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# Governor Northam Announces Commonwealth Research Commercialization Fund Award Winners

CRCF invests in priority research and commercialization activities through the private sector, academia, and nonprofit research institutes

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**RICHMOND**—Governor Ralph Northam today announced \$2.51 million in funding in support of 41 Commonwealth Research Commercialization Fund (CRCF) awards. The projects represent exciting advancements in five industries: clean energy, cybersecurity, data analytics, life sciences, and unmanned systems.

CRCF drives technological and economic development in Virginia by investing in research, development, and commercialization of early-stage, high-potential technologies, when funding can be an essential catalyst to successful market entry.

“Virginia is recognized as one of the most innovative states in the nation, and we know that identifying and supporting Virginia innovators at critical early stages through state-funded programs like CRCF is key to maintaining and expanding our leadership role,” **said Governor Northam**. “The Commonwealth will continue to deliver programs that facilitate bringing pioneering technologies and ideas to market and create a culture where entrepreneurs will thrive. I congratulate this year’s award recipients and thank them for helping develop solutions to some of our most pressing challenges in Virginia, across the country, and around the world.”

“The Center for Innovative Technology presents a broad range of programs for entrepreneurs, researchers, inventors, and innovators throughout the Commonwealth,” **said Secretary of Commerce and Trade Brian Ball**. “CRCF funding is an important part of the research commercialization and development process. The people—individuals, teams, and

organizations—who have received awards this year have the potential to contribute great things globally, and benefit the state of Virginia from an economic development perspective for years to come.”

“Every year our team gets the unique honor of introducing a broad array of exciting new technologies and ideas to the world that are being developed right here in Virginia,” **said Ed Albrigo, President and Chief Executive Officer at the Center for Innovative Technology.** “The CRCF program rewards innovation efforts in a tangible way, and recognizes the incredible promise of these transformative projects that have real potential to generate significant economic and social benefits for the Commonwealth.”

The following CRCF projects will be awarded, contingent upon acceptance of award terms and conditions:

### **Commercialization Program**

*Incentivizes commercialization of high-potential technologies or services by Virginia’s private sector.*

#### **AgroSpheres | Dr. Mark Kester**

*AgroSpheres Enhanced Delivery of Active Ingredients*, \$50,000, Life Sciences, Charlottesville  
[www.agrospheres.com](http://www.agrospheres.com) (<http://www.agrospheres.com>)

#### **Amruta Inc | Dr. Beju Rao**

*Self-Learning System for e-Discovery, Among Large Text Corpus Data Sets to Improve Compliance, Forensics, and Customer Service, Using Machine Learning*, \$50,000, Data Analytics, Fredericksburg  
[www.amrutainc.com](http://www.amrutainc.com) (<http://www.amrutainc.com>)

#### **AVEC, Inc. | Mr. Kyle Schwartz**

*Advancement of Software-Based Noise Prediction Tools for Multirotor Aircraft*, \$49,997, Unmanned Systems, Blacksburg  
[www.avec-engineering.com](http://www.avec-engineering.com) (<http://www.avec-engineering.com>)

#### **BEAM Diagnostics, Inc | Dr. Sarah Snider**

*Using Behavioral Economics to Identify Best-Fit Personality Profiles Among Employment-Seeking Individuals*, \$29,750, Data Analytics, Roanoke  
[www.beamdiagnosticsinc.com](http://www.beamdiagnosticsinc.com) (<http://www.beamdiagnosticsinc.com>)

#### **Casper Drones | Dr. Max DePiro**

*An Unmanned Aerial System to Peacefully Fly People Around*, \$48,400, Unmanned Systems, Hampton

#### **Eksdyne Inc. | Mr. Joshua Eckstein**

*Integrated System for Evolving Developing Devices*, \$49,936, Unmanned Systems, Blacksburg  
[www.eksdyne.com](http://www.eksdyne.com) (<http://www.eksdyne.com>)

