August 13, 2007

HepaLife(TM) Bioartificial Liver: Analysts Forecast Artificial Liver Market to Surpass $2.7 Billion by 2010

BOSTON--

HepaLife Technologies, Inc. (OTCBB:HPLF) (FWB:HL1) (WKN:500625), developing the first-of-its-kind artificial liver device, today announced that forecast data from a newly issued study on the worldwide market for artificial organs projects the artificial liver device market to exceed $2.7 billion in the upcoming 36 months.

According to US-based Global Industry Analysts, Inc., one of the world's largest market research companies, global demand for artificial liver systems is expected to rise to $2.795 billion in 2010, second only to artificial kidney support and more than double the expected $1.31 billion artificial heart market. (July 2007; Artificial Organs - A Global Strategic Business Report)

"For HepaLife's supporters and shareholders, the expected strength of the artificial liver market represents enormous commercial opportunity, especially when considering that analysts expect that artificial liver products alone will account for approximately 25% of the entire artificial organ market, worldwide!" commented Mr. Frank Menzler, President and CEO of HepaLife Technologies, Inc.

"For patients, of course, the staggering growth of the liver support market serves as a stark reminder of the urgent need for a robust artificial liver device able to potentially help recover or survive from liver disease and failure - a leading cause of death."

In the United States, liver diseases and cirrhosis rank as the seventh leading cause of death among adults between the ages of 25 and 64, and an estimated 30 million Americans - one in every 10 - are or have been afflicted by liver diseases, according to the American Liver Foundation.

Unfortunately for patients, conventional artificial liver technologies have not lived up to their initial promise as a consequence of problems relating to their inability to grow liver cells quickly and safely, and with inconsistent results from filtering devices. Culturing and maintaining their cell systems has proven difficult; once removed from the body, their cells soon lose normal functionality.

In contrast, HepaLife's patented PICM-19 cells can survive at room temperature, retain their desired properties even after years in continuous culture, and unlike other cells, are not tumor-causing, a feature critical to nutrient metabolism research.

Recent research has also demonstrated that PICM-19 cells significantly outperform the world's most widely used human liver cell line (HepG2-C3A) in laboratory tests of liver-specific metabolic functions. Among the most important tests of liver function - the ability to synthesize ammonia, a potentially deadly toxin found in the bloodstream - HepaLife's PICM-19 cells synthesized 100% of the ammonia present, nearly four times more than HepG2-C3A.

Incorporating the PICM-19 cell line, HepaLife is developing the first-of-its-kind bioartificial liver. HepaLife's bioartificial liver currently under development is designed to operate outside the patient's body. The bioartificial liver is envisioned to mimic important functions of the human liver by circulating the patient's blood inside the device, where it is exposed to HepaLife's patented PICM-19 liver stem cells, thus processing the patient's blood-plasma by removing toxins, enhancing metabolic function, and ultimately, imitating the liver's natural function.

"Our bioartificial liver is designed to take advantage of the performance of the PICM-19 cells to successfully replicate the biological functions of the human liver inside a mechanical device," continued Mr. Menzler. Key to the growth and survival of our PICM-19 liver cells inside the bioartificial liver is a bioreactor, the most important mechanical component of the device."

In recent months, HepaLife researchers have reported significant advancement in integrating HepaLife's PICM-19 liver cells into the bioreactor system. PICM-19 cells are circulated inside the bioreactor system using HepaLife's HepaDrive(TM) perfusion pump technology, which delivers oxygen and gas supply, regulates temperature, and provides other vital support.

"With our development making important progress, we continue to meet and surpass critical milestones towards our first animal tests, and ultimately the clinical use of our bioartificial liver incorporating HepaLife's high-performance PICM-19 cells", concluded Mr. Menzler.

"The recent results of HepaLife's PICM-19 liver stem cells studies in a 3-D perfusion bioreactor showed excellent liver-like cell morphology combined with growth patterns unlike seen with other liver cell lines," stated Prof. Joerg Gerlach, MD, PhD, a Member of the HepaLife Scientific Advisory Board and inventor of the bioreactor system upon which HepaLife's bioartificial technology is based. "In addition, PICM-19's exciting metabolic functions make it a very promising candidate for use in a bioartificial liver."

The HepaLife(TM) Bioartificial Liver device consists of three basic components: (1) a plasma filter, separating the patient's blood into blood plasma and blood cells; (2) the bioreactor, a unit filled with PICM-19 cells which biologically mimic the liver's function; and (3), the HepaDrive(TM), 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.

HepaLife Technologies, Inc. (OTCBB:HPLF) (FWB:HL1) (WKN:500625) is a biotechnology

company focused on the identification and development of cell-based technologies and products.

Current cell-based technologies under development by HepaLife include 1) the first-of-its-kind artificial liver device, 2) proprietary in-vitro toxicology and pre-clinical drug testing platforms, and 3) novel cell-culture based vaccine production to protect against the spread of influenza viruses among humans, including potentially the high pathogenicity H5N1 virus.

For additional information, please visit www.hepalife.com.

To receive future press releases via email, please visit:

http://www.hepalife.com/alerts.php

To view the full HTML text of this release, please visit:

http://www.hepalife.com/20070813-1.html.php

Legal Notice Regarding Forward-Looking Statements

No statement herein should be considered an offer or a solicitation of an offer for the purchase or sale of any securities. This release contains forward-looking statements that are based upon current expectations or beliefs, as well as a number of assumptions about future events. Although the Company believes that the expectations reflected in the forward-looking statements and the assumptions upon which they are based are reasonable, it can give no assurance that such expectations and assumptions will prove to have been correct. Forward-looking statements, which involve assumptions and describe our future plans, strategies, and expectations, are generally identifiable by use of the words "may," "will," "should," "could," "expect," "anticipate," "estimate," "believe," "intend," or "project" or the negative of these words or other variations on these words or comparable terminology. The reader is cautioned not to put undue reliance on these forward-looking statements, as these statements are subject to numerous factors and uncertainties, including but not limited to adverse economic conditions, intense competition, lack of meaningful research results, entry of new competitors and products, adverse federal, state and local government regulation, inadequate capital, unexpected costs and operating deficits, increases in general and administrative costs, termination of contracts or agreements, technological obsolescence of the Company's products, technical problems with the Company's research and products, price increases for supplies and components, litigation and administrative proceedings involving the Company, the possible acquisition of new businesses or technologies that result in operating losses or that do not perform as anticipated, unanticipated losses, the possible fluctuation and volatility of the Company's operating results, financial condition and stock price, losses incurred in litigating and settling cases, dilution in the Company's ownership of its business, adverse publicity and news coverage, inability to carry out research, development and commercialization plans, loss or retirement of key executives and research scientists, changes in interest rates, inflationary factors, and other specific risks. We currently have no commercial products intended to diagnose, treat, prevent or cure any disease. The statements contained in this press release regarding our on going research and development and the results attained by us to-date have not been evaluated

by the Food and Drug Administration. There can be no assurance that 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 makes no commitment 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.

Source: HepaLife Technologies, Inc.