

# VIPC Awards CCF Grant to UVA for Development of Single-Use Batteries for Wearable and Biometric Applications

*Dr. Gary Koenig is pursuing an improved coin battery solution that exceeds commercially available options more than two-fold in capacity and duration of power.*

RICHMOND, VIRGINIA, UNITED STATES, March 27, 2024 /EINPresswire.com/ --

The Virginia Innovation Partnership Corporation ([VIPC](#)) today announced

that the University of Virginia ([UVA](#)) has been awarded a Commonwealth Commercialization Fund ([CCF](#)) grant for \$100,000 in support of research conducted by Dr. Gary Koenig. VIPC's CCF programs have distributed more than \$55 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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*Dr. Gary Koenig, University of Virginia*

Devices powered by small form factor coin or button batteries are ones you'd find and use everywhere, from fitness trackers and watches, to toys and games, to home decorations, novelty gadgets, health-related instruments, and more. With their small and lightweight size, low cost, and relatively long shelf and service life, these batteries have become the default power source for small, low-power devices. Despite these advantages, when it comes

to biomedical wearables such as insulin pumps and electrocardiograms, designers and manufacturers have indicated that limited battery performance has resulted in negative user feedback and/or device design and capability compromises. They have a strong desire to decrease battery size or extend power delivery duration.

Koenig and his postdoc Chen Cai have developed an improved battery cell that has high volumetric energy density, making it a perfect solution for wearable electronics that demand small batteries with long-lasting power. What started out for the UVA researchers as an effort to



understand the fundamentals of a new energy storage system evolved to possible applications in the wearable and health industries due to their solution offering more than 2x the capacity of existing options. Customer discovery interviews validated the technology's potential. The new patent-pending battery requires additional optimization work to maximize its performance, before being available to customers, which is why the CCF grant is impactful.

"Our battery has already attracted interest from industry who are constantly looking for ways to improve their customers' experiences with their wearable health devices, especially as it relates to the usable lifetime of their products," said Koenig, Associate Professor in the Department of Chemical Engineering at UVA. "We have an opportunity to deliver a meaningful power solution that significantly improves functionality and performance of the current standard. VIPC has been very responsive and supportive in these early stages and the CCF grant will be instrumental in moving our technology out of the lab and towards translational impact."

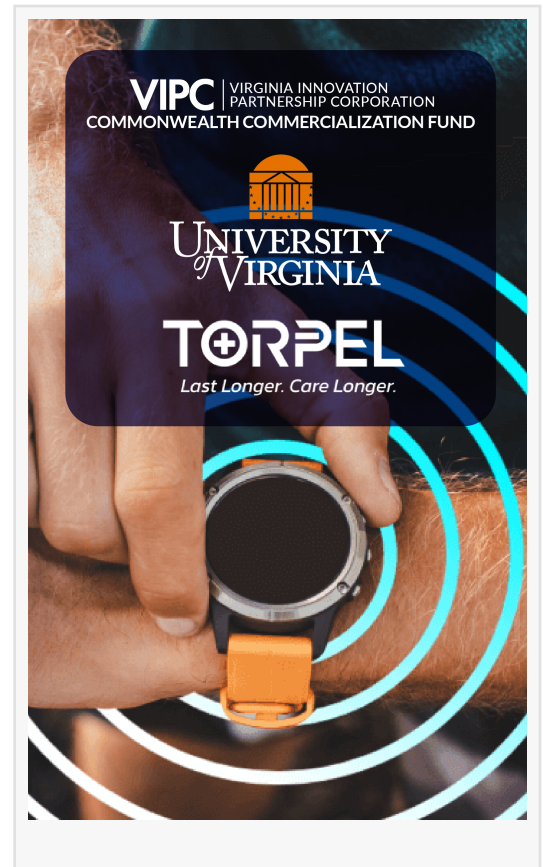
"CCF funding will address technical research and development challenges to advance commercialization of the novel battery technology," said Hina Mehta, VIPC's Director for University Programs. "Moreover, Drs. Koenig and Cai have already established Torpel LLC and intend to transition the technology to the company upon achieving proposed CCF milestones. The team is working hard to understand the market need, provide an innovative solution that meets that need, and do whatever is necessary to accelerate commercialization. I'm delighted CCF can play such an important role in their journey."

The University of Virginia is a public research university based in Charlottesville, Va.

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.VirginialPC.org](http://www.VirginialPC.org). Explore the latest news from VIPC and images from VIPC-supported stakeholder events. 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.VirginialPC.org](http://www.VirginialPC.org).

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