**Embody LLC | Dr. Michael Francis**

*Additive Manufacturing of Collagen Microfibers as an Internal Brace for Regenerating Ligaments of the Knee*, \$50,000, Life Sciences, Norfolk  
www.embodyparts.com (<http://www.embodyparts.com>)

**G2 Ops Global, Inc. | Ms. Corren McCoy**

*A Model-Based Framework for Quantifying Information Risk*, \$42,984, Cyber Security, Virginia Beach  
www.g2-ops.com (<http://www.g2-ops.com>)

**MOVA Technologies, Inc. | Mr. James Compton**

*Panel-Bed Filter Proof-of-Concept Testing*, \$50,000, Clean Energy, Pulaski  
www.movatechnologies.com (<http://www.movatechnologies.com>)

**NIRSleep Inc | Dr. Ryan Casey Boutwell**

*Home Sleep Monitoring with a Compact and Inexpensive Wearable Neuro-Imaging Device*, \$50,000, Life Sciences, Richmond  
www.bionicalabs.com (<http://www.bionicalabs.com>)

**Overa, Inc. | Dr. David Kroeger**

*Development of a Non-Hormonal Female Contraceptive Using an Egg-Specific Antibody-Drug Conjugate*, \$50,000, Life Sciences, Charlottesville

**ReAlta Life Sciences | Dr. Neel Krishna**

*Peptide Inhibitor of Complement C1 (PIC1) as a Treatment for Autoimmune Hemolytic Anemia in Patients with Systemic Lupus Erythematosus*, \$50,000, Life Sciences, Norfolk

**Responsible Robotics Corporation | Mr. Christian Manasseh**

*A Robotics Monitoring and Control Platform*, \$49,625, Unmanned Systems, Tysons  
www.responsiblerobotics.com (<http://www.responsiblerobotics.com>)

**Ryzing Technologies | Mr. Ryan Gundling**

*Braided Inflatable Robotic Technology (BIRT) for Dexterous Maritime Manipulation System (D2MS)*, \$49,953, Unmanned Systems, Staunton  
www.ryzingtech.com (<http://www.ryzingtech.com>)

**Sentinel Robotic Solutions, LLC | Mr. John Robinson**

*Mobile Sentinel – Mobile Unmanned Automated Traffic Control Sensor and Gate System*, \$25,000, Unmanned Systems, Wallops Island  
www.srsgrp.com (<http://www.srsgrp.com>)

**Status Identity, Inc. | Mr. Nakul Munjal**

*Continuous Authentication and Identification by Distinctive Characteristics*, \$25,000, Cyber Security, Burke  
www.statusidentity.com (<http://www.statusidentity.com>)

**Virongy LLC | Mr. Yuntao Wu**

*Commercialization of Infectin*, \$48,791, Life Sciences, Manassas

[www.virongy.com](http://www.virongy.com) (<http://www.virongy.com>)

(<http://www.virongy.com>)

**Matching Funds Program**

*Supports the commercialization of high-potential research and technology by public and private higher education institutions, federal labs and other nonprofit research institutions in Virginia, and university research consortia that include Virginia college and university member institutions.*

**Commonwealth Center for Advanced Manufacturing | Dr. Barbara Boyan**

*Additive Manufacturing of Metal Alloys for 3D Medical Devices*, \$99,988, Life Sciences, Disputanta

[www.CCAM-VA.com](http://www.CCAM-VA.com) (<http://www.ccam-va.com/>)

**Commonwealth Center for Advanced Manufacturing | Dr. Huda Al-Ghaib**

*Advanced Analytics Framework for Deploying Automated Defect Detection in Manufacturing*, \$98,166, Data Analytics, Disputanta

[www.CCAM-VA.com](http://www.CCAM-VA.com) (<http://www.ccam-va.com/>)

**George Mason University | Dr. Siddhartha Sikdar**

*Wearable Ultrasound System for Robust Sensing of Muscle Activation*, \$98,456, Life Sciences, Fairfax

[www.gmu.edu](https://www2.gmu.edu/) (<https://www2.gmu.edu/>)

