VIPC Awards CCF Grant to UVA Health for Brain Imaging Technology to Locate Seizure Focus in Epilepsy Patients

Drs. Bijoy Kundu and Mark Quigg seek to improve chronic underutilization of epilepsy surgery through new noninvasive, AI-driven imaging software.

RICHMOND, VIRGINIA, UNITED STATES, March 13, 2024 /EINPresswire.com/ -- The Virginia Innovation Partnership Corporation (VIPC) today announced that UVA Health has been awarded a Commonwealth Commercialization Fund (CCF) grant for $100,000 in support of research conducted by Drs. Bijoy Kundu and Mark Quigg. VIPC's CCF programs have distributed more than $54 million to Virginia-based startups, entrepreneurs, and university-based inventors since 2012 in support of critical early technology testing and market validation efforts.

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> *Bijoy Kundu, PhD, University of Virginia*

Epilepsy affects 1.6% of the U.S. population, and of those, 30-40% have epileptic seizures that are not adequately controlled by medicine. It is recommended that patients with drug-resistant epilepsy be evaluated to identify an appropriate target, the seizure onset zone (SOZ), for possible surgery that has a high rate of seizure freedom. However, surgery is underutilized either from failure to identify the surgical target or from fear of invasive procedures. Recognizing the importance of a noninvasive approach, Dr. Kundu, Dr. Quigg, and an accomplished team are developing an end-to-end, AI-powered method known as interictal Dynamic PET (iD-PET) to identify and localize the SOZ in epileptic patients and ultimately facilitate a more successful surgical approach.

"The iD-PET technique will change clinical practice," said Bijoy Kundu, PhD, Associate Professor of Radiology and Medical Imaging and Biomedical Engineering at UVA. "Rather than mapping the

uptake and metabolism of glucose in the brain in a static fashion, it maps the rate of glucose uptake, metabolism, and decay. We expect this more sensitive imaging technique to increase the proportion of patients with identifiable 'PET-positive' lesions to allow more patients to undergo transformative epilepsy surgery."

VIPC funding forms an important step in the team's process of clinical biomarker validation: exploring false positive rates. The CCF grant will enable recruitment of more healthy control patients that will provide a rigorous baseline for normal calculations. The grant will also be used for software streamlining and development of an easy-to-use, commercially viable toolkit. The project as a whole will provide critical measures in planning for the definitive "gold standard" trial in which the positive predictive value of iD-PET can be measured against the outcome of epilepsy surgery.

"Dr. Kundu and Dr. Quigg are offering an improved ability to locate a specific region of the brain, a challenge that doctors and neuroscientists have been faced with for decades," said Hina Mehta, VIPC's Director for University Programs. "If the iD-PET technology is successful, it will normalize epilepsy surgery by taking away uncertainty and fears from patients. This CCF grant is one step in the team's journey to bring a breakthrough solution to market, and we could not be more enthusiastic to support their efforts and see them change the landscape of epileptic treatment."

About UVA Health
UVA Health is an academic health system that recently expanded to include four hospitals across Charlottesville, Culpeper, and Northern Virginia, along with the UVA School of Medicine, UVA School of Nursing, UVA Physicians Group, and the Claude Moore Health Sciences Library. With more than 1,000 inpatient beds, approximately 40,000 inpatient stays annually, and more than 1 million outpatient encounters annually at UVA Health, more than 1,000 employed and independent physicians provide high-quality, comprehensive, and specialized care to patients across the Commonwealth and beyond. Founded in 1819 as just the 10th medical school in America, the UVA School of Medicine – with 20 clinical departments, eight basic science departments, and six research centers – consistently attracts some of the nation's most prominent researchers to develop breakthrough treatments to benefit patients around the world. Those research efforts are backed by more than $200 million in grant funding. UVA Health Children's is recognized as the No. 1 hospital in Virginia for children by U.S. News & World Report, with nine specialties rated among the top in America. More than 230 UVA physicians are honored on the Best Doctors in America list. For more information, resources, and to follow us on social media, please visit www.uvahealth.com.

About Virginia Innovation Partnership Corporation (VIPC)
Connecting innovators with opportunities. As the nonprofit operations arm of the Virginia Innovation Partnership Authority (VIPA), VIPC is the commercialization and seed stage economic development driver in the Commonwealth that leads funding, infrastructure, and policy initiatives to support Virginia's innovators, entrepreneurs, startups, and market development strategies. VIPC also collaborates with local, regional, state, and federal partners to support the expansion and diversification of Virginia's economy.

Programs include: Virginia Venture Partners (VVP) | VVP Fund of Funds | Commonwealth Commercialization Fund (CCF) | Petersburg Founders Fund (PFF) | Smart Communities | The Virginia Smart Community Testbed | The Virginia Unmanned Systems Center | Virginia Advanced Air Mobility Alliance (VAAMA) | The Public Safety Innovation Center (PSIC)| Entrepreneurial Ecosystems | Regional Innovation Fund (RIF) | Federal Funding Assistance Program (FFAP) for SBIR & STTR | University Partnerships | Startup Company Mentoring & Engagement.

For more information, please visit www.VirginiaIPC.org. Follow VIPC on Facebook, X (formerly Twitter), and LinkedIn.

About the Commonwealth Commercialization Fund (CCF)
VIPC's Commonwealth Commercialization Fund (CCF) accepts applications and awards funding on a rolling basis to Virginia's small businesses and university-based innovators. For Virginia's academic and nonprofit research community, the competitive grant program seeks to fund high-potential Virginia-based academic research teams that are developing technologies with strong commercial potential. The grants support early technology and market validation efforts such as customer discovery, market research, business model validation, the development of prototypes or minimum viable products (MVPs), customer pilots, and intellectual property protection, team development, and more. For more information on funding opportunities and eligibility requirements, or to apply, visit the CCF pages from www.VirginiaIPC.org.

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