



2020 Undergraduate Virtual Poster Session Directory

(Alphabetical by presenter first name)

Abigale O'Boyle

A Quantitative Analysis of Drug Variation and Concentration by way of Rocky Boy Reservation Municipal-Wastewater-System and Community Based Sampling

Mentor: Deborah Keil, Microbiology and Immunology

Caelan Murray

Synthesis of a Template Molecule to Aggregate Galectin-3

Mentor: Mary Cloninger, Chemistry and Biochemistry

Carolina Dequech Garcia

Development of New Anti-inflammatory Drugs, Based on the Isatin Alkaloid Scaffold

Mentor: Mark Quinn, Microbiology and Immunology; Biotechnology

Clyde Schulein

Characterization of differentiation and morphology of human pluripotent stem cell-derived lung organoids

Mentor: Agnieszka Rynda-Applé, Microbiology and Immunology

Conner Wise

Calculating the Electrostatic Free Energy Change of Proton Transfers Within Active Sites

Mentor: Patrik Callis, Chemistry and Biochemistry

Corinne Moss

Mass Spectrometry Imaging of Ricin Toxicosis in Mouse Models

Mentor: Seth, Valerie Pincus, Copie, Chemistry and Biochemistry

Erik Moody

Agriculturally Themed Activities to Provide a First Integrative STEM Experience to Rural Middle School Students

Mentor: Bernadette McCrory, Mechanical and Industrial Engineering

Frances Cole

Enhancement of Cytotoxic Immunoconjugates Against HIV-Infected Cells with CD4 Analogs

Mentor: Seth Pincus, Chemistry & Biochemistry

Gabrielle Spurzem

Cooperative Adsorption of Biological Peptides to DPPC

Mentor: Robert Walker, Chemistry

Garrett Perkins

Developing a Machine Learning Algorithm to Detect ECG Abnormalities

Mentor: Bradley Whitaker, Electrical and Computer Engineering

Griffin Smith

PDE Analysis of Janus particles' group formation and cohesion

Mentor: Dominique Zosso, Mathematical Sciences

Isaac Copeland

OpenSim Simulation of Anterior Cruciate Ligament Loads

Mentor: David Graham, Health and Human Development

Jocelyn Waggoner

Zic2 and Zic3 Transcription Factors Regulate Convergent Extension

Mentor: Christa Merzdorf, Microbiology

John Kelley

Activity assays for monomer and dimer voltage-sensitive phosphatase

Mentor: Susy Kohout, Microbiology & Immunology

Joshua Davisson

Breaking the Dimerization of *Ciona intestinalis* VSP

Mentor: Susy Kohout, Microbiology and Immunology, Program of Cell Biology and Neuroscience

Julia Schearer

Examining the Effects of *Helicobacter pylori* Soluble Factors on Dendritic Cell Recruitment

Mentor: Diane Bimczok, Microbiology and Immunology



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Laina Hall

Anti-Crispr Protein Copurification with CRISPR RNA-Guided Surveillance Complex

Mentor: Blake Wiedenheft, Microbiology

Martina Du

Optimizing Metabolite Exchange Economics in Synthetic Ecology Systems

Mentor: Ross Carlson, Chemical and Biological Engineering

Owen Burroughs

Modulation of Virulence Factors in *Staphylococcus aureus* by the Auxiliary Proteins SaeP/Q

Mentor: Jovanka Voyich, Microbiology and Immunology

Rylee Close

Single Cell Analysis of Antibiotic Stress In *E. coli* Using Raman Microscopy

Mentor: Brian Bothner, Chemistry and Biochemistry

Samantha Hansen

Optimizing Platinum-Based Chemotherapeutic Agents with the Addition of Lactose Functionalized PAMAM Glycopolymers to Inhibit Galectin-3

Mentor: Mary Cloninger, Chemistry and Biochemistry

Selinda Kiefer

Isolation of *Naegleria fowleri* from Polecat and Huckleberry Springs in Yellowstone/Grand Teton National Park

Mentor: Sandra Halonen, Microbiology and Immunology

Shannon Murphy

Refining of a Mathematical Model of a DNA Detection Assay

Mentor: Tomas Gedeon, Mathematical Sciences

Sharidan Brown

Regulation of the Type III CRISPR-Cas Protein Csx3 by Cyclic Tetra-Adenylate (cA4)

Mentor: Martin Lawrence, Chemistry and Biochemistry

Sophia Thompson

Qualitative Analysis on Community Based Participatory Research Conducted on Latinx Community's Access to Health Care In Gallatin Valley

Mentor: Sally Moyce, Nursing

Soumilee Chaudhuri

Metabolomic Characterization of AMPK- β 1 Knockout mouse joints on High Fat Diet to Explore Metabolomic Sexual Dimorphism and Osteoarthritis

Mentor: Ronald June, Mechanical and Industrial Engineering

Tyler Evans

Staphylococcus aureus, ESAT-6 Excreted Proteins are Potential Modulators of Human Neutrophil Priming

Mentor: Jovanka Voyich, Microbiology and Immunology

Zachary Archambault

Comparing Metabolic Responses of Chondrocytes Caused by Injurious Compression and Physiological Loading

Mentor: Ron June, Mechanical and Industrial Engineering