**Southeastern Universities Research Association | Dr. Cynthia Keppel**

*Development of High-Resolution Radiotherapy Beam Characterization Technology Using Micropattern Gas Detection*, \$100,000, Life Sciences, Newport News

[www.sura.org](http://www.sura.org) (<http://www.sura.org>)

**University of Virginia | Dr. Bryan Berger**

*Designer Enzymes as Green Alternatives to Protect High-Value Agricultural Products Pre- and Post-Harvest from Microbial Infection*, \$100,000, Life Sciences, Charlottesville

[www.virginia.edu](http://www.virginia.edu) (<http://www.virginia.edu>)

**University of Virginia | Dr. Mark Roeser**

*VADstent to Prevent Cavity Collapse and Adverse Cardiac Remodeling*, \$54,578, Life Sciences, Charlottesville

[www.virginia.edu](http://www.virginia.edu) (<http://www.virginia.edu>)

**Virginia Commonwealth University | Dr. Weining Wang**

*Development of a Highly Efficient Air Filter for Inactivation of Airborne Germs*, \$100,000, Life Sciences, Richmond

[www.vcu.edu](http://www.vcu.edu) (<http://www.vcu.edu>)

**Virginia Commonwealth University | Dr. Jason Reed**

*A Nanotechnology Approach for Streamlining Detection of Prognostic Translocation in Multiple Myeloma (MM)*, \$100,000, Life Sciences, Richmond  
www.vcu.edu (<http://www.vcu.edu>)

**Virginia Commonwealth University | Dr. Christopher Ehrhardt**

*Rapid Cell Typing Technology for Forensic DNA Casework*, \$100,000, Life Sciences, Richmond  
www.vcu.edu (<http://www.vcu.edu>)

**Virginia Commonwealth University | Dr. Nicholas Farrell**

*Sulfated Glycosaminoglycans as Disease Biomarkers and Molecular Targets for Precision Medicine in Cancer*, \$100,000, Life Sciences, Richmond  
www.vcu.edu (<http://www.vcu.edu>)

**Virginia Institute of Marine Science | Dr. Jon Derek Loftis**

*Leveraging Deep Lens Technology to Form a Video Inundation Monitoring System for StormSense*, \$49,612, Data Analytics, Gloucester Point  
www.vims.edu (<http://www.vims.edu>)

**Virginia Tech | Dr. Nazila Roofigari-Esfahan**

*Development of a Connected Smart Vest for Improved Roadside Work Zone Safety*, \$91,069, Data Analytics, Blacksburg  
www.vt.edu (<http://www.vt.edu>)

**Virginia Tech | Dr. Robert Gourdie**

*Precision Medicine Exosomal Drug Delivery Medtech for Heart Attack*, \$100,000, Life Sciences, Blacksburg  
www.vt.edu (<http://www.vt.edu>)

(<http://www.vt.edu>)

**SBIR Matching Funds Program**

*Advances high-potential technology commercialization and development efforts by Virginia-based technology businesses that have recently won a Phase I and/or Phase II Small Business Innovative Research (SBIR) award.*

**Alexander BioDiscoveries, LLC | Dr. Cyrille Gineste**

*Small Molecule Inhibitors of the Influenza Virus Nucleoprotein for Drug Development*, \$50,000, Life Sciences, Charlottesville

**Covenant Therapeutics, LLC | Dr. Mikell Paige**

*Drug Discovery for Gram-Negative Rod Bacterial Infection*, \$49,995, Life Sciences, Charlottesville

**Fend Incorporated | Mr. Colin Dunn**

*Low-Cost Data Diodes for Physical Protection of Connected Infrastructure*, \$50,000, Cyber Security, Arlington  
www.fend.tech (<http://www.fend.tech>)

**Gradient Consulting | Dr. Justin Selfridge**

*Achieving Eternal Flight with a Tethered Uni-Rotor Network (TURN) System, \$50,000, Unmanned Systems, Newport News*  
www.turnuav.com (<http://www.turnuav.com>)

