

BOARD OF REGENTS OF THE UNIVERSITY OF WISCONSIN SYSTEM

Research, Economic Development, & Innovation Committee

Thursday, July 8, 2021
10:45 a.m. to 12:00 p.m.

Gordon Dining & Event Center,
2nd floor
770 W. Dayton Street, Madison,
Wisconsin
Via Webex Videoconference

- A. Call of the Roll
- B. Declaration of Conflicts
- C. Approval of the Minutes of the June 3, 2021 Meeting of the Research, Economic Development, and Innovation Committee
- D. WiSys Technology Foundation – Overview of Faculty and Undergraduate Research, Technology Transfer, and Commercialization Initiatives
 - 1. Faculty Perspectives – Undergraduate Research and Regent Scholars
 - 2. Student Perspectives – WiSys Quick Pitch Demonstrations
 - 3. Chancellor Perspectives – Panel: Building an Entrepreneurial Ecosystem

**Research, Economic Development,
& Innovation Committee**

Item D

July 8, 2021

**WISYS TECHNOLOGY FOUNDATION:
UPDATE ON FACULTY AND UNDERGRADUATE RESEARCH,
TECHNOLOGY TRANSFER, AND COMMERCIALIZATION INITIATIVES**

REQUESTED ACTION

For information only.

SUMMARY

WiSys is the technology transfer entity authorized by the Board of Regents of the University of Wisconsin System to advance promising research and innovation from discovery through commercialization at the UW System's 11 four-year comprehensive universities.

By focusing on students, WiSys facilitates cutting-edge research programs, supports development and commercialization of discoveries, and fosters a spirit of innovative and entrepreneurial thinking at the UW System's regional universities.

Although WiSys is only two decades old, the idea for its genesis stems from a philosophy developed at the University of Wisconsin more than a century ago. This is the "Wisconsin Idea" — the principle that education should influence people's lives beyond the boundaries of the classroom — and it represents one of the longest and deepest traditions within the UW System.

Through the years, WiSys has demonstrated leadership in advancing research and technology development in a cost-effective manner by building strategic partnerships with start-ups, high-tech companies, clinical organizations, and other innovators.

In June 2021, WiSys was recognized by the University-Industry Innovation Network (UIIN) of Amsterdam as a Global Good Practice for its program initiatives which provide broad spectrum of support for faculty, staff, and student pursuits in the realm of innovation and entrepreneurship. President Thompson joined WiSys Advisory Board Chair Debbie Ford and WiSys President Arjun Sanga to showcase the WiSys innovation story at UIIN's annual international summit.

BACKGROUND

Though the fiscal year just concluded, the campus-based network of WiSys regional associates and student ambassadors has continued to expand program offerings and outreach to the more than 100,000+ undergraduate students across UW System.

WiSys has inspired and enabled innovation to flourish more broadly throughout the system and across the state for the benefit of all Wisconsin residents. WiSys has made this growth possible through:

- **Collaboration.** By working as a shared service among the 11 universities, WiSys is able to provide high-quality expertise to organize programs and services; to market ideas developed by faculty, staff, students, and alumni; and to inspire and teach students how to innovate and build a culture that perpetuates ongoing innovation.
- **Nimbleness.** With guidance from a knowledgeable board of trustees and an advisory board of chancellors and outside experts, WiSys works in collaboration with, and yet separate from each member of the university's overall administrative structure. This allows WiSys advisors and mentors to be responsive in the testing of concepts and piloting of new programs that have immediate impact and can be shared with other campuses.
- **Active listening.** By seeking feedback from university leaders as well as directly from university researchers and innovators through regular face-to-face meetings, WiSys can assess the unique impediments to innovation on each campus, and in turn, work with stakeholders to define solutions that can be embedded within each university's distinct campus culture.

Today, three faculty innovators will highlight their efforts to build a culture of innovation within a wide range of classroom and laboratory settings, and well beyond. Their unique perspectives will be followed by three students, who have been recognized systemwide for excellence in delivering WiSys Quick Pitch (three-minute) presentations. Finally, WiSys Advisory Board Chair Debbie Ford will lead a panel discussion with three of her Chancellor colleagues who will highlight the growth of entrepreneurship and third-mission initiatives within their respective university networks.

Faculty Presenters:

- Dr. Francis "Frannie" Mann is an assistant professor of chemistry at UW-Parkside. Her areas of expertise include biochemistry, analytical chemistry and natural products biosynthesis.

- Dr. Gokul Gopalakrishnan is an assistant professor of engineering physics at UW-Platteville. His current research is based on fabrication of semiconductor nanostructures for multiple purposes ranging from fundamental investigations of materials properties in the nanoscale to applications such as MEMS and microfluidic devices.
- Dr. Elizabeth Glogowski is an associate professor of materials science and biomedical engineering at UW-Eau Claire. Her research and creative activities include developing smart polymer applications including enhanced oil recovery and architectural coatings.

Student Presenters:

- Gabrielle Richardson is a UW-Parkside pre-med undergraduate majoring in Spanish and Criminal Justice. She won the WiSys Wisconsin Big Idea Tournament for her business idea "LinguaMD," a health care app to improve patient communication and treatment.
- Carl Fossum is a chemistry and physics student entering his senior year at UW-Eau Claire. He won the WiSys Quick Pitch State Final with his presentation "Understanding the Severity of COVID-19: A Point of View Through the Lens of a Computational Chemist."
- ParityBlu is a student startup that is a finalist in the WiSys APPStart Challenge and was accepted into the WiSys VentureHome program in Eau Claire. The student entrepreneurs include UW-Eau Claire students Logan Ickert, Sam Fitzhenry and Max Bossert, as well as UW-Madison student Nicholas Hersperger. ParityBlu provides users with an easy and interactive way to simultaneously manage multiple Bluetooth connections independent of the type or brand of the device.

