



Akron Biotechnology & Worcester Polytechnic Institute Collaboration Awarded ARMI Grant

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BOCA RATON, Fla. – Akron Biotechnology has partnered with Marsha Rolle, associate professor of biomedical engineering at Worcester Polytechnic Institute (WPI), to develop a novel cryopreservation media to support the storage and transport of manufactured tissues. The project, funded by the Advanced Regenerative Manufacturing Institute (ARMI), a Manufacturing USA Institute headquartered in Manchester, N.H., furthers the mission to enable the large-scale manufacturing of engineered tissues and tissue-related technologies.

Specifically, Rolle and Akron will develop dimethyl sulfoxide (DMSO) - free cryopreservation media. DMSO has long been used as a cryoprotective agent for cells and tissues, but it is known to be cytotoxic, alter cell behavior, and have negative clinical side effects. Thus, there is a need to seek novel, alternative solutions.

"The cryopreservation market is growing rapidly as new cell and tissue therapies reach clinical use. These innovative products are needed to keep up with the growing demands for high quality cryopreservation media. Just as new cryopreservation solutions are needed, so too are the testing platforms to evaluate their efficacy," said Dr. Claudia Zylberberg, CEO of Florida-based Akron Biotechnology.

This collaboration combines Akron Biotechnology's strengths in the commercial cryopreservation media market with Dr. Rolle's lab expertise at WPI in engineering and evaluating tissue constructs that can serve as a testbed for novel preservation strategies.

"We are eager to partner with Akron to develop innovative approaches to functional screening of tissue cryomedia," said Rolle. "Technologies that enable preservation of tissue structure and function will be critical to enable transport, availability, and clinical efficacy of manufactured tissues." Zylberberg echoed Rolle's comments.

"We are very excited about our strategic partnership with WPI to further the development of cryopreservation media to serve the expanding tissue engineering and regenerative medicine (TERM) industry," continued Zylberberg. "ARMI has been an excellent catalyst in bringing together diverse sets of skills from industry and academia to forge new connections. As the TERM field continues to grow, it is essential that we bring together the right experts in order to continue driving innovation."

About Akron Biotechnology

Akron is an innovative company dedicated to the development, manufacture, and marketing of ancillary materials and novel products/tools under cGMP compliance for tissue, cell and gene therapies, serving the regenerative medicine industry from bench to bedside. For more information, please visit <https://www.akronbiotech.com/>

**About the Advanced Regenerative Manufacturing Institute (ARMI)**

The Advanced Regenerative Manufacturing Institute (ARMI), headquartered in Manchester, NH, is the 12th Manufacturing USA Institute. It brings together a consortium of nearly 100 partners from across industry, government, academia and the non-profit sector to develop next-generation manufacturing processes and technologies for cells, tissues and organs. ARMI will work to organize the current fragmented domestic capabilities in tissue Biofabrication technology to better position the U.S. relative to global competition. For more information on ARMI, please visit www.ARMIOUSA.org

About Worcester Polytechnic Institute

WPI, a global leader in project-based learning, is a distinctive, top-tier technological university founded in 1865 on the principle that students learn most effectively by applying the theory learned in the classroom to the practice of solving real-world problems. Recognized by the National Academy of Engineering with the 2016 Bernard M. Gordon Prize for Innovation in Engineering and Technology Education, WPI's pioneering project-based curriculum engages undergraduates in solving important scientific, technological, and societal problems throughout their education and at more than 45 project centers around the world. WPI offers more than 50 bachelor's, master's, and doctoral degree programs across 14 academic departments in science, engineering, technology, business, the social sciences, and the humanities and arts. Its faculty and students pursue groundbreaking research to meet ongoing challenges in health and biotechnology; robotics and the internet of things; advanced materials and manufacturing; cyber, data, and security systems; learning science; and more. *WPI is a participating member in eight Manufacturing USA institutes.* www.wpi.edu