



## **FOR IMMEDIATE RELEASE**

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## **FuzeHub Announces Second Set of 2019 Grant Awards to Support Innovations in Manufacturing Throughout New York State**

**In the second round of funding for 2019, \$417,165 is awarded to facilitate research, development, and operational improvements in nine cutting edge technology and manufacturing companies.**

(Albany, NY – September 5, 2019) – FuzeHub, a not-for-profit organization providing small to medium-sized manufacturers (SME's) with guided access to an extensive network of industry experts, programs and assets to solve business growth challenges recently awarded \$417,165 to nine companies through the Jeff Lawrence Innovation Fund.

The Innovation Fund, consisting of \$1 million annually for five years, supports a set of activities designed to spur technology development and commercialization across New York State.

As part of the fund, FuzeHub offers two rounds of Manufacturing Grants funding each year. These grants are available to New York State not-for-profit organizations, including higher education institutions, which are proposing innovative projects to be undertaken with small to medium-sized manufacturers or early-stage companies with a project relevant to the manufacturing sector. Projects can include adoption of new technology to enhance a process and/or product, prototype development, design for manufacturing, proof-of-concept manufacturing, certain equipment purchases, manufacturing scale-up, and other projects to advance manufacturing capabilities. In addition, the fund is used to provide assistance to early stage companies through an annual commercialization competition and an innovation challenge.

The second round of grant awardees for 2019 plan to add nearly fifty new technical and skilled labor jobs to help increase the workforce within the manufacturing sector across New York State. "The Jeff Lawrence Innovation Fund manufacturing grant proposals continue to reflect the spirit of advancement, from all aspects of the technology ecosystem" said Julianne Clouthier, industry engagement manager for FuzeHub. "FuzeHub continues to see many applications from public and private universities as well as Manufacturing Extension Partnership centers or MEP centers, but we are also seeing more interest from local economic development organizations which in turn has yielded a remarkable diversity in the grant proposals. From 3D printing for wearables to collaborative robots (cobots), and advanced medical testing

for Lyme Disease and management of dry eye disease, these grant awardees are demonstrating that there is no shortage of innovation in New York,” she added.

**FuzeHub is pleased to announce the ninth set of grantees:**

**Alfred University / Materials Science and Engineering Department, Inamori School of Engineering / FlexTraPower, Inc. \$50,000 (Western NY)**

Alfred University and FlexTraPower, Inc. DBA Bonbouton are partnering to advance the manufacturing of conductive fibers for functional textiles via an extrusion-based 3D printing of carbon nanomaterials based (CNT, graphene) PDMS composites. This project will develop a novel extrusion-based 3D printing technology to manufacture conductive 1D fibers and 2D patterns for flexible and functional textiles using carbon nanomaterials based PDMS composites.

**Alfred University / New York State College of Ceramics / Lithoz America, LLC \$50,000 (Western NY)**

Alfred University and Lithoz America, LLC. have teamed up on an additive manufacturing (AM) of all solid state fuel cells and batteries project using yttrium-stabilized zirconia (YSZ) and Lithium Super Ionic Conductor (LISICON) for fuel cell and battery applications, respectively. This project intends to characterize particles and rheology of select ceramic suspensions for 3D printing, sinter AM ceramics, and evaluate AM data for adoption of AM technology for energy applications. This project will be the first step towards making all solid-state energy devices using AM in a commercial scale. The all solid-state energy devices have numerous advantages in terms of energy efficiency, compactness, form factor, low corrosion with no liquid or melt, and longer life. The AM will also dramatically cut the cost to manufacture with significant reductions in material loss due to generally reductive approaches used in manufacture of these materials and devices. Rapid production via AM and flexibility in size and shape will open up new markets for these materials and devices. Results will lay the foundation for scaling up and evaluation of this technology for all solid state (ceramic) fuel cells and batteries produced by AM, thus revolutionizing energy conversion and storage industries in the NY state as well as across the US.