**ICBiome | Dr. Srinii Iyer**

*A Cloud-Based WGS Platform for Routine Surveillance of Hospital Pathogens, \$50,000, Life Sciences, Dulles*  
www.icbiome.com (<http://www.icbiome.com>)

**JKM Technologies, LLC | Dr. D. Casey Kerrigan**

*Local Footwear Manufacturing Using a Novel Cost-Effective Pellet-Based 3D Printing Process, \$50,000, Life Sciences, Charlottesville*  
www.oeshshoes.com (<http://www.oeshshoes.com>)

**Micro Harmonics Corporation | Ms. Diane Kees**

*Commercialization of Cryogenic Millimeter-Wave Isolators, \$50,000, Unmanned Systems, Fincastle*  
www.microharmonics.com (<http://www.microharmonics.com>)

**NOVI LLC | Dr. Amit Mehra**

*Next-Generation, Intelligent, and Autonomous Satellites for an Emerging New Space Industry, \$48,700, Unmanned Systems, Arlington*  
www.novillc.com (<http://www.novillc.com>)

**SeeHear LLC | Dr. Silvio Eberhardt**

*Commercialization of an NIH- and NSF-Supported Web-Based Speech Perception Training System for Adults with Hearing Loss, \$50,000, Life Sciences, Arlington*

**VoltMed Inc. | Dr. Christopher Arena**

*Testing of an MRI-Compatible Electrode for Treating Brain Tumors with Non-Thermal Ablation, \$50,000, Life Sciences, Blacksburg*  
www.voltmeddevices.com (<http://www.voltmeddevices.com>)

**WynnVision LLC | Dr. Kenneth Wynne**

*Antimicrobial and Biocompatible Endotracheal Tubes, \$50,000, Life Sciences, Richmond*

**About the Center for Innovative Technology (CIT)**

CIT concentrates on the early commercialization and seed funding stages of innovation, helping innovators and tech entrepreneurs launch and grow new companies to create high-paying jobs throughout the entire Commonwealth of Virginia. Founded in 1985, CIT, a nonprofit corporation, has been a primary driver of advocating for innovation and entrepreneurship in the Commonwealth. CIT accelerates next generation technologies and technology companies through commercialization, capital formation, and market development initiatives. Programs include CIT GAP Funds, CRCF, Virginia Founders Fund, Broadband/Rural Broadband, Smart Communities, Cybersecurity, Unmanned Systems, Small Business Innovation Research & Small Business Technology Transfer programs, University Partnerships, Startup Company Mentoring

& Engagement on behalf of Virginia Entrepreneurship & Economic Development. CIT's CAGE Code is 1UP71.

### **About the CIT Commonwealth Research Commercialization Fund (CRCF)**

The CRCF advances science- and technology-based research, development, and commercialization to drive economic growth in Virginia, create and foster high-potential technology companies in the Commonwealth, and to encourage and strengthen collaboration and partnerships between the public and private sector. The Fund seeks to advance Virginia's position in strategically important areas including, but not limited to human health, cybersecurity, smart communities, and unmanned systems.

Proposals submitted to CRCF undergo a multi-stage review process. The process includes assessment by subject matter experts (SMEs), followed by evaluation and award recommendations made by the Research and Technology Investment Advisory Committee (RTIAC) to the CIT Board of Directors. The Board makes final award decisions. CRCF awards contribute to the Commonwealth's overall plan to enhance economic development through technology research and commercialization and, as such, the CRCF supports technology priorities of the Commonwealth.

The list of Fiscal Year 2019 and prior year CRCF award recipients are available here (<http://www.cit.org/initiatives/crcf-awards/>).

Future CRCF funding opportunities are available on the CIT website (<http://www.cit.org/initiatives/crcf/>). Those interested in receiving CRCF announcements should fill out the online form to join the CRCF listserv. Please direct questions to the CRCF team at [crcf@cit.org](mailto:crcf@cit.org) (<mailto:crcf@cit.org>).

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