

# Third SC LIFE Colloquium of Undergraduate Research

*Morris College  
Wilson-Booker Science Building  
Sumter, South Carolina  
April 9, 2005*



## **PARTICIPATING INSTITUTIONS**

*Benedict College    Clemson University  
Claflin University    Morris College*

*Funded by an award from the Howard Hughes Medical Institute  
Undergraduate Biological Sciences Education Program to Clemson University*

# SCHEDULE

**10:30 - 10:50**

**REGISTRATION**

*First floor, Wilson-Booker Science Building*

**10:50 - 11:00**

**OPENING REMARKS**

*Lecture Room, Wilson-Booker Science Building*

**11:00 - 12:30**

**ORAL PRESENTATIONS**

*100, 204, Physics Lab, Lecture Room  
Wilson-Booker Science Building*

**12:30 - 1:15**

**LUNCH**

**1:15 - 2:30**

**ORAL PRESENTATIONS**

*100, 204, Physics Lab, Lecture Room  
Wilson-Booker Science Building*

**2:30 - 2:45**

**COFFEE BREAK**

*First floor, Wilson-Booker Science Building*

**2:45 - 3:45**

**POSTER PRESENTATIONS**

*101, 104, Wilson-Booker Science Building*

*Broken into two 30 minute sessions - students with odd numbered should be at their posters from 2:45-3:15. Students with even numbered posters should be at their posters from 3:15-3:45.*

# ORAL PRESENTATIONS

<b>Time</b>	<b>Session A - Lecture Room</b>	<b>Session B - Room 102</b>
	Morning Chair – Dr. Gary L. Powell Afternoon Chair – Dr. Kathryn Kleppinger-Sparace	Morning Chair – Dr. Rebecca Bullard-Dillard Afternoon Chair – Dr. Rebecca Bullard-Dillard
11:00	"Characterization of Jensenin P Peptide, Specific Against Acne-Causing Bacteria" by Carolyn Durham, Jeremy Tzeng, and John Abercrombie. Clemson University.	"Influence of the Aminothiols, Cysteamine, on Oviduct Cell Function" by Jennifer Barton, Matthew Turnbull and Tamara McNutt-Scott. Clemson University.
11:12	"Preparing Membrane Proteins for Proteomic Analysis" by Ahmed Mohiuddin, Gary Powell, Jeffrey Tomkins, Chin-Fu Chen and Yonnie Wu. Clemson University.	"Dances with Cells: Chemotactic Studies of Eastern Oyster Hemocytes" by Virginia J. Winston and Andrew Mount. Clemson University.
11:24	"Proteomics of Lipid Rafts from Human Macrophages Infected with <i>Toxoplasma gondii</i> " by Peter Shorter and Chin-Fu Chen. Clemson University.	"Effect of <i>Toxoplasma gondii</i> Infection on TLR4 and Syk in the Human THP-1 Monocyte and Macrophage Cell Line" by Georgios Hilas and Chin-Fu Chen. Clemson University.
