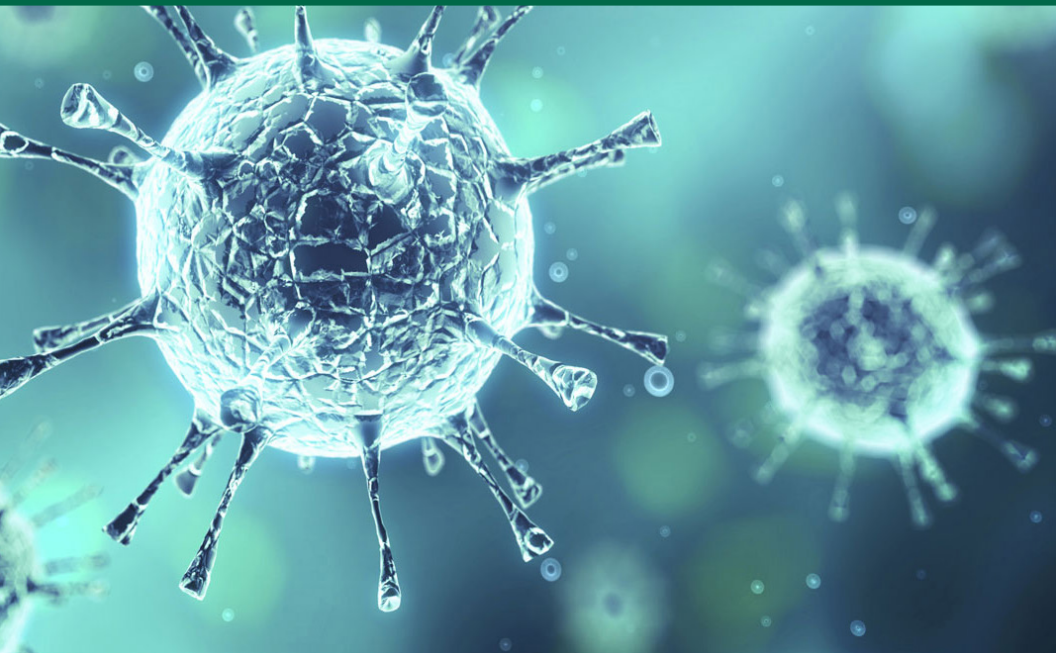


**The 103rd Annual Southeastern Branch
American Society for Microbiology Meeting
Antimicrobial Resistance Program**



**November 10-12, 2017
Hilton St. Petersburg Bayfront, FL
Conference Organizer: Dr. Lindsey Shaw, University of South Florida**



**UNIVERSITY OF
SOUTH FLORIDA**
COLLEGE OF ARTS & SCIENCES

Friday, November 10

4:00 - 5:30 P.M.

Grand Bay South Ballroom

Education Session (By Invitation)

Dr. Johnny El Rady, University of South Florida

Confessions of a microbiology educator

Dr. Johnny El Rady, University of South Florida

In the classroom 'one size does not fit all':

Exploring elasticity of the classroom experience

Dr. Shannon Ulrich, St. Petersburg College

Student to scientist: Effects of using art as a

platform for discovery in a microbiology lab class

Sarah Adkins, University of Alabama-Birmingham

Can a microbiology lab be taught online?

(Is this guy crazy or what?)

Dr. John Bacheller, Hillsborough Community College

6:00 - 7:00 P.M.

Grand Bay South Ballroom

Keynote Address

Dr. Jody Harwood, University of South Florida

Antibiotic resistance in the environment:

A work in progress

7:00 - 8:00 P.M.

Lobby II

Reception

8:30 - 10:00 A.M.
St. Petersburg III

Metabolism (By Invitation)
Dr. Kelly Rice, University of Florida

New archaeal and bacterial players reveal exciting new insights into marine and terrestrial nitrogen cycle

Dr. Willm Martens-Habbena, University of Florida
Ft. Lauderdale Research & Education Center

*Manganese acquisition is essential for the virulence of *Enterococcus faecalis**

Dr. Jose Lemos, University of Florida

*Regulation of nitric oxide synthase (NOS) and its interplay with *S. aureus* metabolism*

Kimberly James, University of Florida

8:30 - 10:00 A.M.
Grand Bay South Ballroom

Antimicrobial Therapeutics and Resistance I
Rahmy Tawfik and Jessie Adams,
University of South Florida

Translational tools for diagnostics and in vivo drug testing for non-tuberculous mycobacteria

