THURSDAY, NOVEMBER 17, 2022
RESEARCH, INNOVATION & STRATEGIC PARTNERSHIPS COMMITTEE MEETING

Lewis Von Thaer, chair
Reginald A. Wilkinson, vice chair
Alexander R. Fischer
Tanner R. Hunt
Phillip Popovich
Hiroyuki Fujita (ex officio)

Location: Sanders Grand Lounge, Longaberger Alumni House
2200 Olentangy River Rd, Columbus, Ohio 43210
Time: 10:30am-12:00pm

Public Session

ITEMS FOR DISCUSSION

1. Committee Chair’s Remarks – Mr. Lou Von Thaer 10:30-10:35am
2. Highlights of New Research, Innovation and Knowledge Achievements:
   Year-in-Review – Dr. Grace Wang 10:35-10:55am
3. Interdisciplinary Research Facility and Energy Advancement & Innovation Center
   Update – Dr. Peter Mohler 10:55-11:05am

ITEM FOR ACTION

4. Approval of August 2022 Committee Meeting Minutes – Mr. Lou Von Thaer 11:05-11:10am

Executive Session 11:10am-12:00pm
Research, Innovation and Strategic Partnerships Committee
Research, Innovation and Knowledge - Year in Review
Grace Wang, Executive Vice President
Strategic Priorities for the Enterprise

- Enable Curiosity-Driven Discoveries and Creative Expression
- Build Large-Scale, Interdisciplinary Research and Centers
- Nurture Innovation and Entrepreneurship
- Design and Develop Carmenton
Delivering Impact
Strong Focus on Supporting Faculty

43

President’s Research Excellence
Projects Awarded To-Date

BIG Collaborations
Building Innovative Interdisciplinary Groups and Collaborations

Engage faculty across the entire university and help develop and nurture interdisciplinary teams
Technology Commercialization Milestones

363
Total Invention Disclosures Filed
Fiscal Year 2022

331
U.S. Patents Filed
Fiscal Year 2022

1,743
Contracts Executed
Fiscal Year 2022
Entrepreneurship Milestones

95 Operational Ohio State Startups
End of Fiscal Year 2022

$1.01 B Total Private Capital Raised
Since 2010

11 New Startups Launched
Fiscal Year 2022
Changing the world through impactful research
Inspiring the world through creative inquiry
Growing Large-Scale, Interdisciplinary Efforts in Strategic Areas
Advanced Computing and Communication
Center for Quantum Information Science and Engineering Established

$15 million NSF Grant for Ohio State Imageomics Institute

$20 million NSF Grant for AI Institute for Future Edge Networks and Distributed Intelligence (AI-EDGE)

$20 million NSF Grant for AI Institute for Intelligent Cyberinfrastructure with Computational Learning in the Environment (ICICLE)
Smart and Sustainable Systems
Up to $52 Million from NSF to Enable Hybrid Autonomous Manufacturing

$18 Million Funding for Watershed Project in Northwest Ohio

$4.2 Million U.S. DOE Grant to Transform the Way Communities Use Energy

$26.5 Million Funding from FTA for Bus Testing Facilities
Life Science Frontiers
$17 Million NIH grant to establish Center for Maternal and Pediatric Drug Research

NeuroTech Institute Powered by Battelle-Ohio State Partnership

$14.6 Million NIH award to accelerate gene therapy research for rare disorder

Funded by NASA, Ohio State is lead academic partner to develop low-earth orbit space station and Ag/Bio research pipeline
AgTech Innovation Hub - Nationwide-Ohio State

Terrestrial Analog Facility - Voyager/Nanoracks, Ohio State, JobsOhio and One Columbus partnership

Center for Advanced Semiconductor Fabrication Research and Education - Intel-Ohio State partnership

Midwest Semiconductor Network - 19 Multistate Academic Members
Carmenton

Historic partnership with the City of Columbus to develop the innovation district

STEAMM Rising partnership with Columbus City School District and Columbus State Community College
Looking to the Future...

- Build on the momentum and grow in key strategic research areas
- Continue to nurture a campus-wide culture of innovation and entrepreneurship
- Deliver sustained, measurable outcomes
Interdisciplinary Research Facility and Energy Advancement and Innovation Center Update

Peter Mohler
Vice President, Research
Objectives for IRF and EAIC

- Accelerate interdisciplinary research
- Create efficient portal for external relationships
- Expand space to grow research portfolio
- House advanced technologies
- Create facilities that can rapidly evolve with science
The Interdisciplinary Research Facility will catalyze convergence research in life sciences and biomedical engineering while providing new opportunities for the community and industry to engage Ohio State researchers.
Interdisciplinary Research Facility: Opening in June 2023
Interdisciplinary Research Facility – By the Numbers

305,000
Square Feet

18
Research Neighborhoods

150
New Faculty Labs

10
New Core Labs

May 2023
Opening
What makes the IRF different?

