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BSGSA Presents:
Clemson Biological Sciences 6th Annual Student Symposium

Saturday, February 22nd, 2014
Vickery Auditorium
Life Science Atrium
Clemson University
**TALKS**

9:00 Welcome!

9:10 Namrata Sangupta - Effects of Diet and Toxicants on Starvation Survival, Reproduction and Allocation of Polar Lipids in *Daphnia magna* (PhD, Entox, Dr. Baldwin)

9:17 Gandura Omar Abagandura - Influence of a Nonionic Surfactant on Soil Water Content and Cotton Growth in a Sandy Loam Soil (PhD, SAFES, Dr. Park)

9:24 Sarah Au - Impacts of Microplastics on the Biological Function of *Hyalella azteca* (PhD, BioSci, Dr. Klaine)

9:31 Michael Carlo - Keeping Pace with Climate Change: a Physiological and Transcriptomic Approach to Thermal Performance Curves (PhD, BioSci, Dr. Sears)

9:38 Vratika Chaudhary - Prevalence of Rabies virus, CDV and Parvovirus in feral dogs and meso-carnivores in Kanha Tiger Reserve, India (MS, BioSci, Dr. Tonkyn)

9:45 Kelly Diamond - How Water Velocity Affects Predator Prey Interactions in Hawaiian Steams (MS, BioSci, Dr. Blob)

9:52 Jacqueline Evans - Investigation of DLA Alleles in Breeds with Exocrine Pancreatic Insufficiency (PhD, Genetics/Biochem, Dr. Clark)

9:59 Holland Hendrick - *Entamoeba histolytica*: The Role of Translation in Stress (MS, BioSci, Dr. Temesvari)

10:06 Brennen Jenkins - Extracellular DNA is Important for Stabilization of *Legionella pneumophila* Biofilms (MS, Micro, Dr. McNealy)

10:13 Katherine Johnson - The chronic toxicity of chloride, sulfate and bicarbonate to *Ceriodaphnia dubia* (MS, Entox, Dr. Klaine)

10:20 Katie Keck - Loss of Foundation Tree Species: Consequences for Small Mammal Assemblages in Forest Ecosystems (MS, WFB, Dr. McFadden)

10:30 BREAK (Fruit, Bagels and Donuts and Coffee and Tea are provided)

10:50 Christopher Mareyl - The Functional Significance of the Fused Pelvis to the Plastron in Pleurodiran Turtles (PhD, BioSci, Dr. Blob)

10:57 Anna Lee McLeod - The Effects of Anthropogenic Contaminants on Fathead Minnow Anxiety Behavior (MS, Entox, Dr. Klaine)

11:04 Daniel Pederson - Inhibition of *Vibrio cholerae* Biofilm Formation by Cranberry Extracts (MS, BioSci, Dr. Cao)

11:11 Suellen Pometto - Reassembly of the Butterfly Proboscis and the Role of Saliva (MS, Entomology, Dr. Morse & Dr. Adler)

11:18 Eric Riddell - Implications of Geographic Variation of Water Loss Rate: within a Lungless Salamander on the Capacity to Respond to Climate Change (PhD, BioSci, Dr. Sears)

11:25 Caitlin Rinz - Congenital Myasthenic Syndrome in a Labrador Retrieve Family (PhD, Genetics/Biochem, Dr. Clark)

11:32 Nicolette Roach - Marsh Madness: Assessing the Vulnerability of Coastal Marsh Birds to Sea Level Rise in South Carolina (MS, SAFES & WFB, Dr. Barrett)

11:39 Christie Sampson – Conserving The Land Giants (PhD, BioSci, Dr. Tonkyn)

11:46 Alanna Slack - Golden Lion Tamarin (*Leontopithecus rosalia*) Food-offering Calls (MS, SAFES, Dr. Rapaport)

12:00 Andrew Warner - Variable Depth “On-The-Go” Peanut Digger Chapter One: Phase One Design and Development (SAFES, Dr. Kirk)

12:07 Nathan Weaver - The Long-term Effects of Exurbanization on Low Order Streams and Stream Salamanders of the Southeastern Appalachian Mountains (MS, Forestry & NR, Dr. Barrett)

12:14 Austin Wray - From Wastewater Treatment to Exposure: Mimicking Nanoparticle Transformations to Assess Changes to Accumulation Patterns in a Simple Aquatic Food Chain (PhD, Entox, Dr. Klaine)

12:21 Vanessa Young - In vivo Femoral Strains on Swimming Turtles: Influence of Locomotor Medium on Limb Bone Structure (PhD, BioSci, Dr. Blob)
1. **Clemson iGEM** - Universal Self-Amplifying Biosensor for Rapid, Specific Detection of Pathogens (UG, Micro, Dr. Tzeng)

2. **Gandura Abagandura** - Libyan Agriculture: Challenges and Future (PhD, SAFES, Dr. Park)

3. **Joseph Angeloni** - Effects of Cranberry on the Lifespan of Caenorhabditis elegans in the Presence of Pathogenic Bacteria (MS, Micro, Dr. M. Cao)

4. **Evan Apanovitch** - Rising Stress: Investigating Plethodon stressors Across Elevation Changes (PhD, BioSc, Dr. Sears)

5. **David Buckley** – Developing Methods for Recovering and Disinfecting Human Noroviruses from Carpets (MS, Micro, Dr. Jiang)