Hillary Bengtson, University of Central Florida

Next-generation sequencing analysis of mycobacteria resistant to fluoroquinolone compound

Pamela Garcia, Florida International University

Bis(pyrrolide-imine) gold(III) macrocycles and chelates: Repurposed anticancer compounds become a novel class of antimicrobials targeting mycobacterium tuberculosis and mycobacterium abscessus

Rashmi Gupta, University of Central Florida

Kaolin products as prospective tools for the sorption of biofilm-forming bacteria

Terrell Johnson, Georgia College and State University

Exploiting phenotypic plasticity to unlock cryptic metabolic pathways in actinobacteria

Haider Manzer, University of South Florida

Discovering novel tuberculosis drugs by exploiting protein interactions

Bailey Mourant, University of Central Florida

Characterization of the Clostridium difficile vanZ gene

Emily Woods, Emory University

10:00 - 10:15 A.M.

Break

10:15 - 11:45 A.M.
St. Petersburg III

**Antimicrobial Therapeutics and Resistance II
(By Invitation)**

Dr. Kyle Rohde, University of Central Florida

Emergence of antibiotic resistance in the absence of acquired external resistance determinants

Dr. Herbert Schweitzer, University of Florida

Discovery of an LL-37 response mechanism in Clostridium difficile

Dr. Shonna McBride, Emory University

Ring distortion of indole alkaloids: A new platform for drug discovery and the identification of antiplasmodial agents

Dr. Robert Huigins, University of Florida

Identification of novel bacterial topoisomerase I inhibitors for development of new antibiotics

Dr. Yuk-Ching Tse-Dinh, Florida International University

10:15 - 11:45 A.M.
Grand Bay South Ballroom

Environmental Microbiology I

**Dr. Andrei Barkovskii,
Georgia College & State University**

Novel crAssphage marker assessed for microbial source tracking (MST) applications in Tampa

Jacob Senkbeil, University of South Florida

Effects of excavation of drainage ditch systems on bacterial communities and biological contamination of tidal creeks and estuaries

Andrei Barkovskii, Georgia College and State University

Saturday, November 11

Bioremediation of mercury using Serratia marcescens isolated from mercury contaminated site

Dr. Timothy Egbo, Alabama State University

Factors that allow salmonella to thrive in tomatoes

Andree George, University of Florida

Evaluation of nitrogen metabolism in municipal wastewater treatment through bioinformatics and molecular tools

Ryan Keeley, University of South Florida

12:00 - 1:00 P.M.

Grand Bay South Ballroom

Keynote Address

Dr. Kelly Doran, University of Colorado, Denver

Blood-brain barrier penetration by group B Streptococcus

1:00 - 2:00 P.M.

Grand Bay North Ballroom

Lunch Provided

2:00 - 3:30 P.M.

St. Petersburg III

Molecular and Cellular Microbiology (By Invitation)

**Dr. Prahathees Eswara,
University of South Florida**

Regulation of cell division in Staphylococcus aureus

Prahathees Eswara, University of South Florida

Linking CRISPR-Cas immunity with the RNA degradosome in Staphylococcus epidermidis

Dr. Asma Hatoum-Aslan, University of Alabama

Identification of putative secreted proteins of the endosymbiont Wolbachia pipientis

Emily Carpinone, University of Georgia

PPE surface proteins are required for heme utilization by Mycobacterium tuberculosis

Dr. Avishek Mitra, University of Alabama-Birmingham

Saturday, November 11

2:00 - 3:30 P.M.

Grand Bay South Ballroom

Environmental Microbiology II

**Dr. Melanie Langford,
Florida Southern College**

*Isolation of multidrug-resistant bacteria from the Florida manatee, *Trichechus manatus latirostris**

Dr. Melanie Langford, Florida Southern College

Environmental factors significantly correlated with culturable enterococci concentrations in surface waters at Escambron Beach, San Juan, Puerto Rico

Abdiel Laureano-Rosario, University of South Florida

Potential of bioleaching with filamentous fungi to mobilize Li and Co from spent rechargeable Li-ion Batteries

Aldo Lobos, University of South Florida

Environmental conditions affect the isolation of mycobacteriophage from soil

Shea Morris, Georgia College and State University

Microbial community structure of a unique sulfidic spring environment

Christina Moss, University of South Florida

Detection of wild animal sources of fecal indicator bacteria by microbial source tracking (MST) influences regulatory decisions

Karena Nguyen, University of South Florida

3:30 - 3:45 P.M.

