

oneVCU | RESEARCH**VICE PRESIDENT'S UPDATE**

Dear colleagues,

Around this time a year ago, I wrote to you about the emergency plans and processes to keep essential research running on our two campuses. I won't reiterate the many, unparalleled challenges so many of you faced to get to this point. The OVPRI has had to adapt and change how we operate due to the pandemic. And now, thanks to COVID-19 vaccination efforts and a return to a new normal potentially on the horizon, the OVPRI continues to focus on delivering outstanding service and ensuring that research thrives.

I am pleased to share that in the final quarter of this fiscal year, our Division of Sponsored Programs reports a trend of growth for our overall sponsored research awards on both campuses. We are optimistic that this will continue into FY2022.

Thanks to the efforts of more than 80 VCU faculty members and staff, we continue to move forward with the implementation planning of the [One VCU Strategic Research Priorities Plan](#). Soon, President Rao and I will share with you next steps including a new advisory council that will assist with implementation of the plan and its key initiatives.

This plan, a continuation of research goals set forth in VCU's Quest 2025, will serve as a framework to streamline critical and bold investments leading to increased funding and growth, ultimately advancing excellence in research at VCU.

This spring, we will advance key initiatives of the One VCU Research Strategic Plan through Innovation Gateway's [Commercialization Fund](#) and the [Presidential Research Quest Fund](#). Since their inception, these projects have seen a significant return on investment, including through extramural awards and/or community impact. We will soon announce the latest recipients and their respective endeavors.

You also likely received our latest communication regarding recent efforts to enhance user experience and advance the quality and services of VCU's core laboratories. (For more information, visit [here](#).) In addition, we will soon share the outcome of our ongoing efforts in streamlining institutional support for VCU's research institutes and centers.

Another effort to provide critical tools to our research community is a searchable database that the OVPRI will roll out in the coming fiscal year. This database will enable the VCU community, as well as potential research or industry partners, to discern what areas of research, discovery and invention are found on VCU's campuses, and with whom we collaborate in Virginia, across the nation and around the world. More details will soon be available.

Through the many personal challenges that all of you have navigated with resilience, VCU's research enterprise has proved its ability to withstand the pandemic and continue to grow, adapt and innovate. However, there is still much work to be done. My colleagues and I at the OVPRI look forward to assisting and working with you through the remainder of this academic year and beyond.

Regards,

P. Srirama Rao, Ph.D.

Vice President for Research and Innovation

**New top honors for VCU
faculty members**



The National Science Foundation honored [two faculty members from the College of Engineering](#) and [one from the College of Humanities and Sciences](#) with Faculty Early Development (CAREER) awards, the agency's most prestigious award given to junior faculty who most effectively integrate research and education. Please join me in congratulating **Carlos Castano, Ph.D.**, assistant professor of mechanical and nuclear engineering; **Jennifer Puetzer, Ph.D.**, assistant professor of biomedical engineering; and **Fantasy Lozada, Ph.D.**, assistant professor in developmental psychology.



Fadi Salloum, Ph.D., the Natalie N. and John R. Congdon Sr. Endowed Chair at VCU Health Pauley Heart Center, received an R35 Emerging Investigator Award from the National Heart, Lung, and Blood Institute. The seven-year, [\\$5.4 million award](#) will fund Salloum's research program to improve the heart health of cancer survivors.

B2C wraps innovative Season 1

You can now binge-watch the “[Bench to Community](#)” webinar series, which brought professional guidance on turning new solutions for unmet needs into clinical practice reality. Find the recorded presentations by VCU experts on [Kaltura](#) to learn about product development; the patent process, funding and commercialization; and the medical regulatory and reimbursement elements.

The OVPRI co-hosted the series with the C. Kenneth and Dianne Wright Center for Clinical and Translational Research and the Institute for Engineering and Medicine.

VA recognizes Cifu's innovative TBI research



David X. Cifu, M.D., professor and chair of the VCU School of Medicine's Department of Physical Medicine and Rehabilitation, was given the [Department of Veteran Affairs' highest rehabilitation researcher honor](#).

Cifu is the principal investigator of a \$50 million federal grant to oversee a national [study of the long-term impacts](#) of mild traumatic brain injuries or concussions on service members and veterans.