- Community ‘neighborhoods’ versus separate, individual labs
- Computational and wet labs in same building and on same floor
- Program density
- Focus on lab spaces not offices
- Advanced features, including vibration sensitivity, floor to ceiling height, power and IT
- Ability to evolve with science
- Connection with outside community
- Neighborhoods are solution based, not department or college-based.
Impact on attracting top talent

Evans Hall Lab

IRF Lab
IRF Neighborhoods

Immuno-oncology
Gene Therapy
Aging
Alzheimer’s disease
Cancer Engineering
Artificial Intelligence
Microbiome
Cardiopulmonary disease
Social and Environmental Determinants of Health
RNA Biology and Advanced Therapeutics
Neuro-engineering
Food Systems and Health
Addiction/Behavioral Health
Sensory Biology
The Energy Advancement and Innovation Center will focus on artificial intelligence and machine learning research as well as smart and sustainable systems research.
EAIC – By the Numbers

- **66,200** Square Feet
- **15** Research Labs
- **2** Floors for industry partners (6 suites)
- **2** New Core Labs
- **250** Seat auditorium, 50 seat seminar room, Café and Food Service
- **Oct. 2023** Opening
Two Floors for Industry Partners
Energy Advancement and Innovation Center: Opening in October 2023
SUMMARY OF ACTIONS TAKEN

August 18, 2022 – Research, Innovation & Strategic Partnerships Committee

Members Present:

Lewis Von Thaer  Alexander R. Fischer  Hiroyuki Fujita (ex officio)
Reginald A. Wilkinson  Tanner R. Hunt

Members Present via Zoom:

N/A

Members Absent:

Phillip Popovich

The Research, Innovation & Strategic Partnerships Committee of The Ohio State University Board of Trustees convened on Thursday, August 18, 2022, in person at Longaberger Alumni House on the Columbus campus. Committee Chair Lewis Von Thaer called the meeting to order at 1:00 p.m.

PUBLIC SESSION

Items for Discussion

1. Committee Chair’s Remarks: Mr. Von Thaer kicked off the meeting by thanking Dr. Wilkinson for agreeing to serve as the committee’s new vice chair. He also welcomed Dr. Hunt as the committee’s new student member. Mr. Von Thaer continued by congratulating President Kristina Johnson and Dr. Grace Wang, Executive Vice President for Research, Innovation and Knowledge, on the major announcement that the National Science Foundation had awarded funding for a multi-institutional engineering research center that Ohio State is leading. The Hybrid Autonomous Manufacturing, Moving from Evolution to Revolution – or HAMMER – will change the way manufacturing is done in the future by building on Ohio State’s strengths in advanced manufacturing, artificial intelligence, robotics and sensors.

2. Highlights of New Research, Innovation and Knowledge Achievements: Dr. Wang, Executive Vice President for Research, Innovation and Knowledge, shared highlights from across Ohio State related to four strategic priority areas: 1) Enable Curiosity-Driven Discoveries and Creative Expression; 2) Build Large-Scale, Interdisciplinary Research and Innovation Centers; 3) Design and Develop the Innovation District; and 4) Nurture Innovation and Entrepreneurship. She discussed research related to the diversity of RNA viral species in the Arctic and also disaster mitigation efforts for specific populations. She also discussed the new HAMMER engineering research center and the announcement of the Midwest Semiconductor Network. Next steps include developing a governance structure for the new semiconductor network, which is currently made up of twelve institutions – Ohio State, Purdue University, University of Dayton, Michigan State University, Case Western Reserve University, Lorain County Community College, University of Notre Dame, University of Michigan, Sinclair Community College, Wright State University, Columbus State Community College and University of Cincinnati.

(See Attachment X for background information, page number XX)
3. Recognition and Conversation with select group of the President’s Buckeye Accelerator Winners: Cheryl Turnbull, Senior Director of the Keenan Center for Entrepreneurship, gave an update on the President’s Buckeye Accelerator program. More than 100 students representing approximately 35 teams participated in a six-week-long, pre-accelerator “Boost Camp” designed to help prepare them for the pitch finale. Each team worked with a world-class startup mentor who provided guidance. At the end of the camp, the teams delivered their pitches to a panel of judges, and 10 ventures were selected to present at the pitch finale. At the conclusion of the pitch finale, six ventures were ultimately selected as the first cohort of the President’s Buckeye Accelerator. Students from three of those ventures – Adithya Ramaswami, Garrett Carder and Anjali Prabhakaran – shared their progress and information about their ventures.

(See Attachment X for background information, page number XX)

Items for Action

4. Approval of Minutes: No changes were requested to the May 18, 2022, meeting minutes; therefore, a formal vote was not required, and the minutes were considered approved.

EXECUTIVE SESSION

It was moved by Mr. Von Thaer, and seconded by Dr. Wilkinson, that the committee recess into executive session to consider business-sensitive trade secrets required to be kept confidential by federal and state statutes, and to consult with legal counsel regarding pending or imminent litigation.

A roll call vote was taken, and the committee voted to go into executive session with the following members present and voting: Mr. Von Thaer, Dr. Wilkinson, Mr. Fischer, Mr. Hunt and Dr. Fujita.

The committee entered executive session at 1:35 p.m. and the meeting adjourned at 2:38 p.m.