

Media Release – For Immediate Distribution

AstraZeneca Relies on 3D InSight™ Human Islet Microtissues in Pancreatic Beta-cell Study

InSphero human islet model helps reveal effects of gene silencing on pancreatic cell function using novel antisense oligonucleotide technology

Schlieren, Switzerland – November 29, 2018 In a recent study published in *ScienceAdvances*, researchers in the Innovative Medicines and Early Development (IMED) Biotech Unit of [AstraZeneca](http://www.astrazeneca.com) used InSphero [3D InSight™ Human Islet Microtissues](http://www.insphero.com/3D-InSight-Human-Islet-Microtissues) to evaluate the effects of antisense oligonucleotides (ASOs) on glucose-stimulated insulin secretion (GSIS) in human pancreatic beta-cells. A promising new class of therapeutic molecules, ASOs are short, chemically modified, single-stranded nucleic acids that can silence any gene product of interest. The AstraZeneca research team, headed by Dr. Carina Ämmälä, Team Leader in Cardiovascular, Renal and Metabolism (CVRM) at IMED, engineered a novel targeted delivery approach for ASO uptake specifically by pancreatic beta-cells. They successfully demonstrated that the ASO target gene in beta-cells could be silenced without affecting gene expression in other cell types.

InSphero partners with pharmaceutical companies to provide comprehensive solutions and disease models for investigators engaged in type 1 and type 2 diabetes research and drug development. 3D InSight™ Islet Microtissue models are standardized primary islets that display homogeneous and native-like distribution of endocrine cells as well as uniform, long-term (> 28 days) and robust islet function. The [3D InSight™ Diabetes Discovery Platform](http://www.insphero.com/3D-InSight-Diabetes-Discovery-Platform) is ideal for high-throughput and longitudinal studies of pancreatic islet function, regeneration, and preservation in health and disease.

To read the *ScienceAdvances* paper, “Targeted delivery of antisense oligonucleotides to pancreatic beta-cells”, see: <http://advances.sciencemag.org/content/4/10/eaat3386>.

To learn more about the AstraZeneca IMED Biotech Unit, visit: <https://www.astrazeneca.com/our-science/IMED.html>.

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



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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.

For more information, visit www.insphero.com.

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