Cyber projects funded for Arts, Engineering faculty

The Commonwealth Cyber Initiative [will provide \\$1 million](#) to fund three projects led by investigators from the School of the Arts and the College of Engineering, and five projects whose co-principal investigators are engineering researchers. VCU leads the CCI's Central Virginia Node, which focuses on cyber physical systems, autonomous systems, the [“Internet of Things”](#) and other areas that apply to smart cities and medical device security. Topics of the funded proposals range from medical device security, mental health and “smart city” research.

Might there be some good news regarding climate change?

Associate professor of biology **Christopher Gough, Ph.D.**, and an international team of colleagues continue to illuminate the role of carbon loss and climate change mitigation. Their [latest research](#), published in Science Advances, finds that carbon emissions from ecosystems may be less than expected because of acclimation to

increasing temperatures. This good news suggests that many ecosystems will retain the capacity to sequester our carbon emissions as temperatures increase.

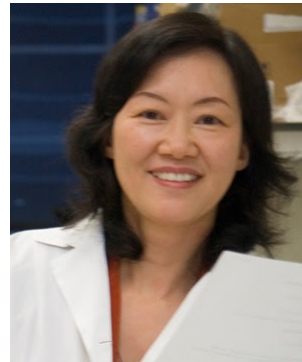


Teacher candidates face 'dire' financial burden



For aspiring teachers, the costs and financial burdens of entering the teaching profession are dire, especially for those from diverse backgrounds, [according to findings](#) from VCU and 11 other institutions. The report explores where teacher candidates need more support and identifies areas for improvement in their preparation. **Tamara Sober, Ph.D.**, assistant professor in the Department of Teaching and Learning, led data collection efforts for VCU.

Huang finds new strategy for fighting brain cancer



Massey researcher **Suyun Huang, Ph.D.**, professor in the Department of Human and Molecular Genetics, recently discovered how cholesterol becomes dysregulated in brain cancer cells and showed that the gene responsible for it could be a target for future drugs. [Huang's recent study](#) in Nature Communications pinpoints a gene called YTHDF2 as a crucial link in a chain leading to the development and growth of glioblastoma multiforme.

Preventing adverse childhood experiences

Sunny Shin, Ph.D., a social work and psychiatry associate professor, leads a [two-year project](#) funded by Families Forward Virginia, a nonprofit working to prevent child abuse, neglect and poverty. Shin's study looks at the impact adverse childhood experiences might have on parenting behaviors and on the health and behavioral outcomes of the parents' children. The study also will examine whether home-based preventive intervention improves parenting practices and promotes resilience among children at risk of traumatic events and poverty.

Solving COVID supply chain issues

The pandemic continues to fuel supply chain challenges for consumers, industry and health care systems. **Jeff Shockley, Ph.D.**, associate professor in VCU's Department of Supply Chain Management and Analytics, joined supply chain experts from other universities and industry to launch a [Consortium for the Healthcare Supply Chain](#) to work through supply chain problems and serve as an advisory resource to industry and governments at the state and local levels.

Nobel laureate describes revolution in the metric system



Nobel laureate **Bill Phillips, Ph.D.**, the National Institutes of Standards and Technology, spoke at a recent Department of Physics colloquium on the reform of the metric system that fixes the values of the International System of Units on fundamental constants of nature. An [animated video](#) shows Phillips explaining how laser cooling, the subject of his prize-winning research at the National Institutes of Standards and Technology, led to changes in time-keeping.

What leads students to drop out?

VCU researchers studied nearly 10,000 college students to examine this pervasive problem that confronts many universities. [Study co-supervisor Danielle Dick, Ph.D.](#), Commonwealth Professor in the Department of Psychology and the Department of

Human and Molecular Genetics, said involvement in student organizations and living on campus early in college reduced the odds of dropping out, while substance use and mental health in later years were connected to quitting school.

VCU research news highlights



Among the exciting discoveries and new research featured at [VCU News](#) are these stories:

- [Meet the Massey researchers who met with first lady Jill Biden](#)
- [E-cigarettes with a cigarette-like level of nicotine are effective in reducing smoking and exposure to carcinogen](#)
- [Fighting COVID-19 with data](#)
- [Feeling depressed after losing sense of smell or taste related to COVID-19](#)
- [Computer science professor develops new methods to protect wind and solar power grids from cyber attacks](#)
- [VCU's new STEM building begins to take shape](#)
- [Imagine a word and ... a device speaks?](#)
- [Wilder School institute plays a key role in the state's efforts to distribute the COVID-19 vaccine equitably](#)

