

SEBASM Program

THURSDAY, NOVEMBER 5

4:00 – 5:30 pm	Executive Committee Meeting	CGC, Rm 128
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FRIDAY, NOVEMBER 6

7:30 am – 4:00 pm	SEBASM REGISTRATION CHECK-IN Badge and Program Pick-up	CGC, Lobby
7:30 – 8:20 am	POSTER SET-UP All posters set-up for viewing	CGC, Rm 111
8:20 – 8:30 am	WELCOME Branch President Laura Regassa, Georgia Southern University	CGC, Rm 100
8:30 – 9:30 am	OPENING KEYNOTE ADDRESS Insights into the Origin of Microbial Virulence <i>Arturo Casadevall, Albert Einstein College of Medicine</i>	CGC, Rm 100
9:30 am – 4:30 pm	POSTER VIEWING Presenters at posters 1-3 pm	CGC, Rm 111
9:30 am – 4:30 pm	EXHIBITORS Please visit the exhibitor booths – they support our meeting activities!	CGC, Lobby
9:30 – 10:00 am	COFFEE BREAK	CGC, Lobby
10:00 am – 12:00 pm	CONCURRENT SESSIONS I & II	
10:00 am – 12:00 pm	Session I: Graduate Student Talks <i>Convener: Paul Cobine, Auburn University</i> [Speakers to upload talks 9:30-9:55 am]	CGC, Rm 217
	1. Adaptation to multiple extreme conditions in the species of the genus <i>Natranaerobius</i> Karen J. Bowers, University of Georgia	

SEBASM Program

FRIDAY, NOVEMBER 6

10:00 am – 12:00 pm

CONCURRENT SESSIONS I & II

10:00 am – 12:00 pm

Session I: Graduate Student Talks

CGC, Rm 217

2. Characterization of a *Staphylococcus aureus* Two Component System Important in Transport and the Switch to Fermentation
Stacey Kolar, University of South Florida
3. Management Practices Effects on *Salmonella* Prevalence on Broiler-Breeder Farms in Southeastern United States
Demetrius L. Mathis, University of Georgia
4. Analysis of the Role and Regulation of σ^S in *Staphylococcus aureus*
Halie K. Miller, University of South Florida
5. Biodegradation of 2-Nitropropylbenzene, a Synthetic Analog of 1-Nitro-2-phenylethane by *Burkholderia* sp. JS670
Samantha T. Parks, Georgia Institute of Technology
6. Leech Community Composition on Freshwater Turtles in Northeast Alabama
Kayla Smith, Jacksonville State University
7. Direct effects of agrochemicals on indicator bacteria
Zachery R. Staley, University of South Florida

10:00 am – 12:00 pm

Session II: Undergrad Student Talks

CGC, Rm 218

Convener: Lindsey Shaw, University of South Florida
[Speakers to upload talks 9:30-9:55 am]

1. Investigation of Sea Turtle Immunity using a cDNA Library.
Eric Bradley, Armstrong Atlantic State University
2. Vertical transmission from broiler breeder stocks of poultry integrators is primarily responsible for chicken carcass contamination with *Salmonella*
Akshita Khetarpal, University of Georgia

SEBASM Program

FRIDAY, NOVEMBER 6

10:00 am – 12:00 pm	CONCURRENT SESSIONS I & II	
10:00 am – 12:00 pm	Session II: Undergrad Student Talks	CGC, Rm 218
	3. <i>E. coli</i> Survival in Fresh and Saltwater Zalika Nisbeth, University of South Florida	
	4. Using Replicate Phosphate Lakes to Investigate the Effects of Land Use on the Concentration of Fecal Indicator Bacteria Mythili Penugonda, University of South Florida	
	5. Epidemiology of <i>Salmonella enterica</i> Typhimurium in Songbirds in the Southeastern United States. A. W. Ray III, University of Georgia	
	6. The Distribution of ST64B like, Gifsy-1 like, and P-22 like Prophages in <i>Salmonella enterica</i> Typhimurium isolates from Passerine, Psittacines, and Gallinaceous Birds Misha Taherbhai, University of Georgia	
12:00 – 1:00 pm	LUNCH Boxed lunches (prepaid); pickup 12:00-12:30	CGC, Rm 115
1:00 – 3:00 pm	POSTER PRESENTATIONS Presenting authors at posters All presenters must remove posters by 5:00 pm	CGC, Rm 111
3:00 – 4:30 pm	CONCURRENT SESSIONS III & IV	
3:00 – 4:30 pm	Session III: Pathogenesis <i>Convener: Laura Silo-Suh, Auburn University</i> [Speakers to upload talks 2:30-2:55 pm]	CGC, Rm 217
	1. Interactions of <i>Burkholderia pseudomallei</i> with Murine Macrophages Paul Brett, University of South Alabama	

