and (3), the HepaDrive™, a perfusion system for pumping the patient's plasma through the bioreactor while controlling gas supply and temperature for best possible performance of the cells.

ABOUT HEPALIFE TECHNOLOGIES, INC.

Based in Boston, Massachusetts, HepaLife Technologies, Inc. (OTCBB: [HPLF](#) - [News](#)) (FWB: HL1) (WKN: 500625) is a developer of cell-based medical technologies addressing prevalent human health concerns.

HepaLife is developing the first-of-its-kind bioartificial liver device intended for the treatment of liver failure using the Company's patented PICM-19 liver stem cell line. The HepaLife™ bioartificial liver, currently under development, is designed to serve as a supportive device, either allowing the liver to regenerate upon acute liver failure, or to bridge the patient's liver functions until a transplant is available.

Utilizing its patented liver stem cell line PICM-19, HepaLife is designing testing platforms to improve the pharmaceutical industry's capability to evaluate drug toxicity and possible side-effects before pharmaceutical compounds are commercially distributed.

Any statements contained in this press release regarding our ongoing research and development and the results attained by us to-date have not been evaluated by the Food and Drug Administration.

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further research and development, and /or whether clinical trial results, if any, will validate and support the results of our preliminary research and studies. Further, there can be no assurance that the necessary regulatory approvals will be obtained or that HepaLife will be able to develop commercially viable products on the basis of its technologies. In addition, other factors that could cause actual results to differ materially are discussed in the Company's most recent Form 10-Q and Form 10-K filings with the Securities and Exchange Commission. These reports and filings may be inspected and copied at the Public Reference Room maintained by the U.S. Securities & Exchange Commission at 100 F Street, N.E., Washington, D.C. 20549. You can obtain information about operation of the Public Reference Room by calling the U.S. Securities & Exchange Commission at 1-800-SEC-0330. The U.S. Securities & Exchange Commission also maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the U.S. Securities & Exchange Commission at <http://www.sec.gov>. The Company undertakes no obligation to publicly release the results of any revisions to these forward looking statements that may be made to reflect the events or circumstances after the date hereof or to reflect the occurrence of unanticipated events.
