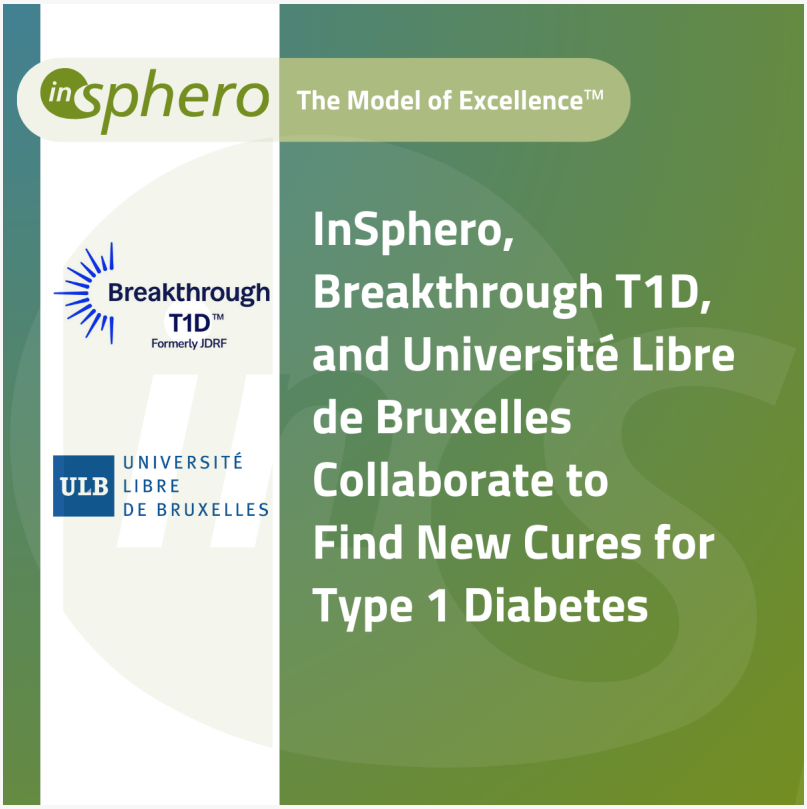
InSphero, Breakthrough T1D and Université libre de Bruxelles Collaborate to Find New Cures for Type 1 Diabetes

InSphero, Breakthrough T1D, and ULB partner to discover novel T1D treatments, aiming to protect and preserve vital insulin-producing pancreatic beta cells.



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SCHLIEREN, ZURICH, SWITZERLAND, August 19, 2024 /EINPresswire.com/ -- InSphero, a leading innovator in 3D Cell Culture and Organ-on-Chip technology, has announced a new collaboration with Breakthrough T1D, the leading global type 1 diabetes (T1D) research and advocacy organization, and the Université Libre de Bruxelles (ULB) Center for Diabetes Research. With funding from Breakthrough T1D under its Industry Discovery & Development Partnerships (IDDP) program, this collaboration aims to uncover novel treatment strategies for T1D, focusing on protecting and preserving the vital insulin-producing beta cells in the pancreas.

T1D is a challenging condition in which the immune system mistakenly attacks the body's own beta cells, leading to insufficient insulin production. This collaboration's innovative approach centers on shielding these cells from immune attack by focusing on beta cell intrinsic mechanisms.

Dr. Decio L. Eizirik, a renowned expert in beta cell research at ULB Center for Diabetes Research, is InSphero's scientific partner in this effort. The team will focus on identifying novel targets which decrease the antigen presentation on the beta cells to make them less visible to an auto-immune assault, while increasing the production of PDL-1, a molecule which inhibits immune

cells and promotes immune self-tolerance. This combined effect could effectively prevent beta cell destruction to enhance beta cell survival and function. The project will utilize InSphero's advanced primary 3D Cell Culture platforms to simulate the interactions between pancreatic islets and immune cells, offering a highly relevant model for the study of T1D.

Dr. Burcak Yesildag, Vice President of Islet Biology at InSphero, shares her enthusiasm for the collaboration, stating: "Unlike traditional approaches that focus solely on the immune system, our strategy addresses the misguided dialogue between the immune system and beta cells in T1D. With Breakthrough T1D support, we are excited to leverage our physiologically relevant 3D cell models to explore new therapeutic avenues that could revolutionize T1D treatment."

Dr. Jay Tinklepaugh, Senior Scientist at Breakthrough T1D, added: "This effort exemplifies the innovative spirit needed to tackle the complex challenges of type 1 diabetes. Identifying ways to preserve and protect beta cells in people with T1D is a priority for Breakthrough T1D and a critical part of accelerating cures. By bringing together InSphero's pioneering technology and ULB's scientific expertise, we are excited by the opportunities this creates to achieve significant breakthroughs in the fight against T1D."

This collaboration represents an innovative step forward in the quest to develop new treatments for type 1 diabetes and aims to pave the way for potentially life-changing therapies.

About InSphero
InSphero is the only 3D in vitro model company with the platform and expertise to modernize drug discovery in a way that empowers researchers to reach their full potential. Our innovative spheroid-based models allow more effective, safe therapies to contact the clinic through superior robustness, reliability, reproducibility, and scalability. InSphero's goal is to inspire the next generation of breakthrough therapies through customer obsession, commitment to innovation, and the model of excellence.
Learn more at insphero.com. Follow the company on LinkedIn, X and Instagram, and sign up for the Scientific Newsletter.

About Breakthrough T1D (Formerly JDRF)
As the leading global type 1 diabetes research and advocacy organization, Breakthrough T1D helps make everyday life with type 1 diabetes better while driving toward cures. We do this by investing in the most promising research, advocating for progress by working with government to address issues that impact the T1D community, and helping educate and empower individuals facing this condition.

About Type 1 Diabetes
T1D is an autoimmune condition that causes the pancreas to make very little insulin or none at all. This leads to dependence on insulin therapy and the risk of short or long-term complications, which can include highs and lows in blood sugar; damage to the kidneys, eyes, nerves, and heart; and even death if left untreated. Globally, it impacts nearly 9 million people. Many believe T1D is

only diagnosed in childhood and adolescence, but diagnosis in adulthood is common and accounts for nearly 50% of all T1D diagnoses. The onset of T1D has nothing to do with diet or lifestyle. While its causes are not yet entirely understood, scientists believe that both genetic factors and environmental triggers are involved. There is currently no cure for T1D.

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