11:36	"Bioinformatic and Proteomic Applications of ProteinLynx Software" by Joshua Rickey, Yonnie Wu, Brandon Cuthbertson, Jeff Tomkins, and Gary Powell. Clemson University.	"Dye Transfer Between Cells as Evidence of Direct Cell:Cell Communication Between Immune Cells of Caterpillars" by J. Gibson and M. Turnbull. Clemson University.
11:48	"Sulfolipid Extraction with Organic Solvents" by Amanda Cheung and Caye Drapcho. Clemson University.	"Effects of Microgravity on Gene Expression" by Barnard Swanson and Larry L. Lowe. Benedict College.
12:00	"Lipid Analysis of the Eastern Oyster <i>Crassostrea virginica</i> " by Ankur Patel and Kathryn Kleppinger-Sparace. Clemson University.	"Population Genetic Structure in Hawaiian Goby Fish" by Lisa Durham, Richard W. Blob and Margaret B. Ptacek. Clemson University.
<b>12:30</b>	<b>LUNCH</b>	<b>LUNCH</b>
1:15	"Characterization of a Putative Beta Subunit of AMP-Dependent Protein Kinase (AMPK) in <i>Trypanosoma brucei</i> " by Clarice Seifert, Meredith Morris, Alvaro Acosta-Serrano and James C. Morris. Clemson University and University of Glasgow.	"An Analysis of Drinking Water From Selective Sites at Claflin University Located in Orangeburg, South Carolina." by Kassidy Lillard, Rachel Crosby, Randall Harris, and Verlie Tisdale. Claflin University.
1:27	"Identification and Characterization of Tomato Lectin Binding Mutants in an RNA interference-based screen of <i>Trypanosoma brucei</i> " by William Toole and James Morris. Clemson University.	"Turning performance of swimming turtles" by Erin Dougherty, Gabriel Rivera, and Richard W. Blob. Clemson University.
1:39	"Generation of Hexokinase 2-deficient <i>Trypanosoma brucei</i> " by Courtney DeBruin, Meredith Morris and James Morris. Clemson University.	"Limb bone strain in jumping frogs" by Sagar Shah, Nora R. Espinoza and Richard W. Blob. Clemson University.
1:51	"A Novel Acyl-activating Enzyme from <i>Methanothermobacter thermoautotrophicus</i> " by Christopher Goodman, Cheryl Ingram-Smith and Kerry Smith. Clemson University.	"Learned Individual Recognition and Deceptive Communication: Do Crayfish Bluff Opponents?" by Jennifer Oblinger and Michael Childress. Clemson University.
2:03	"Lea maps a LEA" by Lea Lanni, Alicia Manfre and William Marcotte. Clemson University.	"Interspecific Variation in Spiny Lobster Individual Recognition" by Ken Sercy and Michael Childress. Clemson University.
2:15	"LEA Proteins Won't Leave You High and Dry" by Kelly Hines, Greg Gilles and William Marcotte. Clemson University.	"Thermal Sensitivity in Viperine Snakes." by Corey E. Roelke, Richard R. Montanucci, and Michael J. Childress. Clemson University.