**Cornell University / Kevin M. McGovern Family Center for Venture Development in the Life Sciences / Ionica Sciences \$35,000 (Southern Tier)**

Ionica Sciences has developed a high sensitivity, precision platform for the detection of infectious diseases in human serum samples. The first test under development is the IonLyme test, a high sensitivity assay for Lyme disease in humans. Lyme disease, a tick-borne disease, is the fastest growing vector-borne infectious disease in the United States. There is a widely recognized and critical need for better assays to detect Lyme disease in humans. Currently Lyme disease is diagnosed using antibodies, or the body’s response to exposure to Lyme disease. This approach results in poor sensitivity, especially for patients tested within 30 days of infection, since antibody production has not reached detectable levels at that point. Further, new and old infections cannot be differentiated. To address the need for a better Lyme disease diagnostic, Ionica Sciences has combined two existing technologies, DNA aptamers and surface-enhanced Raman scattering (SERS) to create a novel direct test for Lyme disease. In collaboration with FuzeHub, Ionica will purchase a 96-well Raman spectrometer to help transition the IonLyme test from the research laboratory to a clinical reference lab for future sale of the assay to physicians.

**Finger Lakes Community College / New Scale Technologies, Inc. \$50,000 (Finger Lakes)**

New Scale Robotics (NSR) has a line of precision grippers and other tools that install in minutes on

collaborative robots (cobots) from Universal Robots. NSR will collaborate with Dr. Samanta and his students at FLCC to develop a Smart Platform that expands plug-and-play compatibility of its tools to multiple additional cobot brands. A new cobot will be housed at FLCC's Instrumentation and Controls program. Dr. Samanta will act as consultant on the Smart Platform development project and may use the cobot to teach students, demonstrate cobot applications, and problem-solve any issues that surface during development. The class can work with other local companies to develop solutions for assembly, loading, quality control, and packaging as a part of their curriculum or co-op experience. A successful collaboration for this innovation will increase revenue and employment for New Scale Technologies and will bring Industry 4.0 technology into the FLCC classroom.

**Rensselaer Polytechnic Institute / Lighting Research Center / Rich Brilliant Writing \$49,981 (Capital Region)**

The Lighting Research Center (LRC) at Rensselaer Polytechnic Institute is teaming up with Rich Brilliant Willing (RBW), a growing, Brooklyn-based company that designs and manufactures custom LED fixtures, to develop a novel approach using additive manufacturing for prototyping, concept validation, and manufacturing of functional 3D-printed heat sinks for LED fixtures. LED lighting products require the heat generated by the LEDs and other components to be properly dissipated. High operating temperatures negatively impact long-term performance and system reliability. Additive manufacturing will provide a simpler, faster, and better predictive design cycle to optimize RBW custom products, expanding their design possibilities without compromising performance or profitability. Through LRC outreach activities, the results from this project will benefit manufacturers of lighting and additive manufacturing equipment and materials at large.

**Rochester Institute of Technology / COE in Advanced and Sustainable Manufacturing / Enetics, Inc. \$50,000 (Finger Lakes)**

The Center of Excellence in Advanced and Sustainable Manufacturing (COE-ASM) at Rochester Institute of Technology (RIT) partnered with Enetics, Inc., headquartered in Victor NY, under a previous project to design and engineer a flow-loop testbed for a gas telemetry system that could be constructed for prototype and production unit testing. Enetics tested several prototypes with gas utility companies and ultimately uncovered the need for local testing of the prototypes to enable quicker design iterations. Under this new project, COE-ASM will fabricate a flow-loop testbed with the required features and sensor systems to allow Enetics' product design to mature faster and create a more accurate and reliable product. Upon COE-ASM's completion of the testbed, Enetics will be able to finalize development of their GasComm system, calibrate flow rates under prototypic conditions, and update their firmware for more accurate data collection. The company expects to deliver a thousand units to utilities customers in its first year, generating a projected net positive revenue.

**University at Buffalo / Department of Chemistry / Molecular Glasses, Inc. \$32,564.00 (Western NY)**

The laboratory of University at Buffalo chemistry professor Luis A. Colón, in partnership with Molecular Glasses, Inc. will develop a new environmentally benign purification process to be implemented in the manufacturing of novel Organic Light Emitting Diode (OLED) materials that are used in displays on devices such as cell phones, tablets, and flat screen TVs. The purification approach is based on supercritical fluid chromatography (SFC), a technology that provides scale-up purification capabilities with the added benefit of minimizing the use of organic solvents in the purification process. The new purification method will allow Molecular Glasses, Inc. to improve reproducibility and replace current methodology that often lacks the reproducibility to achieve the required purity of their novel OLED materials. The new purification

process based on SFC will also enable the production of materials at a reduced manufacturing cost.

