

Media Relations

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Innovation Award Used for Clinical Evaluation of Pump Prototype for Cardiopulmonary Bypass

DURHAM, N.H. — [Design Mentor, Inc.](#), a Pelham-based developer of medical devices for Fortune 100 Med-Tech companies, has collaborated with Dartmouth College to conduct testing on their patented pulsatile pressure cardiac pump, VentriFlo™. Unlike the existing continuous flow pumping processes, the VentriFlo mimics the physiological flow of blood from the human heart.

The testing is made possible by a Granite State Technology Innovation Grant from the NH Innovation Research Center (NHIRC) to support projects under development in the private sector. Projects vary from proof-of-concept to a substantial product or process design. Companies are required to provide matching dollars or services in an effort to improve leverage of NHIRC dollars.

“Design Mentor views this program as being a key driver of future growth for its NH-based operations,” said Marc Sedam, executive director of the NHIRC. “We’re striving to help the company reach full commercial development and regulatory approval in a much shorter time span than if they had been left to their own resources. Reaching such commercial viability will require additional staff and funding; another example of a Granite State Technology Innovation Grant turning research and product testing into clear economic impact.”

According to Ryan Halter, assistant professor in Dartmouth’s Thayer School of Engineering, “this device safely pumps oxygenated blood back into the body during cardiopulmonary bypass surgery with blood pressures and flow rates similar to native heart circulation. By using these pumps to mimic natural physiology, patients will do better with fewer post-surgery complications; doctors will have better reported outcomes; and hospitals will save money.”

Doug Vincent, president of Design Mentor, said “We have funded the product development since its inception to the point that it is ready for evaluation. The NHIRC gave us funding and access to skilled academic researchers and top-notch engineering, medical, and clinical resources. We are confident that we’re clearing the pathway to additional funding opportunities and commercial development that will directly impact New Hampshire’s economy. Once this technology is clinically vetted and receives proper regulatory approval, the VentriFlo has the ability to dramatically improve the state of care for the one million plus worldwide patients who undergo open heart surgery each year.”

The NHIRC was created in 1991 by the New Hampshire Legislature to support innovations through industry and university collaborations, thereby increasing the number of quality jobs in the state.

A request for proposals is now open and will fund 12-month projects beginning January 1, 2014. For more information, visit <http://www.nhirc.unh.edu/>.

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