# ORAL PRESENTATIONS

<b>Time</b>	<b>Session C - Room 204</b>	<b>Session D - Physics Lab</b>
	Morning Chair – Dr. Rush Oliver Afternoon Chair – Dr. Frank Bellevue	Morning Chair – Dr. Debbie Bishoff Afternoon Chair – Dr. Rush Oliver
11:00	“Indole-3-Carbinol's Ability to Inhibit Dihydroxytestosterone's Effect on Androgen-Dependent Prostate Cancer Cells” by Nicholas Graham, Randall Harris, Rebecca Bullard-Dillard, Omar Bagasra, and Joseph K. Rugutt. Claflin University.	“Effects of Estrogen and Estrogen Inhibitors on Apoptosis in Cultured Porcine Luteal Cells” by April Bright and Rush H. Oliver. Benedict College.
11:12	“A Genetic Screen for Mutations Which Suppress the Supernodulation Phenotype of the <i>summ</i> Mutant in <i>Medicago Truncatula</i> ” by Liiani Camit, Elise Schnabel and Julia Frugoli. Clemson University.	“Estrogen Receptor Sub-types in Ovarian Follicles and Corpora Lutea” by Leeann Nelson, Holly A, LaVoie*, and Rush H. Oliver. Benedict College and *University of South Carolina School of Medicine.
11:24	“The Inhibitory Effects of Oscillatoria Cells on Heterotrophic Bacteria” by Xiaoyi Wang and Caye Drapcho. Clemson University.	“Expression of F-actin in MCF-7 Cells Following Treatment with 17 $\beta$ -Estradiol and Tamoxifen” by Nicole Clarke, George McCoy and Samir Raychoudhury. Benedict College.
11:36	“The Inhibitory Effects of Oscillatoria Cells on T4 Bacteriophage” by Stephanie Arnold and Caye Drapcho. Clemson University.	“Effects of 17 $\beta$ -Estradiol and Tamoxifen on the Cell Cycle Distribution and Apoptosis in MCF-7 Cells” by Kirk Kangaloo and Samir Raychoudhury. Benedict College.
11:48	“The Inhibitory Effects of Oscillatoria Algae on <i>Pythium irregulare</i> ” by Meredith Amick and Caye Drapcho. Clemson University.	“The Involvement of a Caspases in Peptide-Induced Cancer Cell Apoptosis” by Mike Stadnisky, Brandon Cuthbertson, Yonnie Wu, Chin-Fu Chen and Gary Powell. Clemson University.
12:00	“Involvement of Apoliphorin in Flight Muscle Histolysis of the House Cricket.” by Gaylyn Henderson and Rush H. Oliver. Benedict College.	“Cloning and Expression of Avian Interleukin-6” by Timothy M. Snider and Thomas R. Scott. Clemson University.
<b>12:30</b>	<b>LUNCH</b>	<b>LUNCH</b>
1:15	“Biogeography of Desert Inhabiting Methylophilic Bacteria: A Metabolic Analysis” by Melissa Palmer and Harry Kurtz. Clemson University	“The Effects of Goldenseal on Various Cancerous Cells” by Russell Baxley, Guohui Huang, and Jeremy Tzeng. Clemson University.
1:27	“ <i>Crotalaria spectabilis</i> , <i>Cosmos bipinnatus</i> , and <i>Solidago canadensis</i> as Potential Sources of Antifungal Agents” by Marcus L Johnson and Frank H. Bellevue III. Morris College.	“Antimicrobial and MDR Pump Inhibitor Characteristics of Goldenseal” by Heidi Spikereit and Jeremy Tzeng. Clemson University.
1:39	“ <i>Callicarpa americana</i> and <i>Ilex vomitoria</i> as Possible Antifungal Agent Sources” by Cassie Green and Frank H. Bellevue III. Morris College.	“Development of <i>Campylobacter jejuni</i> Strains Expressing Green Fluorescent Proteins for in vitro Tracking” by Megan Shive and Jeremy Tzeng. Clemson University.
1:51	“Detection of Food Borne Pathogens Using Nanomaterials” by Eric Jones and Xiuping Jiang. Clemson University.	“DNA Profile of Jenseniiin P Producing <i>Propionibacterium jensenii</i> Variants” by Adam Gude and Jeremy Tzeng. Clemson University
2:03	“The Effects of Different Natural Products on the Growth of <i>Helicobacter pylori</i> ” by Charles C. Bray and Xiuping Jiang. Clemson University.	“Nitrosative Stress Resistance in <i>Deinococcus radiodurans</i> ” by Mark Gramling and Weiguo Cao. Clemson University.
2:15		“Genetic Analysis of Resistance to Nitrosative Stress” by Edward Weeks and Weiguo Cao. Clemson University.

# POSTER PRESENTATIONS

**2:45 - 3:45 PM** *The poster presentations are broken into two 30 minute sessions. Students with odd numbered posters should be at their posters from 2:45-3:15. Students with even numbered posters should be at their posters from 3:15-3:45.*

1. Durham	2. Mohiuddin	3. Shorter	4. Rickey
5. Cheung	6. Patel	7. Seifert	8. Toole
9. DeBruin	10. Goodman	11. Lanni	12. Hines
13. Barton	14. Winston	15.	16. Gibson
17. Swanson	18. Durham	19. Lillard	20. Dougherty
21. Shah	22. Oblinger	23. Sercy	24. Roelke
25. Graham	26. Camit	27. Wang	28. Arnold
29. Amick	30. Henderson	31. Palmer	32. Johnson
33. Green	34. Jones	35. Bray	36. Hilar
37. Bright	38. Nelson	39. Clarke	40. Kangaloo
41. Stadnisky	42. Snider	43. Baxley	44. Spikereit
45. Shive	46. Gude	47. Gramling	48. Weeks

