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Media Release – For Immediate Distribution

Novel Phenomics NASH In Vitro Assay Presented by InSphero AG and PharmaNest Inc at 2021 Society of Toxicology Meeting

Introduction of key technology to accelerate NASH drug discovery by combining 3D disease models and automated AI-based fibrosis quantification.

Schlieren, Switzerland – March 30, 2021 During the 2021 Society of Toxicology (SOT) Annual Meeting, researchers from Swiss-based InSphero AG and from US-based PharmaNest Inc have presented a novel key technology to help drug developers in their search for therapeutics against non-alcoholic steatohepatitis (NASH).

While industry and academia search for safe and efficacious drugs against the disease globally, progress has been delayed by limitations related to reliable early human efficacy testing of drug candidates invitro. It is especially difficult to reliably quantify the onset and progression of fibrosis, the critical hallmark of the disease which leads to end-stage liver cirrhosis. To provide a scalable, robust and biologically relevant discovery platform, PharmaNest and InSphero have teamed up to combine their expertise in tissue engineering, disease modelling and artificial-intelligence-based quantitative image analysis. This game-changing preclinical discovery platform enables scalable human-based drug efficacy assessment, screening, combinatorial testing, as well as the study of complex NASH pathophysiology.

The current FDA surrogate end points for the approval of NASH therapies include the histological assessment of liver biopsies for fibrosis and its associated features. Quantitative assessment of fibrosis using more than 300 histological fibrotic parameters by the FibroNest Digital Pathology platform demonstrated efficacy of anti-fibrotic tool compounds which block TGF-β in InSphero's 3D InSight™ Human Liver NASH Model. These data correlated well with the decrease of the secretion of the clinical biomarker pro-collagen type III in the same model. "The computational quantification of fibrosis in our NASH model with the FibroNest method is extremely robust and sensitive. It provides insights into the fibrosis phenotype that correlate well with adult patients with NASH", says Radina Kostadinova, Product Manager at InSphero.

The superior capability of the FibroNest technology to quantify collagen fibers and their architecture in the 3D InSight™ Human Liver NASH Model was highlighted showcasing both small and large molecules at SOT 2021 (replay available on the companies' web sites). "The success of the Digital Pathology assay developed with InSphero is further evidence of the translational performance of FibroNest, which now can be used not only with adult NASH patient biopsies, but now with in vitro models", says Mathieu Petitjean, CEO of PharmaNest, Inc.

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About InSphero

InSphero is the pioneer of industrial-grade, 3D-cell-based assay solutions and scaffold-free 3D organ-on-a-chip technology. Through partnerships, InSphero supports pharmaceutical and biotechnology researchers in successful decision-making by accurately rebuilding the human physiology *in vitro*. Its robust and precisely engineered suite of 3D InSight™ human tissue platforms are used by major pharmaceutical companies worldwide to increase efficiency in drug discovery and safety testing. The company specializes in liver toxicology, metabolic diseases (e.g., T1 & T2 diabetes and NAFLD & NASH liver disease), and oncology (with a focus on immuno-oncology and PDX models). The scalable Akura™ technology underlying the company's 3D InSight™ Discovery and Safety Platforms includes 96 and 384-well plate formats and the Akura™ Flow organ-on-a-chip system to drive efficient innovation throughout all phases of drug development.

Learn more at www.insphero.com and follow us on Twitter and LinkedIn.

About PharmaNest, Inc

PharmaNest is an Artificial Intelligence and Digital Pathology company focused in the development and validation of novel standards for the quantification of the histological phenotypes Fibrosis at its associated features for drug discovery and development. PharmaNest's FibroNest cloud-based image analysis tool provides the most advance cloud-based phenotypic, translational and quantitative image analysis platform for the automated quantification of fibrosis and associated histological features for non-alcoholic steatohepatitis (NASH) and other fibrotic conditions. FibroNest has been validated to establish continuous scores for the assessment of the severity and progression of fibrosis in +20 pre-clinical models and most recently in clinical PBC, Adult NASH and Pediatric NASH. It remains a research-only-use tool at this stage.

For more information about FibroNest and PharmaNest, visit www.pharmanest.com and www.fibronest.co

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