BOARD OF REGENTS OF THE UNIVERSITY OF WISCONSIN SYSTEM

Research, Economic Development, & Innovation Committee

Via WebEx Videoconference

Thursday, June 4, 2020
8:45 a.m. –10:00 a.m.

A. Approval of the Minutes of the February 6, 2020 Meeting of the Research, Economic Development, and Innovation Committee

B. Three Perspectives on Research, Economic Development, and Innovation in Light of the Pandemic: Introduction by REDI Committee Chair Bob Atwell

    1. University of Wisconsin – Milwaukee Update on Research Focused on COVID-19

    2. Wisconsin Economic Development Corporation (WEDC) Update on Its "Focus Forward" Pandemic Recovery Effort

    3. University of Wisconsin – Madison's Research Response to COVID-19 Pandemic

Research, Economic Development, & Innovation Committee **Item B.1**

June 4, 2020

UNIVERSITY OF WISCONSIN-MILWAUKEE UPDATE ON RESEARCH FOCUSED ON COVID-19

REQUESTED ACTION

Information only.

SUMMARY

UW-Milwaukee (UWM) educates more Wisconsin residents than any other university and continues to attract a diverse population of international students and faculty. Since the outbreak of COVID-19, UWM's world-class researchers have focused their expertise on gathering data and devising possible solutions to slow its spread. As Wisconsin's public urban research university, UWM researchers are trying to understand as much as possible about the disease and how it proliferates through communities.

Three current initiatives highlight the many pandemic research efforts under way at the university. They include determining a novel approach to locate hotspots, tracking COVID-19's disproportionate effects on the African-American community, and developing a spray to protect surfaces from contamination. By combining the knowledge gained in these discoveries with those of other dedicated researchers, UWM continues to provide healthcare workers and policymakers with important tools that will help save lives.

BACKGROUND

UWM Chancellor Mark Mone and UWM Research Foundation President and Director of the Lubar Entrepreneurship Center Brian Thompson will be joined by the following individuals to provide additional information on COVID-19 related research initiatives and answer questions:

- Konstantin Soblev, Ph.D. Professor of Engineering.
    - He leads a team of researchers creating a spray to protect surfaces from contamination.

    - The spray's coating repels and deactivates the virus-laden droplets that are spread when people with COVID-19 speak, cough, or sneeze.

- Sandra McLellan, Ph.D.
    - She leads a team of School of Freshwater Sciences researchers working with the Milwaukee Metropolitan Sewerage District to learn more about COVID-19 by collecting and analyzing wastewater samples.
    - Such monitoring may provide early warnings of developing viral hotspots, which may be particularly useful as social distancing measures are relaxed.

- Joel Rast, Ph.D., Director of the UWM Center for Economic Development.
    - The center has examined the spread of COVID-19 in Milwaukee County and has shown that African-American residents have been far more affected by the disease than the county's white population.
    - The study found that while 13% of the county's population lives in census tracts that are at least 75% African American, those tracts accounted for 26% of confirmed coronavirus cases as of April 8.

Research, Economic Development, & Innovation Committee

Item B.2.

June 4, 2020

WISCONSIN ECONOMIC DEVELOPMENT CORPORATION (WEDC) UPDATE ON ITS "FOCUS FORWARD" PANDEMIC RECOVERY EFFORT

REQUESTED ACTION

Information only.

SUMMARY

WEDC Secretary and CEO Missy Hughes will highlight initiatives encompassed in the agency's Focus Forward initiative designed to accelerate the pandemic remediation and recovery effort for business and industry of all sizes across Wisconsin.

BACKGROUND

The UW System and the Wisconsin Economic Development Corporation (WEDC) continue to develop and sustain a broad range of partnership initiatives designed to leverage collaborations and initiatives which support innovation, entrepreneurship, and economic development. WEDC provides periodic updates to the REDI Committee on current and planned initiatives and provides progress reports on outcomes.

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Item B.3

UNIVERSITY OF WISCONSIN-MADISON'S RESEARCH RESPONSE TO COVID-19 PANDEMIC

REQUESTED ACTION

Information only.

SUMMARY

During the COVID-19 pandemic, UW–Madison researchers have been doing what we would expect from a world-class research institution. UW researchers have hit the ground running and are on the forefront of fighting COVID-19, by studying the virus from different angles and disciplines. Research runs the gamut from an international collaboration of virologists led by the university working with industry partners to develop and test a vaccine against COVID-19, to using experimental and computational methods to understand how the virus spreads. The American Family Insurance Data Science Institute has gathered scientists from UW Health, data science, epidemiology, City of Madison, Wisconsin Department of Health and Human Services, the University of Chicago and others from across the country to use recent data to study modeling strategies for delivering health care during the COVID-19 crisis. To date, UW–Madison has more than 160 proposed and funded research projects aimed at addressing the impacts of COVID-19.

BACKGROUND

UW-Madison Chancellor Rebecca Blank and UW-Madison Vice Chancellor for Research and Graduate Education Steve Ackerman will provide an overview of the substantial and broad range of research activities UW-Madison researchers are engaged in to address impacts of COVID-19. The UW-Madison researchers joining them are:

- David O'Connor, Professor of Pathology and Laboratory Medicine, UW School of Medicine and Public Health.
    - He will discuss his collaborative research to study the virus and create opportunities to test new vaccines and antivirals.

- Kristen Bernard, Professor of Virology, Department of Pathobiological Sciences, UW-Madison School of Veterinary Medicine.
    - She is an expert on zoonotic viruses, which are transmitted between animals and people.

Professor O'Connor, along with Thomas Friedrich, professor in the UW School of Veterinary Medicine, are leaders in real-time data sharing during viral pandemics. They are building nonhuman primate models to test medical countermeasures such as vaccines and therapeutics in collaboration with scientists from around the world. Locally, they are sequencing coronaviruses from patients around the state to understand how the virus spreads within and between different communities. They are working with the Milwaukee Public Health department to enable local, real-time sequencing in Milwaukee. In collaboration with UW-Madison professor Dr. David Beebe, they are also developing novel coronavirus tests that could be used in nursing homes, residential housing, and other locations where people living closely together need to be tested repeatedly.

Professor Bernard's research furthers the understanding of the virus-host interaction. By understanding this interaction, new therapies and vaccines can be developed. She currently works on mosquito-borne and tick-borne viruses, but previously worked with another coronavirus, SARS, after it first emerged in 2003.