

# Theobald Smith Society

## Fall 2023 Symposium Program

**12.00-12.45 pm** Attendee check-in, poster set-up, poster presentations, lunch

**12:45-1:00pm** Opening remarks by Gregory Wiedman, President, Theobald Smith Society

**1.00-2.00 pm** Jennifer A. Leeds, PhD American Society for Microbiology Distinguished Lecturer and Waksman Foundation Lecturer

"Challenges and Opportunities in Antibacterial Drug Discovery: a personal perspective."

**2.00-2.30 pm** Dana Price, PhD, Young Investigator Award Recipient

"Genomic epidemiology and the New Jersey vector-borne disease landscape."

**2.30-2.40 pm** Truman Dunkley, "Playing with power: modulating ATP production in *E. coli*."

**2.40-2.50 pm** Liya Popova, "The regulation of gene expression by acetylated forms of HbS during sporulation in *Bacillus subtilis*."

**2.50-3.00 pm** Bala Madduri "Characterizing how *Mycobacterium tuberculosis* secreted effector proteins PE25 and PPE41 disrupt macrophage cell biology

**3.00-3.10 pm** Lylla Almosd, "Microbial source tracking technologies to identify sources of fecal contamination in the Raritan River, NJ."

**3.10-3.20 pm** Adriana Machado, "Antibiofilm and antimicrobial properties of *Schinus terebinthifolia* fruit extract."

**3.20-3.30 pm** Closing remarks by Gregory Wiedman, President, Theobald Smith Society

### **3.30-5.00 pm** POSTER PRESENTATIONS

1. Characterization of the sirtuin SrtN in *Bacillus subtilis*.

M. Akantibila<sup>1,2</sup>, V, J. Carabetta<sup>2</sup>

1. Department of Chemistry and Biochemistry, Rowan University, Glassboro, NJ.

2. Department of Biomedical Sciences, Rowan University, Camden, NJ

2. Spatial organization of sphingolipid synthesis enzymes.

Chioma Uchendu<sup>1</sup>, Eric Klein<sup>1,2</sup>

1. Center for Computational and Integrative Biology, Rutgers University- Camden, NJ

2. Department Of Biology, Rutgers University - Camden, NJ

3. Cultivation of selenate-respiring bacteria from soils of the Mekong and Red River deltas in Vietnam.

Nicole Almosd, Angel Robinson, Max M. Häggblom

Dept. of Biochemistry and Microbiology, Rutgers University, New Brunswick, NJ

4. Antibiofilm and antimicrobial properties of *Schinus terebinthifolia* fruit extract.

Adriana Machado, Jerry Louis, Meriem Bendaoud

Dept. of Biology, New Jersey City University, Jersey City, NJ

5. Effects of bacterial sphingolipids on the properties of synthetic liposomes.

Joshua Chamberlain<sup>1,2</sup>, Julie Griepenburg<sup>1,3</sup>; Eric Klein<sup>1,2,4</sup>

