Media Release – For Immediate Distribution

InSphero and Yokogawa Enter into Partnership Agreement to Support Drug Development Research

New partnership will focus on establishing and advancing high content screening solutions using complex, physiologically relevant 3D cell-based disease models.

Schlieren, Switzerland – December 3, 2020 InSphero AG, a pioneer of 3D *in vitro* technologies for drug discovery and safety, today announced that it has entered into a partnership agreement with Yokogawa Electric Corporation (Tokyo:6841) to establish and advance high content imaging and analysis (HCA) in drug discovery and safety. The two companies aim to promote and support the use of innovative HCA solutions with 3D *in vitro* models.

"Over the past few years, 3D *in vitro* models have clearly become the gold standard for drug discovery applications," says InSphero CEO and Co-Founder Jan Lichtenberg, PhD. "Our portfolio of 3D InSight™ discovery and safety platforms provide several key advantages over 2D and animal models for research teams seeking more *human* cell-based models." InSphero specializes in perfecting and customizing complex, multicellular 3D spheroid models with the physiologically relevant morphological characteristics, cellular complexity, and longevity in culture required to mimic clinical response to drug treatments. The company's Akura™ plate and organ-on-a-chip technology is precisely engineered for imaging and automation across a broad range of experimental formats, from high content screening to multi-tissue networks. "We found the perfect HCA partner in Yokogawa to help us optimize our use of 3D imaging instrumentation and software—and leverage their exceptional suite of tools for high quality 3D imaging for live cell analysis," says Lichtenberg.

Yokogawa's CellVoyager high-throughput screening system series is equipped with the company's confocal scanner unit (CSU), which scans cells at high speed, enabling high resolution 3D imaging for screening of candidate compounds. Furthermore, the deep learning function of the CellPathfinder high-content analysis software, enables complex image analysis techniques such as phenotypic analysis. This partnership will enable InSphero and Yokogawa to advance the use of HCA technology and methodologies and thereby address the growing demand for innovative HCA solutions for drug discovery and disease research.

Hiroshi Nakao, a Yokogawa Vice President and head of the company's Life Innovation Business Headquarters, says, "As one of our three long-term sustainability targets for the year 2050, we are working to ensure the well-being of all people. Through this partnership, we will be able to provide seamless services ranging from the construction of high-quality 3D *in vitro* models to complex analyses, thereby contributing to the improvement of screening technologies and the speed of drug discovery."

As part of this partnership agreement, InSphero has begun using Yokogawa's CQ1 confocal quantitative image cytometer in their research laboratory. The companies have already collaborated on several joint presentations, and co-authored a publication in the scientific journal *SLAS Discovery* that presented a framework for optimizing high content imaging of 3D models for drug discovery.

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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 about InSphero at www.insphero.com and follow them on Twitter and LinkedIn.

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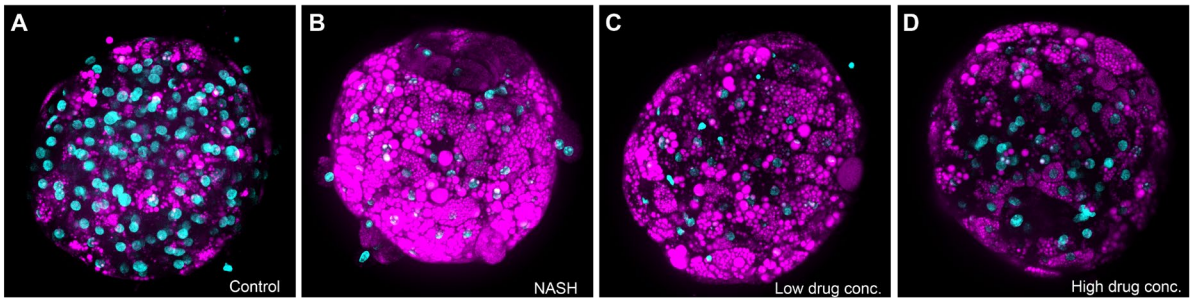
About Yokogawa HCA Solutions

For a wide range of research applications, from basic research to drug discovery screening, Yokogawa's life innovation business provides HCA systems, also known as high-content screening (HCS) systems. Paired with Yokogawa's advanced analysis software, these HCA systems provide high quality 3D imaging for enhanced live cell analysis, enabling researchers to identify substances, such as small molecules, peptides, and RNAi, that can alter the cell phenotypes. High-resolution microscopic images captured with Yokogawa HCA instruments can be used to detect cellular phenotypic changes at a molecular level, making this a powerful tool for studying the effects of physiologically active substances such as siRNA, peptides, and antibodies on cultured cells, tissue samples, and whole organisms.

Learn more about Yokogawa HCA solutions at https://www.yokogawa.com/solutions/products-platforms/life-science/high-content-analysis. Follow them on LinkedIn, Twitter, Facebook, and YouTube.

Images



High content images of the InSphero 3D in vitro *liver disease model for non-alcoholic steatohepatitis (NASH) shows the changes in model phenotype under healthy control conditions (A) and after NASH induction (B) with a specialized media that contains higher sugar levels and free fatty acids (lipids). Treatment with low (C) and high (D) concentrations of an anti-steatotic clinical drug candidate leads to a decrease in intracellular lipids. Nile Red staining captures a normal amount of lipids (magenta) in the control and after treatment with high drug concentrations of the drug, whereas steatotic hepatocytes are abnormally enlarged and filled with lipid vacuoles. Hoechst staining for nuclei (blue) further highlights macrovesicular steatosis (engorgement of hepatocytes by lipids that displace nuclei), mimicking the fatty liver disease state in humans. (Photo credit: Yokogawa Electric Corporation, imaged on a Yokogawa CQ1)*