SEBASM Program

FRIDAY, NOVEMBER 6

3:00 – 4:30 pm

CONCURRENT SESSIONS III & IV

3:00 – 4:30 pm

Session III: Pathogenesis

CGC, Rm 217

2. Role of oxido-reductive stress in *Mycobacterium tuberculosis* persistence
Andries Steyn, University of Alabama at Birmingham
3. Adaptation of *Pseudomonas aeruginosa* to the cystic fibrosis lung
Laura Silo-Suh, Auburn University

3:00 – 4:30 pm

Session IV: Food & Environmental Microbiology

CGC, Rm 218

Convener: Bruce Seal, USDA

[Speakers to upload talks 2:30-2:55 pm]

1. Genotypic and phenotypic analyses of food-borne bacterial pathogens
Kelli L. Hiett, Agricultural Research Service
2. Interactions between *Saccharomyces* and *Lactobacilli* during ethanol fermentation
Trevor Phister, North Carolina State University
3. Bioremediation
Robin L. Brigmon, Savannah River National Laboratory
4. Life in Sunheated Athalossohaline Salt Brines: Anaerobic Polyextremophiles
Juergen Wiegel, University of Georgia

4:30 - 6:30 pm

RECEPTION & MICRO SMACK DOWN

CGC, Rm 115

SEBASM Program

SATURDAY, NOVEMBER 7

<i>8:00 – 10:15 am</i>	SEBASM REGISTRATION CHECK-IN Badge and Program Pick-up	CGC, Lobby
<i>8:00 – 8:45 am</i>	CONTINENTAL BREAKFAST & SEB GENERAL MEMBERSHIP MEETING General business meeting open to all members	CGC, Rm 115
<i>9:00 – 10:00 am</i>	KEYNOTE ADDRESS The Good of the Many: Genomics & Undergraduate Education as a Mutually Beneficial Collaboration <i>Brad Goodner, Hiram College</i>	CGC, Rm 100
<i>10:15 am – 12:15 pm</i>	CONCURRENT SESSIONS V & VI	
<i>10:15 am – 12:15 pm</i>	Session V: Bacterial Stress Response & Adaptation <i>Convener: Sang-Jin Suh, Auburn University</i> [Speakers to upload talks 8:30-8:55 am or 10:00-10:10am]	CGC, Rm 218
	<ol style="list-style-type: none">1. <i>Legionella</i> and Intercellular Signaling James Barbaree, Auburn University2. The VirAG Regulon Plays a Critical Role in the Intracellular Lifestyle of <i>Burkholderia mallei</i> Mary Burtnick, University of South Alabama3. Scratching the surface of <i>Pseudomonas aeruginosa</i> General Stress Response Sang-Jin Suh, Auburn University	

SEBASM Program

SATURDAY, NOVEMBER 7

10:15 am – 12:15 pm

CONCURRENT SESSIONS V & VI

10:15 am – 12:15 pm

Session VI: Creating Change in Undergraduate Science Education

CGC, Rm 217

Convener: Alix Darden, University of Oklahoma

[Speakers to upload talks 8:30-8:55 am or 10:00-10:10am]

1. SESSION LECTURER
The Scholarship of Teaching and Learning as applied to Microbiology Education
Alix Darden, University of Oklahoma
2. Direct and Indirect Benefits of Service-Learning in Large Classrooms
Michelle Cawthorn, Georgia Southern University
3. The Effectiveness of Project-based Labs on Learning the Process of Science
Jennifer Leavey, Georgia Institute of Technology

12:15 – 1:45 pm

AWARDS LUNCHEON

CGC, Rm 115

Award Presentations

Student Awards (President's Awards & Travel Awards)
Faculty Recognition Awards

Closing Remarks

Laura Regassa, Branch President

Poster Presentations

Posters on display in Rm 111
9:30 am – 4:30 pm, Friday (Nov 6)
Presenting authors available 1-3 pm

Authors may set up their posters 7:30-9:30 am; poster board numbers must remain visible to assist with poster viewing. Posters should be removed 4:30-5:00 pm.

