



ABT 395 Research Presentation Schedule Agricultural & Medical Biotechnology Program

Spring 2024

Tuesday, April 16 & Thursday, April 18, 2024
Plant Science Building, Cameron Williams Auditorium

Tuesday, April 16

9:55 AM **Olga Tsyusko** Introductions

10:00 AM **Jada Gordon** Production and optimization of bacterial cellulose from agricultural waste
Mentor: Dr. Kendall Corbin, Department of Horticulture, Martin-Gatton College of Agriculture, Food & Environment

10:15 AM **McKenna Walker** EpiCMare: An epigenetic clock to predict parturition date in mares
Mentor: Dr. Carlos Rodriguez-Lopez, Department of Horticulture, Martin-Gatton College of Agriculture, Food & Environment

10:30 AM **Daniella Jackson** Efficacy of essential oils for German cockroach control
Mentor: Dr. Zachary DeVries, Department of Entomology, Martin-Gatton College of Agriculture, Food & Environment

10:45 AM **Elizabeth Rice** Determining specificity in a high-quality library of pervasive binding proteins
Mentor: Dr. Luke Bradley, Department of Neuroscience, College of Medicine

11:00 AM **Warren Van Nort** Characterizing the role of protein tyrosine phosphatase receptor type F (PTPRF) in regulating the c-met signaling pathway in colorectal cancer
Mentor: Dr. Tianyan Gao, Department of Molecular and Cellular Biochemistry, College of Medicine

11:15 AM **Hannah Greenwell** Analysis of physiological effects from mutations of anterior segment regulatory genes using a zebrafish model system
Mentor: Dr. Jakub Famulski, Department of Biology, College of Arts and Sciences

11:30 -1:00 PM LUNCH

1:00 PM **Megan Johnston** Evaluation of fungal protein secretion in a nonpathogenic signal peptidase mutant of the maize anthracnose fungus *Colletotrichum graminicola*
Mentor: Dr. Lisa Vaillancourt, Department of Plant Pathology, Martin-Gatton College of Agriculture, Food & Environment

1:15 PM **Beatrice Nchamukong** Characterization of Different Non-Small Cell Lung Cancer Organoids
Mentor: Dr. Christine Fillmore Brinson, Department of Toxicology and Cancer Biology, College of Medicine

1:30 PM **Caroline Benda** The expression of internalin B by neurotropic strains of *Listeria monocytogenes*
Mentor: Dr. Sarah D'Orazio, Department of Microbiology, Immunology, and Molecular Genetics, College of Medicine


1:45 PM **Chase Huff** Analysis of quadricep strength and lower-limb biomechanics after ACL reconstruction
Mentor: Dr. Brian Noehren, Human Performance and Biomotion Laboratories, College of Health Sciences

2:00 PM **Xiomara Arias** Simulations of deleterious recessive alleles impact on populations using a horse model
Mentor: Dr. Theodore Kalbfleisch, Department of Veterinary Science, Martin-Gatton College of Agriculture, Food & Environment

2:15 PM **Cailin McDonald** Designing a nanobody-based treatment targeting the HER-2 protein
Mentor: Dr. Lou Hersh, Department of Molecular & Cellular Biochemistry, College of Medicine

2:30 PM Short break

2:45 PM **Cooper Samuelson** Riparian repairing: Effects of conservation efforts on microbial communities and soil characteristics
Mentor: Dr. Luke Moe, Department of Plant and Soil Sciences, Martin-Gatton College of Agriculture, Food & Environment



Thursday, April 18

9:55 AM **Olga Tsyusko** Introductions

10:00 AM **Jonathan Ramsey** Cancer associated fibroblasts and programmed cell death protein 1 in pancreatic ductal adenocarcinoma tumor microenvironments as a possible therapeutic target.

Mentor: Dr. Joseph Kim and Dr. Hannah McDonald, Department of Surgery/Division of Surgical Oncology, College of Medicine

10:15 AM **Jayla Franklin** Genetics of coleoptile color in rye

Mentor: Dr. Lauren Brzozowski, Department of Plant and Soil Sciences, Martin-Gatton College of Agriculture, Food & Environment

10:30 AM **Olga Assa** Determining the impact of p53 mutations in pediatric brain tumor relapse

Mentor: Dr. Jessica Blackburn, Department of Molecular & Cellular Biochemistry, College of Medicine

10:45 AM **Bailey Swart** Effects of climate change on genome stability of *Saccharomyces cerevisiae*

Mentor: Dr. Eva Goellner, Department of Toxicology and Cancer Biology, College of Medicine

11:00 PM **Victoria Shema** Mitigating tobacco-specific nitrosamines with beneficial bacterial strains

Mentor: Dr. Ruth McNees, KY Tobacco Research and Development Center, Martin-Gatton College of Agriculture, Food & Environment