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Four NH Businesses Awarded Grants for Research and Product Development

Monday, February 13, 2017

(HTTPS://WWW.UNH.EDU/UNHTODAY/NEWS/2017/02/13/FOUR-NH-BUSINESSES-AWARDED-GRANTS-RESEARCH-AND-PRODUCT-DEVELOPMENT)

DURHAM, N.H. – CairnSurgical and RyTek Medical have received Granite State Technology Innovation Grants in the latest round of funding from the New Hampshire Innovation Research Center (NHIRC), a state program administered by the University of New Hampshire. Turbocam Energy Solutions and HALO Maritime Defense Systems Inc. also received Granite State Technology Innovation Grants in a previous round of funding that was awarded in July 2016.

The funding enables the companies to collaborate with New Hampshire-based colleges and universities to help turn their research, conceptualization, and product development into economic assets. Projects vary from proof-of-concept to substantial product or process design. Companies are required to provide matching dollars or services in an effort to improve leverage of NHIRC dollars.

CairnSurgical LLC is developing an MRI-derived surgical guidance device, the Breast Cancer Locator (BCL), to improve the accuracy of breast conserving surgery. CairnSurgical will collaborate with Dartmouth College researchers to develop and optimize MRI imaging parameters across multiple MRI scanners and in multi-site settings.

RyTek Medical will collaborate with Dartmouth College researchers to explore bioimpedance sensing as a method by which intracranial pathology can be used to safely and continuously monitor patients with traumatic brain injury. Current technologies often do not provide clinicians with early enough warning to adequately treat evolving injury.

Turbocam Energy Solutions, LLC, will collaborate with UNH to evaluate the possibility of replacing the traditional technology of metal casting by introducing a new technology called direct metal laser sintering. They will work with UNH researchers to ensure that the performance of the parts they make with the new technology for their aerospace, industrial, and automotive customers continue to satisfy all performance and certification criteria.

HALO Maritime Defense Systems, an engineering company specializing in the protection of naval bases, ports, nuclear power facilities, bridges, refineries, and other assets from terrorist attacks, will collaborate with UNH faculty to produce a simulation-based design tool to predict strength and the hydrodynamic performance of marine anti-terrorism barriers, their components, and mooring systems under various environmental loading conditions and service regimes. This will provide the company with the ability to develop site-specific solutions for high-risk sites in various parts of the world and incorporate new, cheaper, and more environmentally friendly materials.

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. Since its inception, the NHIRC has awarded more than \$8 million in state funds to support research projects and has been responsible for the creation or retention of more than 685 jobs. Its awardees have received more than \$32 million in federal Small Business Innovation Research

(SBIR) grants, over \$950,000 in National Science Foundation Experimental Program to Stimulate Competitive Research (NSF-EPSCoR) funds, and over \$900 million in investment/acquisition capital.

For more information, visit <http://www.nhirc.unh.edu/> (<http://www.nhirc.unh.edu/>).

The University of New Hampshire is a flagship research university that inspires innovation and transforms lives in our state, nation and world. More than 16,000 students from all 50 states and 71 countries engage with an award-winning faculty in top ranked programs in business, engineering, law, health and human services, liberal arts and the sciences across more than 200 programs of study. UNH’s research portfolio includes partnerships with NASA, NOAA, NSF and NIH, receiving more than \$100 million in competitive external funding every year to further explore and define the frontiers of land, sea and space.

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