InSphero to Present Novel 3D Human Liver Fibrosis Model at Annual Liver Meeting® in Washington, DC

New 3D InSight™ Human Liver Fibrosis Model represents a powerful tool for screening efficacy and safety of anti-fibrotic drugs in vitro.

Schlieren, Switzerland – Oct 18, 2017  InSphero AG, the leading supplier of assay-ready 3D cell culture models for accelerating drug discovery and development, will present data characterizing and demonstrating the utility of its new 3D InSight™ Human Liver Fibrosis Model for screening efficacy of anti-fibrotic drugs. The findings will be presented in a poster presentation this Friday at the annual meeting of the American Association for the Study of Liver Disease (AASLD) Conference in Washington, DC.

Anti-fibrotic therapies aim to inhibit activation of hepatic stellate cell (HSCs), thereby preventing excessive accumulation of extracellular matrix (ECM) proteins, such as collagen, which can lead to cirrhosis and liver failure. The InSphero 3D InSight™ Human Liver Fibrosis Model is unique in that it contains all liver cell types necessary to mimic fibrosis in vitro in a high throughput, screening-compatible platform.

InSphero Chief Scientific Officer Dr. Patrick Guye says, “Our 3D human fibrosis model is composed of primary human liver cells, including HSCs, hepatocytes, Kupffer cells, and liver endothelial cells, all of which are required to accurately reflect the clinical fibrotic disease state in a cell culture model. Treatment of the model with TGF-β1, a known inducer of HSC activation, was shown to trigger strong induction of pro-fibrotic gene expression and ECM protein accumulation in the microtissue, resulting in collagen deposition and diminished hepatocyte function, both hallmarks of liver fibrosis. Even more promising, we were clearly able to demonstrate successful inhibition of disease progression on a phenotypic and transcriptional level using drugs known to interfere with pro-fibrotic signalling pathways.”

Dr. Jan Lichtenberg, InSphero Chief Executive Officer and Co-founder, notes, “These findings support the power of our model to help drug discovery groups meet the demand for safer, more effective anti-fibrotic drugs. The initial feedback from beta testers within major pharmaceutical groups with fibrosis programs has been overwhelmingly positive. Not only does the model overcome the lack of cellular complexity of current in vitro models, but being based on our pharma-validated Human Liver Microtissue platform, it can deliver valuable data on both the efficacy and safety of drug candidates, without the use of animal models.”

AASLD Presentation Details
Friday, October 20: 12:00 – 1:30 PM
Abstract #385: Development and characterization of a novel in vitro human liver fibrosis model for efficacy testing of anti-fibrotic drugs based on 3D Human Liver Microtissues
Poster presented by: Dr. Radina Kostadinova, InSphero AG
InSphero sets the standard for in vitro testing of novel drugs in the pharmaceutical and biotechnology industry with comprehensive solutions that provide greater confidence in decision making. Its robust and highly physiologically relevant suite of 3D InSight™ Microtissues and Services are used by major pharmaceutical companies worldwide to increase efficiency in drug discovery and safety testing. InSphero patent-pending technologies and methods enable large-scale, reproducible production of scaffold-free 3D microtissues driven solely by cellular self-assembly. The company specializes in delivering assay-ready and custom 3D models derived from liver, pancreas, and tumor tissues, to provide unrivaled biological insight into liver toxicology, metabolic diseases (e.g., diabetes and liver diseases), and oncology. All InSphero microtissues are thoroughly validated to ensure the highest quality, certified for use in a variety of assays, and shipped globally to customers in a patented, easy-to-use spheroid-optimized platform, ready for research. Field application scientists and research staff with expertise in working with 3D models help ensure efficient integration and onsite training as needed. For customers who prefer an outsourcing strategy with fast turnaround, InSphero also offers contract research services utilizing their 3D microtissue models.

InSphero 3D InSight™ solutions drive significant findings in peer-reviewed journals, through collaborative industry initiatives such as EU-ToxRisk and HeCaToS, and have gained validation in the world’s largest government institutions and pharmaceutical, chemical and cosmetics companies.

Founded in 2009, the privately held company is headquartered in Switzerland, with subsidiaries in the United States and Germany. It has been recognized for its scientific and commercial achievements with several national and international awards.

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Images (continued on next page)
Image caption:
The 3D InSight™ Human Liver Fibrosis Model is a powerful in vitro tool used by pharmaceutical drug discovery groups to test the ability of novel anti-fibrotic drugs to prevent induced accumulation of collagen protein (green staining) within microtissues derived from primary human liver cells (blue DNA stain).