1. Center for Computational and Integrative Biology, Rutgers University, Camden, NJ

2. Rutgers Center for Lipid Research, Rutgers University, New Brunswick NJ

3. Department of Physics, Rutgers University, Camden, NJ

4. Department of Biology, Rutgers University, Camden, NJ

6. Characterization of an evolutionarily distinct bacterial ceramide kinase from *Caulobacter crescentus*.  
Tanisha Dhakephalkar<sup>1</sup>, Geordan J. Stuke<sup>2,3</sup>, Ziqiang Guan<sup>4</sup>, George M. Carman<sup>2,3</sup>, and Eric A. Klein<sup>1,2,3,5</sup>
1. Biology Department, Rutgers University-Camden, Camden, NJ
  2. Department of Food Science, New Jersey Institute for Food Nutrition and Health, Rutgers University, New Brunswick, NJ
  3. Rutgers Center for Lipid Research, New Jersey Institute for Food Nutrition and Health, Rutgers University, New Brunswick, NJ
  4. Department of Biochemistry, Duke University Medical Center, Durham, NC
  5. Center for Computational and Integrative Biology, Rutgers University-Camden, Camden, NJ
7. Characterizing how *Mycobacterium tuberculosis* secreted effector proteins PE25 and PPE41 disrupt macrophage cell biology.  
Bala Madduri<sup>1</sup>, Samantha Bell<sup>1,2</sup>
1. Center for Emerging and Re-Emerging Pathogens, Rutgers New Jersey Medical School, Newark, NJ,
  2. Department of Microbiology, Biochemistry & Molecular Genetics, Rutgers New Jersey Medical School, Newark, NJ
8. Cultivation of arsenic-respiring anaerobic bacteria from the rivers of Vietnam.  
Angel G. Robinson, Nicole Asmod, Max M. Häggblom  
Department of Biochemistry and Microbiology, Rutgers University, New Brunswick, NJ
9. The regulation of gene expression by acetylated forms of HBSu during sporulation in *Bacillus subtilis*.  
Liya Popova, Hritisha Pandey, Valerie J. Carabetta  
Department of Biomedical Sciences, Cooper Medical School of Rowan University, Camden, NJ
10. Testing antimicrobial and antibiofilm properties of nicotinamide (Vitamin B3).  
Mark M. Sadek, Adriana Machado, Meriem Bendaoud  
Dept. of Biology, New Jersey City University, Jersey City, NJ
11. Antimicrobial and antibiofilm properties of L-ascorbic acid and bitter melon fruit extract.  
Jerry Louis, Adriana Pinheiro Machado, Meriem Bendaoud  
Dept. of Biology, New Jersey City University, Jersey City, NJ
12. Microbial source tracking technologies to identify sources of fecal contamination in the Raritan River, NJ.  
Lylla Almosd, Genevieve Ehasz, Piash Ahamad, N.L. Fahrenfeld  
Dept. of Civil and Environmental Engineering, Rutgers University, New Brunswick, NJ
13. Playing with power: modulating ATP production in *E. coli*.  
Truman Dunkley<sup>1</sup>, Eric Klein<sup>1,2,3</sup>
1. Center for Computational and Integrative Biology, Rutgers University, Camden, NJ
  2. Department of Biology, Rutgers University, Camden, NJ
  3. Rutgers Center for Lipid Research, Rutgers University, New Brunswick
14. Enrichment and isolation of organobromine respiring bacteria from estuarine sediment.  
Niveda Thuravil<sup>1</sup>, Chloe Costea<sup>1</sup>, Lee J. Kerkhof<sup>2</sup>, Max M. Häggblom<sup>1</sup>
1. Dept. of Biochemistry and Microbiology, Rutgers University, New Brunswick, NJ
  2. Dept. of Marine and Coastal Sciences, Rutgers University, New Brunswick, NJ
15. Cassava ssDNA viruses in coastal Kenya: high within-plant and within-field diversity.  
J. Steen Hoyer<sup>1</sup>, Anna E. Dye<sup>2</sup>, Cyprian A. Rajabu<sup>2,4</sup>, Charles Tunje Chiro<sup>3</sup>, Alvin Crespo-Bellido<sup>1</sup>, Divya Dubey<sup>1</sup>, David O. Deppong<sup>2</sup>, Evangelista Chiunga<sup>2,4</sup>, Brenda Muga<sup>5</sup>, Justin Koesterich<sup>1</sup>, Paul E. Labadie<sup>2</sup>, Paul Kuria<sup>3</sup>, Ignazio Carbone<sup>2</sup>, José Trinidad Ascencio-Ibáñez<sup>2</sup>, Linda Hanley-Bowdoin<sup>2</sup>, Joseph Ndunguru<sup>4</sup>, Elijah M. Ateka<sup>5</sup>, Siobain Duffy<sup>1</sup>.
1. Rutgers University, New Brunswick NJ, USA
  2. North Carolina State University, Raleigh NC, USA
  3. Kenya Agricultural and Livestock Research Organisation, Mtwapa and Nairobi, Kenya
  4. Tanzania Agricultural Research Institute, Dar es Salaam, Tanzania
  5. Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya
16. Reactive oxygen species and multi-drug resistance: an investigation into the uses of photosensitizers and antimicrobial peptides against *Candida auris*.  
Akilah I. Mateen, Gregory R. Wiedman  
Department of Chemistry and Biochemistry, Seton Hall University, South Orange, NJ
17. Evaluation of antibacterial activity of *Lactobacillus* spp. in commercial yogurts.  
Connor R. Dolan, Abdulrahman Y. Abdullaah, Tinchun Chu  
Dept. of Biological Sciences, Seton Hall University, South Orange, NJ
18. Exploring sporicidal efficacy of novel formulations and their anti-spore mechanisms.  
Myeong Gil Jun, Vanessa Guo, Tinchun Chu  
Dept. of Biological Sciences, Seton Hall University, South Orange, NJ
19. Macrophages with depleted mtDNA have depressed immune response to intracellular bacteria. 25  
Vijay Subramanian<sup>1</sup>, Samantha Bell<sup>1,2</sup>
1. Center for Emerging Pathogens, Rutgers New Jersey Medical School, Newark NJ
  2. Department of Microbiology, Biochemistry, and Molecular Genetics, Rutgers New Jersey Medical School, Newark NJ
20. Development of *Cryptococcus* inspired antimicrobial peptide.  
Robert J. Tancer<sup>1</sup>, Yina Wang<sup>1</sup>, Siddhi Pawar<sup>1</sup>, Gregory R. Wiedman<sup>2</sup>, Chaoyang Xue<sup>2</sup>
- 1 Public Health Research Institute, Department of Microbiology, Biochemistry and Molecular Genetics, New Jersey Medical School, Rutgers University, Newark, NJ
  - 2 Department of Chemistry and Biochemistry, Seton Hall University, South Orange, NJ