

# Persista Bio Secures Two NIH Grants to Advance O2Line™ Oxygenated Cell Therapy Platform

*Funding supports large-animal studies and clinical-grade manufacturing of novel systems designed to overcome oxygenation and fibrosis barriers in cell therapy.*

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EINPresswire.com/ -- [Persista Bio®](#), Inc. today announced it has been awarded two competitive grants from the U.S. National Institutes of Health (NIH) to accelerate development of its O2Line™ Oxygenated Cell Therapy Platform. The awards, including a \$2.1 million Direct-to-Phase II SBIR grant from the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), will fund Persista Bio's next stage of product development in Type 1 diabetes (T1D), while laying the foundation for broader applications across multiple chronic diseases.



The Persista Bio O2Line™ system was created to address two challenges that have constrained cell-based therapies for decades: insufficient oxygen supply to implanted cells and fibrosis that limits long-term function. By combining an implantable electrochemical oxygen generator (iEOG) with a core-shell nanofibrous encapsulation capsule, Persista Bio's O2Line™ provides continuous and controllable oxygenation, high-capacity cell loading, protection against fibrosis, and the ability to be placed and retrieved subcutaneously. In preclinical studies, the system achieved sustained diabetes correction in immunocompetent rats using densely packed allogeneic islets, showing promise for long-term, immunosuppression-free therapy.

"These NIH awards directly fund several de-risking steps we must take to move this technology

toward the clinic: demonstrating scale-up and function in large-animal models, developing the fully implantable system, and producing the cell capsules at clinical grade under GMP standards,” said Linda Tempelman, PhD, chief executive officer of Persista Bio. “The Persista Bio O2Line™ is more than a device, it’s a platform for cell therapy. Our first program is in diabetes, but we see broad potential across diseases where cells can replace or augment lost physiological function.”

The Direct-to-Phase II SBIR grant will enable Persista Bio to scale O2Line™ to minipig size, demonstrate long-term survival of allogeneic islets in immunocompetent animals, and validate diabetes correction in a large-animal diabetes model. It will also support development of the oxygenation module and integration of Persista Bio’s human-system prototype. A separate Phase I award, led by Principal Investigator Beum Jun Kim, PhD, will focus on manufacturing readiness including technology transfer of the encapsulation capsule to a GMP-qualified electrospinning partner and execution of pilot manufacturing runs to finalize process specifications.

Dr. Tempelman commented on the team effort, “These cell therapy products require extensive R&D and product development, and we are very grateful for the prior corporate and grant funding, especially from NIDDK and Breakthrough T1D, that helped initiate the technology development at our licensors, Cornell University and Giner, Inc. All of our partners are united by the same goal: advancing a fully implanted cell therapy that can meaningfully improve the quality of life and long-term health of patients living with Type 1 diabetes.”

Persista Bio is positioning O2Line™ as a flexible cell therapy platform. While Type 1 diabetes is the initial indication, the company is also exploring applications in inflammation, pain, obesity, enzyme deficiencies, and metabolic disorders. To complement its NIH support, the company is raising a \$3.5 million seed round to accelerate large-animal milestones and advance development of the human system prototype.

#### About Persista Bio

Persista Bio®, Inc. is a pre-clinical biotherapeutics company based in Ithaca, NY, developing technology designed to revolutionize cell encapsulation. With the O2Line™ Oxygenated Cell Therapy Platform, Persista Bio aims to enable long-term, immunosuppression-free cell therapy, starting with Type 1 diabetes. The company licenses technology from Cornell University and Giner, Inc. For more information, visit [persistabio.com](http://persistabio.com). and follow us on [LinkedIn](#).

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