

Schedule: Oral Sessions

ORAL SESSION I: 8:30 – 9:30 AM

Biotechnology & Molecular Biology: Room 212

8:30 – 8:45 Justin Ashby; *Lenoir Rhyne University*

Type 2 cGMP-dependent protein kinase suppresses tumorigenesis in the mouse colon

8:45 – 9:00 Ereny Gerges; *University of North Carolina at Pembroke*

Studying the interplay between RNA Polymerase II and nucleosome dynamics

9:00 – 9:15 Victoria Hudson; *East Carolina University*

Expressing Scorpion Antarease in *E. coli*

Environmental Sciences: Room 214

8:30 – 8:45 Charles Bookheimer*, Benjamin Levin, Dave Millican, John Bang; *Guilford College*

Persistent Organic Pollutants in Soil and Water Samples

8:45 – 9:00 Cerita Mattison; *Nash Community College*

The Future of Conservation: Tough questions from a population assessment of the Bali Starling on Nusa Penida

9:00 – 9:15 Briana Wilson; *Shaw University*

Shell Selection in Hermit Crabs Based on Color and Condition

9:15 – 9:30 Trina Phan, David Beamer; *Nash Community College*

Using Maximum Likelihood Networks to Infer Reticulation Events Between Lineages in the Northern Dusky Salamander Species Complex

Microbiology: Room 215

8:30 – 8:45 Sinclair Do; *Lenoir Rhyne University*

Influence of capsaicin on the growth of pathogenic microorganisms

8:45 – 9:00 Laura Dytrt; *Lenoir Rhyne University*

The influence of ginger (*Zingiber officinale*) on the growth of gut bacteria, in vitro.

9:00 – 9:15 Aubrey Hite; *Lenoir Rhyne University*

The effects of clove oil (*Eugenia carophyllata*) on the growth of antibiotic-resistant Gram-negative bacteria.

ORAL SESSION II: 9:45 – 10:30 AM

Microbiology: Room 212

9:45 – 10:00 Micaela Robson^{1*}, Stephanie Matthews¹, Anne Madden², Amy Grunden², Rob Dunn²;

¹*Campbell University*, ²*North Carolina State University*

Isolation and characterization of *Bacillus* species from polyester clothing

10:00 – 10:15 Dana Waskiewicz ; *Guilford College*

The effects of green tea on staphylococcal, lactose fermenting, bacteria of the buccal flora

10:15 – 10:30 Sean Bryant; *Lenoir Rhyne University*

Identification of Bacteria Through Fourier-Transform Infrared Spectroscopy

Chemistry & Physiology : Room 214

9:45 – 10:00 Hannah Aaron; *Lenoir Rhyne University*

Confirming Monofloral Honey Composition through the Comparison of PCR, Pollen Counting, and Basic Color Identification Methods

10:00 – 10:15 Joshua Cade*, Devang Upadhyay, Sivanadane Mandjiny, Jeff Frederick, Leonard Holmes; *University of North Carolina at Pembroke*

The Effect of Carbohydrates on the Growth and Bioluminescence of *Photobacterium luminescens*

10:15 – 10:30 Jeison Valencia*, Devang Upadhyay, Sivanadane Mandjiny, Jeff Frederick and Leonard Holmes; *University of North Carolina at Pembroke*

The Effects of Alternative Growth Media Composition on Beneficial Entomopathogenic Nematode Mass Production

Genomics & Physiology: Room 215

9:45 – 10:00 Osvaldo Rodriguez*, Daisy Fry*; *Wake Tech Community College*

Measuring Alcohol Tolerance in *Drosophila melanogaster* with Genetic Variations

10:00 – 10:15 Renelsa Blackman; *Lenoir Rhyne University*

The Effects of Exogenous Juvenile Hormone III on 5th Instar Tobacco Hornworms (*Manduca sexta*)

10:15 – 10:30 Kaitlin Smith; *University of North Carolina at Pembroke*

Reducing Alzheimer-type protein accumulation pathology and associated synaptopathogenesis to treat early dementia in a mouse model

Oral Session III: 11:00AM – 12:00PM

Faculty & Graduate Student Presentations: Room 215

11:00 – 11:15 Dennis Edgell; *University of North Carolina at Pembroke*

Analysis of heating and cooling degree-days in North Carolina's Southeastern Coastal Plain climate division, 1895-2016.

11:15 – 11:30 Lisa Kelly; *University of North Carolina at Pembroke*

Colony social forms of invasive ants (*Solenopsis invicta*) in a cypress savanna

11:30 – 11:45 Emily Woolard^{1*}; Gleta K. Carswell², Steve O. Simmons², Brian N. Chorley²; ¹*Oak Ridge Institute for Science and Education*, ²*U.S. Environmental Protection Agency*

Optimization of DNA Barcode Method to Assess Altered Chemical Toxicity Due to CYP-Mediated Metabolism