Poster Presentation Summary/Index

Note: Poster numbers assigned alphabetically by presenting author

- P-1. Detection of aflatoxigenic and non-aflatoxigenic forms *Aspergillus flavus* and *A. parasiticus* in commercial peanuts. **P.N. Achar***, T. Doan, U. Patel, M. Christopher.
- P-2. Excess Carbohydrate Effects on *Clostridium cellulovorans* After Growth in Crystalline Cellulose. **B.G. Blair***.
- P-3. *Natronolimnobius aegyptiacus* sp. nov., a novel poly-extremophilic archaeon isolated from the lakes of the Wadi An Natrun, Egypt. **K.J. Bowers***, N.M. Mesbah, F. Sarmiento B., J. Wiegel.
- P-4. Elevated Levels of Fecal Bacteria, Algal abundance and Nutrient concentrations in the Cattle Farming Regions of the Lake Oconee Watershed. **C.D. Burt***, D. Bagoon, M. Smith, K Manoylov.
- P-5. Novel Virulence Determinants of the Opportunistic Intracellular Actinomycete *Rhodococcus equi*. **G.B. Coulson***, V.N. Tripathi, S. Jain, and M.K. Hondalus.
- P-6. Does the presence of fire ants affect the community composition of ammonia-oxidizing Bacteria and ammonia-oxidizing Archaea? **W. Crabb***, J. Zettler, J.A. McGarvey and J. Brofft.
- P-7. Characterization of pACK1 and pACK3 from *Staphylococcus simulans* biovar *staphylolyticus*. **A.S. Gargis***, A. H. Tate, L. S. Heath, H. E. Heath, P. A. LeBlanc, G. L. Sloan.
- P-8. The Lysostaphin Endopeptidase Resistance Protein, Epr, Inhibits Both Domains of Lysostaphin. **S.R. Gargis***, L.S. Heath, H.E. Heath, P.A. LeBlanc, R.S. Simmonds, G.L. Sloan.
- P-9. Characterization of a CHAP-like Staphylolytic Enzyme from *Staphylococcus sciuri* DD4747. **A.T. Glass***, S.R. Gargis, A.S. Gargis, G.L. Sloan.

- P-10.** The Effect of Membrane Filter Type on the Quantity and Quality of DNA Recovered from Water Samples. **C.P. Green***, C.M. Miller, D. Bachoon.
- P-11.** Identification of *Edwardsiella ictaluri* genetic determinants of phage infection, with a novel role for a hemolysin in phage resistance. **M.J. Hossain***, K.S. Rahman, K. Tsuji, M.L. Williams, M.L. Lawrence, J.S. Terhune, M.R. Liles.
- P-12.** Characterization of Host Cell Death in Cultures of Macrophage-like RAW264.7 Cells Pretreated with Gamma Interferon and Infected with *Rickettsia prowazekii*. **K. Huitt*** and J. Turco.
- P-13.** Continued Development of an Alternative Antibody-Based Capture Matrix for the Detection of Live and Dead *E. coli* O157:H7. **D.M. Hunter*** and D.V. Lim.
- P-14.** Keeping the Predator off the Trail: The Quorum-Sensing Molecule Farnesol May Provide a Means of Survival for the Fungus *Candida albicans* when Faced with Bacterial Mediated Death by *Pseudomonas aeruginosa* as it Acts to Delay *P. aeruginosa* response to *C. albicans* filaments. **C. Jensen***, A. Ward, S. Jones-Dozier, G. Pierce.
- P-15.** Screening a soil metagenomic library to identify recombinant clones producing an antimicrobial activity. **K.S. Kakirde***, N.K. Capps, B. Rhodes, M.R. Liles.
- P-16.** Comparison of Single Versus Multiple Applications of the Probiotic Eubacterium cellulosolvens 5494 and its effect on the Growth Rate of Nile Tilapia (*Oreochromis niloticus*). **J.E. Kelly***, B. Blair, M. Meade, C. Murdock.
- P-17.** Sensitive and Specific Detection of *E. coli* O157:H7 in Complex Mixtures of Microorganisms. **K.M. Leach***, S. Magaña, S.M. Schlemmer, and D.V. Lim.
- P-18.** Initial Field Trials of the Automated Concentration System for Recovery of Fecal Indicator Bacteria from Surface and Ground Waters of the Tampa Bay area. **S.D. Leskinen***, E.A. Kearns, D.V. Lim.
- P-19.** Method to Concentrate and Detect: Automated Concentration System and Lateral Flow Immunoassays. **S. Magaña***, S.M. Schlemmer, D.V. Lim.
- P-20.** Evaluation of Fecal Contamination in Harris Neck Estuary by Traditional and Molecular Techniques. **S.J. Markand***, S.P. Sherchan, L.Gentit, D.S. Bachoon.
- P-21.** Dynamic among *Salmonella enterica* flagellar export apparatus proteins: a kinetic analysis. J.L. Wilson, J.D. Parker, I.M. Scott and **J.L. McMurry***.
- P-22.** Establishment of Replicating *Mycobacterium tuberculosis* in an Aerosol Mouse Model of Infection: Active vs. Chronic Infection. **M.B. Minyard***, M. Bridges, J. Trombley, J. Boydston, J. Anderson, K. Bohannon, L. Bowen.
- P-23.** The Inability of Pathogenic and Nonpathogenic Strains of *Escherichia coli* to Survive in Coastal Beach Sand. **M. Muscarella***, J. Awong-Taylor, and J.A. Zettler.
- P-24.** Methods for isolation, purification, and cloning of metagenomic DNA extracted from environmental sources. **M.M. Newman***, L.C. Parsley, J.W. Feminella, M.R. Liles.

