UNIVERSITY of MARYLAND BALTIMORE

# UMB News

## Face to Face: Better Research Together

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A series of yellow fever outbreaks in the 1790s took the lives of thousands of Americans, primarily residents of cities like Philadelphia and Baltimore. Two young doctors, Nathaniel Potter and John Beale Davidge, wanted to know why, what was the cause, and how could it be prevented or best treated. They pushed the Maryland legislature to establish a medical college. It would provide education, to train Maryland doctors to care for the sick, and research, to understand and overcome impediments to good health.

A few years later, in 1812, the legislature came to realize that happy and productive lives require more than medicine, so the college was rechartered as the University of Maryland, with faculties of law, divinity, and arts and sciences, all endeavoring to educate and discover new knowledge.

More than two centuries later, that mission remains mostly unchanged. Of course, everything else has changed a great deal, and lately that change has been accelerating. What started as the College of Medicine of Maryland now includes more than 170,000 students at 12 University System of Maryland (USM) institutions. All the while, university research has grown as well. Collectively, USM institutions attract more than $1.5 billion in external grants each year. The vast majority, about $1.2 billion, derives from the two largest research institutions: the University of Maryland, Baltimore (UMB) and the University of Maryland, College Park (UMCP).

Owing to their disparate origins (the former as a medical college and the latter as an agricultural school) and very different missions (mostly professional training at UMB and mostly undergraduate education at UMCP), there has never been much overlap in research.

Surprisingly, it wasn't until very recent years that state and university leaders began to realize that those differences weren't a reason that the two *couldn't* work together. Instead, they offer numerous opportunities for collaborative research that neither university could perform alone. For instance, put computer scientists and engineers from College Park together with doctors, dentists, pharmacists, and nurses from Baltimore, and you may see a hundred new ideas to tackle chronic pain, overcome opioid addiction, revolutionize critical care … you name it. Add lawyers, criminologists, social workers, and sociologists to the mix, and you might see bold new ideas to identify and unlearn implicit bias in policing, combat human trafficking, reduce violent crime in cities, and so much more.

In 2012, UMB and UMCP took the first step toward meaningful research collaboration with the formation of the informal *MPowering the State* initiative, which provided seed grants to help nascent research partnerships get off the ground. That blossomed into the University of Maryland Strategic Partnership: *MPowering the State* by an act of the Maryland General Assembly in 2016. The legislation not only strengthened *MPower*, but it also called for the research efforts of UMB and UMCP to be managed collectively under one vice president of research. In 2018, Laurie Locascio, PhD, was named vice president of research for the combined UMB-UMCP research enterprise, removing any doubt about leadership's commitment to collaborate and catapulting University of Maryland research into the highest echelon of university research in the country. In the most recent national Higher Education Research and Development survey, the combined $1.2 billion in externally funded research ranked UMB-UMCP 10th among public institutions and 16th overall.

In his inaugural address in 2021, UMB President **Bruce E. Jarrell, MD, FACS**, ran through a long list of extraordinary accomplishments made by every school at the University. "I'm surrounded by creative people," he said, "people committed to improving the health and well-being of the people around us in our community. ... This is the magic of UMB, and it's the secret to our great success. Magic like this is fragile. We have to work hard as leaders to keep that magic alive. And part of the trick to keeping it alive is standing out in front of the world, anticipating future needs, finding new opportunities, staying a step ahead."

On the March 24 edition of *Virtual Face to Face with President Bruce Jarrell*, Jarrell was joined by the newly appointed vice president for research, **Gregory Ball, PhD**. Ball replaced Locascio after her nomination by President Biden to head the National Institute of Standards and Technology.

Ball joined UMCP in 2014 as professor and dean of the College of Behavioral and Social Sciences. He previously was vice dean for science and research infrastructure in the Krieger School of Arts and Sciences at Johns Hopkins University. Ball is himself a prolific researcher. His lab studies the interrelation of hormones, the brain, behavior, and reproduction, particularly in birds.

"When you line up the two institutions, we have excellence over a wide range of disciplines, which are fundamental to the future of the United States," he told Jarrell and the virtual audience. "Our potential here is to bring cutting-edge developments in the physical and engineering sciences, and then have them inform and inspire people working on the front lines of some of the most important questions facing us today in terms of health, behavioral health, addiction, et cetera."

Clearly excited about the possibilities and the challenge, Ball added, "We have done a few wonderful things, but there's still a beautiful future ahead of us to do that. And we just have to overcome barriers — things like geography, culture, history — that have built inertia to working together."

Ball used the example of computer science — just one of UMCP's strengths — as an example of the potential of collaboration. "We've built one of the best quantum computers in the world. And that is not going to just enhance high-performance computation," he explained. "The quantum ideas aren't going to just apply to computers and things like that, they're also going to apply to things like quantum sensors, which would be a whole new way to monitor human physiology in a way that's less invasive."

Jarrell noted that the partnership benefits students as well. "We've had the UM Scholars program in place for probably eight years, and we have it going in both directions. So, College Park undergraduates come to Baltimore and spend a summer in the lab. We also have it where, particularly social work and law students, work in labs, meaning social science labs and other situations down at College Park," he explained. "Dr. Ball mentioned about graduate students going back and forth. We just need to find more ways to do that, because as he said, that's the glue that gets people talking."

During the second half of the program, the virtual audience pursued issues such as how to overcome the impact of the physical distance between UMB and UMCP, what areas of research Ball considers underexplored, and ways to keep researchers at both institutions better informed.

Watch the entire program by following the link at the top of this page.

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