



2024 SYMPOSIUM

## **The Quest for Transformative Biomedical Technologies: From Proteomics to Therapeutics**

Tuesday, April 9, 2024 | B01 McCourtney Hall

- 8:45AM Registration and Refreshments
- 9:30AM **Welcome**  
Paul Bohn - Director; Arthur J. Schmitt Professor of Chemical & Biomolecular Engineering, Professor of Chemistry & Biochemistry, University of Notre Dame
- 9:45AM **KEYNOTE SPEAKER 1:** Dr. Lloyd Smith - University of Wisconsin  
**New Frontiers in Proteomics – Proteoforms, Proteoform Families, and the Human Proteoform Project**
- 10:45AM Break
- 11:00AM **Graduate Student Research Presentations**
- Alex Sinclair  
**Rotational Diffusometry Assay of Bound Immuno-Janus Particles, A Transformative Biomedical Technology to Rapidly Quantify and Characterize Cancer-associated Exosomes Directly From Plasma**  
Advisor: Dr. Chang
- Daniel Montes Pinzon  
**Development of a High-Throughput Drug Screening Platform Via Pipetting Gel Droplet Micro-Organoids Models**  
Co-advised by: Dr. Hanjaya-Putra and Dr. Chang
- Hannah Marietta  
**Stabilizing the Mycobacterial Small Proteome Through Proteasome Inhibitor Drug Treatment**  
Advisor: Dr. Champion
- 12:00PM Lunch

- 1:00PM      **KEYNOTE SPEAKER 2:** Neil Kelleher - Northwestern University
- Measuring Proteoform Signatures in Human Disease: Leveling up Proteomics to Bridge the Gap from Genotype to Phenotype**
- 2:00PM      **Graduate Student Research Presentations**
- Taylor Lundgren  
                 **Untargeted characterization of substitution errors in hyper-accurate and error-prone bacterial ribosome mutant strains**  
                 Co-advised by: Dr. Champion and Dr. Clark
- Gyoyeon Hwang  
                 **Prodrug-loaded Liposomal Nanoparticles as a Potential Drug Delivery Strategy Specifically Targeting Lung Cancer Cells**  
                 Advisor: Dr. Bilgiçer
- Julius Reitemeier  
                 **Detection of Ionizable Lipid Degradation in Lipid Nanoparticle Formulations Using a Smart Nanopore Electrochemical Biosensor**  
                 Advisor: Dr. Bohn
- 3:00PM      **Closing Remarks**  
                 Paul Bohn  
                 Caitlin Kerr
- 3:05PM      **Student Poster Session and Refreshments**
- 4:15PM      **End**