Faculty and student presenters will be available (virtually) for discussion and questions.

Chancellor Panelists:

- Debbie Ford, UW-Parkside, Moderator
- Katherine Frank, UW-Stout
- Andy Leavitt, UW-Oshkosh
- Jim Schmidt, UW-Eau Claire

ATTACHMENTS

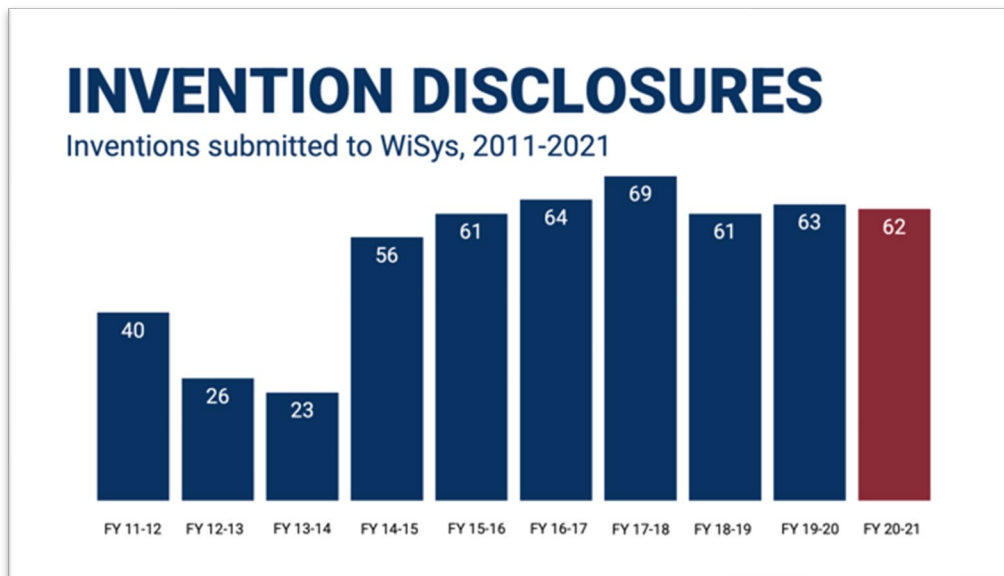
- A) WiSys Invention Disclosures FY 2020-2021
- B) UW System President Thompson presentation to the University Industry Innovation Network (UIIN): WiSys Global Good Practice Case Study, June 2021.
- C) WiSys Quick Pitch Winners and Additional Themed Events

WiSys Invention Disclosures FY 2020-2021

Traditional university research and intellectual property development has been focused on supporting innovative faculty, working to commercialize their inventions and discoveries.

For WiSys and the University of Wisconsin regional universities, inspiring and engaging undergraduate students in research, innovation, and entrepreneurship is a primary focus, resulting not only in commercialization of inventions, but also the transfer and development of human potential from the university to industry.

Students are a primary, not just a secondary constituent.



This strategic focus is a significant factor for Wisys, and the group of 11 universities it serves, in achieving a rank of second in innovation impact productivity among smaller research institutions in a major report issued in 2020 on the innovation impact of U.S. universities.

Each year, nearly one-third of the invention disclosures submitted to WiSys come directly from students, and the pandemic has had no significant impact on the number of invention disclosures reported over the past year.

The University as a Talent Engine:

In June 2021, UW System President Tommy Thompson led a discussion with an international audience participating in the annual summit of the Amsterdam-based University-Industry Innovation Network (UIIN).



Co-presenters included UW-Parkside Chancellor Deborah Ford and WiSys President Arjun Sanga. The UIIN recognized WiSys as a Global Good Practice for its work expanding innovation, entrepreneurship, and technology transfer with 100,000+ undergraduates at systemwide comprehensive universities.

In his comments at the summit, President Thompson said “WiSys is a prime example of what we call the new Wisconsin Idea, our deeply held tradition of helping to ensure that what happens on campus positively influences lives and builds economic vitality well beyond the boundaries of the classroom. For two decades, WiSys has demonstrated leadership in a cost-effective manner by building strategic partnerships with start-ups, high-tech companies, clinical organizations, and other innovators.”

The complete WiSys case study can be found at this [link](#).

**WiSys Quick Pitch and
Additional Themed Events**

WiSys organizes student competitions on each of the campuses it serves to inspire students to be innovative leaders. Programs like the WiSys Quick Pitch competition encourage undergraduate researchers to consider the importance of their work and to learn how to communicate it in lay terms to a broad audience.



RESEARCH & INNOVATION EVENTS

- Encourage undergraduate researchers to consider the importance of their work
- All WiSys student competitions include mentoring and training

WiSys

The image shows a woman with long blonde hair, wearing a colorful patterned top, standing on a stage and holding a small white card. Behind her is a large projection screen displaying the text 'SYS QUICK PITCH @ UW Oshkosh' in blue and white. The 'Q' in 'QUICK' is stylized as a clock face. The WiSys logo is visible in the bottom right corner of the graphic.

Additional themed events (based on campus focus areas) include WiSys Innovation in Aging, WiSys Innovation in Sustainability, and the WiSys Prototype Hackathon, which are each designed to encourage students to tackle real-world problems and to create innovative solutions.

The competitions and awards provide recognition and entice students to participate. Additionally, because all WiSys student competitions include mentoring and training, students learn how to problem solve and test out new innovation skills.