**University at Buffalo / School of Engineering and Applied Sciences / Coolnomics and QSG Technologies  
\$50,000 (Western NY)**

Dr. Shenqiang Ren of the University at Buffalo's Mechanical and Aerospace Engineering and RENEW Institute is partnering with Coolnomics LLC and QSG Technologies to develop CoolPak Hydrogel for advanced personal cooling solutions. This project will leverage thermal management technology and local manufacturing capabilities to enable superior cooling wearables. The impact of this new cooling technology will shine a light on the University at Buffalo and the entrepreneurial success of a Buffalo innovator. More so, this new cooling technology will enhance physical and mental endurance while also preventing heat injuries among the many populations commonly challenged when exertional heat meets environmental heat; from the endurance athlete to the military. From occupational workers in the construction trades, to the oil, gas, and nuclear industries; the airline industry, fire fighters and first responders; and the one-in-three Americans who become worsened when overheated due to a chronic condition and/or disability.

**University of Rochester / The Institute of Optics / Optel, Inc. \$49,600 (Finger Lakes)**

The University of Rochester is partnering with Optel, Inc., to develop and build commercial clinical prototypes to characterize and assist in the management of dry eye disease (DED). These prototypes are based on a proprietary laboratory instrument developed at the University of Rochester, The Institute of Optics and Flaum Eye Institute that has been shown to characterize dry eye and the effect of several types of eye drops. DED affects an estimated 40 million individuals in the U.S. and given its predisposition and increased prevalence with age, along with its association with cataract and refractive surgery, incidence is predicted to increase with the aging population and increased use of digital displays that alters blink behavior.

**FuzeHub is also preparing for the Commercialization Competition:**

In 2019, FuzeHub enters its third year hosting the Commercialization Competition. The competition is a two-day event to be held November 18 & 19, 2019 at the Albany Capital Center in Albany, New York and will feature a pitch competition showcasing innovative early stage companies, panelist discussions and networking opportunities. Finalists will compete in person to demonstrate the commercialization potential of their technology or product. Up to \$400,000 in award money is available, and FuzeHub anticipates making at least six awards of up to \$50,000 each and one company has the chance to win an additional \$100,000 for a grand prize of \$150,000. To learn more about the event and to register, visit [www.fuzehub.com/commercialization-competition/](http://www.fuzehub.com/commercialization-competition/).

For more information about the Jeff Lawrence Innovation Fund, visit [www.fuzehub.com/innovation-fund/](http://www.fuzehub.com/innovation-fund/) or contact Julianne Clouthier, Industry Engagement Manager at [julianne@fuzehub.com](mailto:julianne@fuzehub.com).

**About Jeff Lawrence**

*During his more than 20 years at the Center for Economic Growth, the Manufacturing Extension Partnership (MEP) affiliate in the Capital Region where he served as executive vice president and MEP Center Director, Jeff Lawrence directed programs of direct assistance to manufacturers and technology companies to increase their competitiveness. He is remembered for being an invaluable and generous mentor to many in the area's business community and a tireless advocate for manufacturing innovation throughout New York.*

## **About FuzeHub**

*FuzeHub is a not-for-profit organization that connects New York's small to medium-sized manufacturing companies to the resources, programs and expertise they need for technology commercialization, innovation, and business growth. Through our custom assessment, matching, and referral platform, we help companies navigate New York's robust network of industry experts at Manufacturing Extension Partners centers, universities, economic development organizations, and other providers. FuzeHub is the statewide New York Manufacturing Extension Partnership Program (MEP) center, supported by Empire State Development's Division of Science, Technology & Innovation.*

*For more information on FuzeHub, visit [www.fuzehub.com](http://www.fuzehub.com).*

## **About Empire State Development's Division of Science, Technology and Innovation (NYSTAR)**

*Empire State Development's Division of Science, Technology and Innovation (NYSTAR) mission is to advance technology innovation and commercialization in New York State. NYSTAR's programs are designed to enable new and existing businesses to become more competitive through the use of innovative technologies, and emphasize the importance of working with industry to leverage the state's technology strengths. Through funded programs that support world-class technology research at colleges and universities, NYSTAR works to promote a robust network of industry-university partnerships throughout the state. It administers the New York Manufacturing Extension Partnership, which provides direct technology assistance to small to medium size manufacturers.*

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