

Chemistry and Biochemistry

POSTER SESSION, 9:30am to 11:30am

Campus Center, Odeum

Discovery and Characterization of Novel Anelloviridae Protein Activities and Their Potential Cancer-Selective Toxicity

Aaron Wheeler, Chloe Byrne, Jessica Takami, and Shane Dancer

Advisor: Destin Heilman

Silanes Form Strong Bonds to UiO-66 Metal-Organic Framework Surfaces

Abigail Berube

Advisor: Ronald Grimm

Investigating the Role of Exosomes in the Development of Neuromuscular Junctions

Adam McKnight

Advisor: Suzanne Scarlata

Exploring the effects of CBD on *C. elegans* with 6-OHDA induced Parkinson's Disease to determine potential therapeutic implications

Amanda Holbrook and Claire Behning

Advisor: Suzanne Scarlata, Jill Rulfs, and Michael Buckholt

Investigating the Role of Plasmalogens in *C. elegans*

Anna Hickman, and Sofi Murray

Advisor: Carissa Olsen

Overexpression of ATF1 in Brewer's Yeast for an Increase in Production of Select Esters

Brandon Rein and Olivia Wallace

Advisor: Destin Heilman

Phosphatidylinositol-4-Phosphate Domain Properties in Asymmetric Giant Unilamellar Vesicles

Catherine Reynolds

Advisor: Arne Gericke

Investigating an in vivo murine model of microglial senescence

Christina Tsillas

Advisor: Robert Dempski

Establishing a Zebrafish Model for Venous Malformations

Eleni Bellas

Advisor: Destin Heilman

Investigating the Catalytic Activity of SARM1

Eliza Mastergeorge

Advisor: Anita Mattson and Paul Thompson (Umass)

Sustaining Silicon's Charge-Carrier Lifetimes through Nb₂O₅ and Organic Silane Passivation

Emma Pellerin

Advisor: Ronald Grimm

Morphological Effects of Stretch on Actin Cytoskeleton in Cocultured Neuronal and Smooth Muscle Cells

Gismael Lopez

Advisor: Suzanne Scarlata

The Role of PLC β 1 in the Relocalization of EGR-1

Grace Hadley

Advisor: Suzanne Scarlata

Drug-Herb Interactions between *Artemisia annua* Tea, Caffeine, and Acetaminophen

Hannah Duncan and Sophia Togneri

Advisor: Suzanne Scarlata and Pamela Weathers

The Synthesis and Properties of a Zinc Photocage Containing Aminoquinoline

Isaac Frederique

Advisor: Shawn Burdette

Bioconjugation of Aliphatic Amino Acids

Ishani Bedre

Advisor: Patricia Musacchio

Synthesis of Zinc Photocaged Thioester Molecules for Biological Applications

Jason White

Advisor: Shawn Burdette

Copper homeostasis in *Salmonella enterica*: cloning, expression, and purification of CopA transporter and CueO cuproprotein

Jeffrey Marsh

Advisor: Jose Arguello

Determining the Relationship between DNA Double Strand Breaks and Apoptosis: Implications for Cancer Therapy

Jillian Earley

Advisor: Jose Arguello and Sharon Carter (Umass Medical)

Cellular Stress and Thioredoxin

John Gabelmann

Advisor: Jose Arguello and Natalie Farny

Coarse-grain lattice technique for studying protein-ligand binding

Jon Aronoff

Advisor: George Kaminski and Jennifer Mortensen

Development of Method to Determine EDTA Concentration

Katherine Jones

Advisor: Christopher Lambert

Interactions of Human VPS45 with Partner SNARE Proteins

Kimberly Huaman

Advisor: Arne Gericke and Mary Munson

Investigation into Ionic and Photoredox Reactions of Sulfoxonium Ylides

Kyra Tripp

Advisor: Anita Mattson

Trafficking of the Dopamine Transporter

Lali Berelashvili

Advisor: Suzanna Scarlata, Jeanine Skorinko, and Haley Melikian (UMass)

Analyzing Cannabinoid Content in Hemp Plants

Lauren Balukonis

Advisor: Anita Mattson

Exploring the Role of GolT and GolB Proteins in Copper Homeostasis in Salmonella: Generation of E. coli Clones for Protein Expression

Leo Zhu

Advisor: Jose Arguello

Bamboo for Mining Reclamation and Renewable Energy

Marissa Desir and Yiyi Wu

Advisor: Anita Mattson and Robert Krueger

Differentiating SH-SY5Y Cells into Mature Human Neurons

Natalia Wierzbicki

Advisor: Robert Dempski

Development of a C-H Acylation Reaction in Batch and in Flow

Rachel Swanson

Advisor: Patricia Musacchio and Andrew Teixeira

Surface Functionalization of 1DL Materials

Rebecca Ramthun

Advisor: Ron Grimm

Phosphatidylinositol Phase Behavior in the Presence of Bivalent Cations

Safiya Ali

Advisor: Arne Gericke

Hypo-Osmotic Stress Impact on Cell Circadian Rhythms

Tovah Lockwood

Advisor: Suzanne Scarlata

Proximity Labelling Identifies Novel Cell Cycle Specific Interactions of Retinoblastoma Protein

Misha Rashkoskii

Advisor: Jose Arguello and Amity Manning