Break

3:45 - 4:30 P.M.

Grand Bay South Ballroom

Virology

**Dr. Karyna Rosario,
University of South Florida**

Discovery of single-stranded DNA viruses in fungus-farming termites

Mason Kerr, University of South Florida

*Discovery and prevalence of single-stranded DNA viruses associated with spinybacked orbweavers (*Gasteracantha cancriformis*) from Florida*

Kaitlin Mettel, University of South Florida

Diversity of viruses circulating in indoor air as assessed via metagenomic sequencing

Karyna Rosario, University of South Florida

Outer membrane protein (OmpA) in 'Candidatus liberibacter' species, characterization and role as phage receptor

Marta Sena-Vélez, Florida State University

3:45 - 4:30 P.M.
St. Petersburg III

General Microbiology
Dr. Avishek Mitra,
University of Alabama-Birmingham

*Redox substrates and autotrophic pathways of *Endoriftia persephone*, the gammaproteobacterial endosymbiont of vestimentiferan tubeworm *Riftia pachyptila**

Juliana Leonard, University of South Florida

Antiae: A novel external organelle in prokaryotes responsible for gliding motility

Elena Pikuta, Athens State University

*Confirming the functional roles of the ortholog genes *ahpB* of *Aeromonas hydrophila* and *hap* of *Aeromonas salmonicida**

Rahiq Rahman, Kennesaw State University

4:30 - 6:00 P.M.
Williams/Demens

Poster Session

6:00 - 7:00 P.M.
Grand Bay North Ballroom

Microbiology Smackdown
Dr. Donald McGarey,
Kennesaw State University

Sunday, November 12

8:30 - 10:00 A.M.
St. Petersburg III

Microbiomes (By Invitation)
Dr. Larry Dishaw,
University of South Florida

Social interaction network studies of lung microbial communities identify cooperating and competing clubs of bacterial taxa

Dr. Kalai Mathee, Florida International University

Proteobacteria dominance in the preterm infant gut microbiome

Samia Dutra, University of South Florida

State-of-the-art microbiome data analysis

Dr. Giri Narasimhan, Florida International University

Microbes and mariculture: Using probiotics to grow healthier fish

Dr. Andrea Tarnecki, MOTE Marine Lab & Aquarium

Microbiome analysis pipelines: Present and future

Dr. Trevor Cickovski, Florida International University

*Characterization of muramyl peptides that regulate antibiotic resistance in *Pseudomonas aeruginosa**

Supurna Dhar, Florida International University

10:00 - 10:15 A.M.

Break

10:15 - 11:45 A.M.
St. Petersburg III

Eukaryotic Microbiology (By Invitation)
Dr. Rays Jiang, University of South Florida

In search of next generation antimalarials

Dr. Debopam Chakrabarti,
University of Central Florida

*A whole genome mutagenesis screen of the *Plasmodium falciparum* defines genes important for in vitro asexual blood-stage growth*

Dr. John Adams, University of South Florida

Sunday, November 12

Details matter: Comparative annotation and re-annotation of three cryptosporidium genome sequences reveals surprising similarities and differences

Dr. Jessica Kissinger, University of Georgia

Using molecular genetics to study the plastid Clp complex in malaria parasites

Dr. Vasant Muralidharan, University of Georgia

10:15 - 11:45 A.M.

Grand Bay South Ballroom

Bacterial Pathogenesis

Dr. Xingmin Sun, University of South Florida

*The novel infectivity gene *bbk13* confers complement resistance to the Lyme disease agent *Borrelia burgdorferi**

Dr. George Aranjuez, University of Central Florida

*Identification of a novel two component system connected to membrane energetics in *Acinetobacter baumannii**

Leila Casella, University of South Florida

*Regulation of toxin production and sporulation in *Clostridium difficile* by the multifunctional protein, *RstA**

Dr. Adrienne Edwards, Emory University

*Exploring the regulation of secreted protease and their role in controlling disease progression in *Staphylococcus aureus**

Brittney Gimza, University of South Florida

*A novel Abi-domain protein controls virulence determinant production in *Staphylococcus aureus**

Stephanie Marroquin, University of South Florida

*Multivalent mucosal vaccines against *Clostridium difficile* infection*

Dr. Xingmin Sun, University of South Florida

12:00 - 1:00 P.M.

Closing Banquet

Notes