6. **Nattasha Vinas** – Finding and Measuring Growth Related Transcripts in Marine Bacteria (MS, Microbiology, Dr. Campbell)

7. **Amanda Carter, Danielle Herring** – Adaptive Mating Strategies in Online Dating (UG, BioSc, Dr. Rapaport)

8. **Zhao Chen** - Developing a Two-Step Heat Treatment for Inactivating Desiccation-Adapted Salmonella in Aged Chicken Litter (PhD, BioSci., Dr. Xiuping Jiang)

9. **Tyler Collins** - Assessing the Role of Melanocortin 4 Receptors in Diversification of Poeciliid Fishes (MS, BioSc, Dr. Ptacek)

10. **Jason Coral** - Fate and Behavior of Photoactive Titanium Dioxide Nanoparticles in Aquatic Ecosystems (PhD, Entox, Dr. Steve Klaine)

11. **Grant Davidson** - The Effect of Social Environment on the Development of Sailfin Mollies (P. latipinna) (UG, BioSc, Dr. Ptacek)

12. **Holly Garrett** - Geospatial Mapping and Proposed Diversion Channel and Pond Placement for the South Carolina Botanical Gardens (PhD, Plant and Environmental Sciences, Dr. Dara Park)

13. **Amber Hackler** – Probing the Effects of TbHK2 on Trypanosoma brucei Growth, Social Behavior and Inhibitory Response (UG, Genetics/Biochem, Dr. J Morris)

14. **S.K. Hart** - Weather Extremes and Phenological Changes of the Shores of Lake Issaqueena, SC (UG, SAFES, Dr. Mikhailova)

15. **Sarah Hoffman** - It’s Not Easy Being a Reef: The Impacts of Corralivory and Competition on Live Coral Cover (UG, BioSc, Dr. Childress)

16. **Kathleen Jwano** - Determining the Activity of Legionella pneumophila Gold Response Operon (ipg2105-2108) (MS, Micro, Dr. McNealy)

17. **Abigail Lawson** - Habitat Influence on South Carolina American Alligator Densities Derived from Nightlight Survey Data (1971-2013) (PhD, WFB, Dr. McFadden)

18. **Katerina Lay** - Analysis of Shikimate Accumulation and EPSPS Gene Cop Number in Amaranthus palmeri Populations of Varying Glyphosate Resistance (UG, Genetics/Biochem, Dr. Lawton-Rauh)

19. **David Limbaugh** - Gene Expression in Legionella Biofilms (UG, Micro, Dr. McNealy)

20. **Jui Tung 'Ray' Liu** – Arsenic Inhibits Hedgehog Signaling During P19 Cell Differentiation (PhD, BioSc, Dr. Bain)

21. **Amith Maroli** - Glyphosate Application Causes Physiological Perturbations in Amino Acids Profile in Palmer amaranthus- A Study of Susceptible and Resistant varieties of Palmer amaranthus (PhD, SAFES, Dr. Tharayil)

22. **Chris McCoy** - Arsenic Targets Neural Plate Border Specifier Cells in P19 cells (MS, BioSc, Dr. Bain)

23. **Snehal Mhatre** - Water for Electricity in the Upper Savannah Basin: Impacts on Freshwater Mussels (PhD, SAFES, Dr. Johnson)

24. **Kim Newton** - Evaluating Acute Cadmium and Zinc Metal Mixture Toxicity to Daphnia Magna (PhD, BioSc, Dr. Klaine)

25. **Charles Pellett** - Enhanced Gleiization for Biological Pond Liners (MS, SAFES, Dr. Zehnder)

26. **C.M. Pilgrim** - Land use changes in the Lake Issaqueena watershed, South Carolina (UG, SAFES, Dr. Mikhailova)

27. **Lauren Perino & Porsha Reed** - Disney’s portrayal of gender roles and evolutionary mate-choice selection (UG, BioSc, Dr. Rapaport)

28. **Brandt Quirk-Royal** - Just keep grazing: the effects of parrotfish species grazing behavior on coral cover (UG, BioSc, Dr. Childress)

29. **Alyssa Shearer** - Repair of DNA damage by Microbial DNA Glycosylases (UG, Genetics/Biochem, Dr. W. Cao)
30. Marco Valera - Quantifying Transcript Expression of *N. profundicola* (MS, Dr. Barbara Campbell, Biological Sciences)

31. Rachel Weber - Fecal Source Tracking in Little Eastatoe Creek (UG, Micro, Dr. Campbell)

32. Dhansuka Wijesinghe - Soil Erosion in South and Southeast Asia: A Review (PhD, SAFES, Dr. Park)

33. Dhansuka Wijesinghe & Kathryn Drennan - Soil Temperature And Moisture Differentials From Concrete Sidewalks (Various, SAFES, Dr. Park)

34. D. Wijesinghe, A. Pellett, H. Garrett, G. Abagandura, W. Chapman, A. Cole - Soil Loss Estimation in the Natural Heritage Trail in the South Carolina Botanical Garden (Various, SAFES, Dr. Park)

35. H. Yun - Adaptation of Soil Judging to Northeast China (UG, SAFES, Dr. Mikhailova)

36. Emily O'Connor & Taylor Burgess - Modeling population structure and adaptation in a Hawaiian stream goby: *Sicyopterus stimpsoni* (UG, BioSci, Dr. Childress)

37. Julianna Ellis & Katie Cunningham - Do spiny lobsters prefer to associate with familiar individuals? (UG, BioSci, Dr. Childress)