InSphero AG
Wagistrasse 27
CH-8952 Schlieren
Switzerland
Tel: +41 (44) 515049-0
Fax: +41 (44) 515049-1
www.insphero.com

Media Release

3D Liver Spheroid Model in Use by MIP-DILI, IMI's Drug Liver Injury Project

Schlieren, Switzerland January 21, 2015 – European consortium will use 3D liver tissues to better predict drug-induced liver injury.

Leaders of the European project "Mechanism based Integrated systems for the Prediction of Drug Induced Liver Injury" (MIP-DILI) project have reported they will use 3-dimensional (3D) liver spheroids against a panel of other in vitro test systems aimed at developing novel preclinical tests to improve the safety evaluation of drugs likely to cause drug-induced liver toxicity before subsequent evaluation in clinical trials. Along with its academic and EFPIA partners, the MIP-DILI consortium is funded equally by the EU Innovative Medicines Initiative (IMI) and EFPIA companies, and is in year three of the €32.4 million 5-year program.

In early project work, primary human hepatocytes (PHH), cells isolated from human liver donors, outperformed tumor-derived or other immortalized liver cell lines in terms of metabolic activity but with apparently mixed sensitivity to known DILI-inducing drugs. InSphero, the leading supplier of 3D cell culture products and services to the pharmaceutical industry, along with a number of other commercial technology suppliers were invited to participate in the next round of studies, where PHH were grown and assayed in a variety of formats that included static 2D culture, perfusion cultures, and 3D spheroids. Among the participating commercial suppliers contributing to the study, 3D spheroids emerged as the culture platform that most resembled liver-like biology and responded to a number of liver toxins with a certain enhanced sensitivity, which now requires further investigation.

Dr. Phil Hewitt, co-leader of the project's 'Established and novel in vitro cell systems' work package, says "3D spheroids proved to offer more than just superior biological relevance, they also provide the scalability and compatibility necessary to work with commercial assays and automation systems, and can do it at a more reasonable cost than other systems evaluated in the early phase studies. Liver spheroids will play a key role in the predictive in vitro tests being developed as the project progresses."

The findings were presented last fall at EUROTOX 2014 in Edinburgh, UK, in talks that summarized a thorough two-year evaluation of available liver cell sources and cell culture formats being considered.

InSphero supplies assay-ready 3D microtissues and 3D-focused screening services to the pharmaceutical and cosmetics industry, counting the world's top 15 pharmaceutical companies as their clients. InSphero's 3D InSight™ Human Liver Microtissues are established using PHH and other non-hepatocyte liver cells using a proprietary process and the company's hanging drop platform. Growing the cells in 3D results in a long-lived microtissue that more accurately mimics the cell architecture and metabolic phenotype of native liver compared to traditional 2D cultured PHH.

For more information about InSphero, visit www.insphero.com.

InSphero AG
Wagistrasse 27
CH-8952 Schlieren
Switzerland
Tel: +41 (44) 515049-0
Fax: +41 (44) 515049-1
www.insphero.com

InSphero contacts

Dr. Randy Strube, Director of Global Marketing, phone +1 800-779-7558 ext. 102, randy.strube@insphero.com, www.insphero.com

Dr. Jan Lichtenberg, CEO and Co-Founder, phone +41 44 5150490, jan.lichtenberg@insphero.com , www.insphero.com

Disclaimer

MIP-DILI is jointly funded by EFPIA and Innovative Medicines Initiative. The press release by no means endorses MIP-DILI or its members in using InSphero products for drug discovery & development. MIP DILI endorses/recognizes the imperative value of comparing the quantitative evaluation of all test systems for drug safety evaluation in line with its primary objective http://www.mip-dili.eu/

About InSphero

InSphero is a leading supplier of organotypic, biological in vitro 3D microtissues for highly predictive drug testing. The company, headquartered in Zurich, Switzerland, with subsidiaries in the USA and in Germany, currently counts all of the top ten global pharmaceutical and cosmetics companies as customers. InSphero 3D Insight™ Microtissues enable more biologically relevant in vitro applications in efficacy and toxicology. The spin-off company of the Swiss Federal Institute of Technology (ETH) Zurich and the University Zurich has been recognized for its scientific and commercial achievements with a number of national and international awards, including being named the #1 Swiss Startup and ACES Award Winner for 2014. InSphero is certified to the ISO 9001:2008 standard for its Quality Management System.

Follow us on InSphero newsletter and www.insphero.com