BERTHIAUME INSTITUTE FOR PRECISION HEALTH

2023 SYMPOSIUM

Gene Design and the Genome World: Combating Diseases with mRNA and CRISPR Technology

Tuesday, April 4, 2023 | B01 McCourtney Hall

AGENDA

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 **Gene Regulation by Natural and Engineered Riboswitches**
Ronald Breaker
Henry Ford II Professor, Department of Molecular, Cellular & Developmental Biology
Investigator, Howard Hughes Medical Institute
Yale University

10:45AM Break

11:00AM Graduate Student Research Presentations
First Session

Engineering Lymphatic Vessels to Treat Lymphatic Dysfunction
Laura Alderfer

A Scalable High-throughput Isoelectric Fractionation Platform for Bias-free Extracellular RNA Nanocarriers Fractionation From Plasma, Urine, and Saliva
Himani Sharma

Analyzing GLDC in Renal Stem Cell Development Through the Use of Gene Editing Technology
Nicole Weaver

12:00PM Lunch

1:00PM **Engineering Effectors, Guides, and Templates for CRISPR Genome Editing *in vivo***
Erik Sontheimer
Pillar Chair in Biomedical Research and Professor
Vice Chair, RNA Therapeutics Institute
University of Massachusetts Chan Medical School

2:00PM Graduate Student Research Presentations
Second Session

Real-time Genomic Surveillance of *Plasmodium falciparum* Using a Mobile Nanopore Sequencing Lab: A Feasibility Study
Aurel Holzchuh

Spectroelectrochemical Behavior of Parallel Arrays of Single Vertically-Oriented *Pseudomonas aeruginosa* Cells
Allison Cutri

Designer Chemistries for Biosensor Technology
Nathaniel Dominique

3:00PM **Closing Remarks**

3:05PM **Student Poster Session and Refreshments**

4:15PM **End**

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