# 2004/2005 SC LIFE UNDERGRADUATE RESEARCH PROGRAM

## **FACULTY & STUDENT PARTICIPANTS**

<u>Faculty</u>	<u>School &amp; Department</u>	<u>UR Student (s)</u>	<u>Major</u>	<u>Class</u>
John Abercrombie	Clemson University - Biological Sciences	Carolyn Durham	Microbiology	Junior
Frank Bellevue III	Morris College - Natural Sciences & Mathematics	Marcus Johnson Cassie Green	Biology Biology	Senior Junior
Richard Blob	Clemson University - Biological Sciences	Erin Dougherty Sagar Shah	Biological Sciences Biological Sciences	Junior Junior
Weiguo Cao	Clemson University - Genetics, Biochemistry and Life Science Studies	Mark Gramling Ed Weeks	Biochemistry Genetics	Senior Freshman
Chin-Fu Chen	Clemson University - Genetics, Biochemistry and Life Science Studies	George Hilas Peter Shorter	Biochemistry Biochemistry	Senior Senior
Michael Childress	Clemson University - Biological Sciences	Jennifer Oblinger Ken Sercy	Geology/Biological Sciences Biological Sciences	Senior Senior
Caye Drapcho	Clemson University - Agricultural and Biological Engineering	Amanda Cheung Meredith Amick Xiaoyi Wang Stephanie Arnold	Biosystems Engineering Biosystems Engineering Biosystems Engineering Biosystems Engineering	Junior Senior Senior Senior
Julia Frugoli	Clemson University - Genetics, Biochemistry and Life Science Studies	Liani Camit	Biochemistry	Senior
Randall Harris	Clafin University - Biology	Nicholas Graham Kassidy Lillard	Biology Biology	Senior Senior
Xiuping Jiang	Clemson University, Food Science & Human Nutrition	Eric Jones Charles Bray	Microbiology Microbiology	Senior Senior
Kathryn Kleppinger-Sparace	Clemson University - Genetics, Biochemistry and Life Science Studies	Ankur Patel	Biological Sciences	Senior
Harry D. Kurtz, Jr.	Clemson University - Genetics, Biochemistry and Life Science Studies	Melissa Palmer	Microbiology	Junior
Larry Lowe	Benedict College - Biology, Chemistry & Environmental Science	Barnard Swanson	Biology	Sophomore
William Marcotte	Clemson University - Genetics, Biochemistry and Life Science Studies	Lea Lanni Kelly Hines	Biochemistry Biochemistry	Senior Junior
George McCoy	Benedict College - Biology, Chemistry & Environmental Science	Nicole Clarke	Biology	Junior
Tamara McNutt-Scott	Clemson University - Biological Sciences	Jennifer Barton	Biological Sciences	Junior
Richard Montanucci	Clemson University - Biological Sciences	Corey Roelke	Biological Sciences	Senior
James Morris	Clemson University - Genetics, Biochemistry and Life Science Studies	Courtney DeBruin Clarice Seifert William P. Toole	Biochemistry Biochemistry Biological Sciences	Sophomore Junior Junior
Andrew Mount	Clemson University- Biological Sciences	Virginia J. Winston	Biological Sciences	Senior
Rush Oliver	Benedict College - Biology, Chemistry & Environmental Science	April Bright Gaylyn Henderson Leeann Nelson	Biology Biology Biology	Senior Junior Sophomore
Gary Powell	Clemson University - Genetics, Biochemistry and Life Science Studies	Joshua Rickey Ahmed Mohiuddin	Biochemistry Biochemistry	Senior Junior
Margaret Ptacek	Clemson University - Biological Sciences	Lisa Durham	Biological Sciences	Senior
Samir Raychoudhury	Benedict College - Biological & Physical Sciences	Kirk Kangaloo	Biology	Junior
Tom Scott	Clemson University - Animal & Vet Sciences/Biological Sciences	Timothy M. Snider	Microbiology	Senior
Kerry Smith	Clemson University - Genetics, Biochemistry and Life Science Studies	Christopher Goodman	Biochemistry	Senior
Matt Turnbull	Clemson University - Entomology, Soils, and Plant Sciences	Jennifer Gibson	Biology	Senior
Jeremy Tzeng	Clemson University - Biological Sciences	Heidi Spikereit Adam Gude Russell Baxley Megan Shive	Microbiology Microbiology Microbiology Microbiology	Junior Junior Senior Junior
Yonnie Wu	Clemson University - Genetics, Biochemistry and Life Science Studies	Michael Stadnisky	Biochemistry	Senior