- P-25.** Identification and Characterization of *denA*, a Novel HNP Denitrase Integral to 3-Nitrotyrosine Degradation in *Variovorax* sp. JS669. **S.T. Parks***, Y. Qu, and J.C. Spain.
- P-26.** Functional and Phylogenetic Characterization of Diverse Chloramphenicol Resistance Genetic Determinants Identified from Activated Sludge Metagenomic Libraries. **L.C. Parsley***, W.F. Harper, Jr., M.R. Liles.
- P-27.** Iron Reduction and Adsorption on *Shewanella putrefaciens* nearby Landfills in Northwest Florida. **S. Patil***, P.K. Subramaniam and G. Chen.
- P-28.** The Role of *MurM* in *Penicillin Resistance and Evolution of Streptococcus pneumoniae*. **D.B. Payne***, P.A. Coan, S.K. Hollingshead.
- P-29.** *Bacillus acidiceler* CBD 119^T develops a branched morphology under conditions that foster rapid growth. **K.K. Peak***, W. Veguilla, K.E. Duncan, V.A. Luna, D.S. King and A.C. Cannons.
- P-30.** The Molecular Biology Initiative Program: Active learning to enhance molecular biology knowledge & skills for diverse learners. **M. Phillips***, **S. Cannon***, M. Bennett, and L.B. Regassa.
- P-31.** Fate of GFP-expressing *Bacillus cereus* within the housefly digestive tract. **A. Renfro***, D. Nayduch.
- P-32.** Analysis of the Variations in Secretome between HA-MRSA and CA-MRSA. **F.E. Rivera***, S.M. Stevens, L.N. Shaw.
- P-33.** Vitamin B Effects on Recovery of *Rhodotorula glutinis* Post-Electroporation. **C. Steed***, S. Trail, T. French, B. Blair.
- P-34.** Usage of Microbial Fuel Cell Technology to Prevent Iron Release nearby Landfills in Northwest Florida. **P. Subramaniam***, G.Chen.
- P-35.** Yeast Extract Supplementation as a Membrane Stabilizer for *Rhodotorula glutinis* Following Electroporation. **S. Trail***, C. Steed, T. French, B. Blair.
- P-36.** Transport and regulation of C4 dicarboxylates in the opportunistic macrophage pathogen *Rhodococcus equi*. **V.N. Tripathi***, I. Azuonye, M. Letek, A. Rogovskyy, G. Coulson, J.A. Vázquez-Boland and M.K. Hondalus.
- P-37.** Survivability of GFP-expressing *E. coli* in the digestive tract of house flies (*Musca domestica*). **N.K.H. Vasudev***, D. Nayduch.
- P-38.** Relationship of *Listeria Monocytogenes* Resistance to Nisin and Ionophore Antibiotics. **L.T. Wiggins***, N.J. Stern.
- P-39.** Comparative Assessment of Standard Culture and Real-Time Polymerase Chain Reaction to Detect *Campylobacter Jejuni* in Retail Chicken Samples. **T. Yehualaeshet***, A. Debrezion, S. Wilson, B. Tameru, I.V. Wesley, T. Habtemariam.
- P-40.** Influence of monoterpenes on TCE oxidation potential of methanotrophs. **J. Yoon*** and A.S. Lindner.