EIGHTH
SC LIFE COLLOQUIUM OF UNDERGRADUATE RESEARCH

Clemson University
Clemson, South Carolina
April 16/17, 2010

Benedict College
Claflin University
Clemson University
TriCounty Technical College
Morris College

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

AGENDA

FRIDAY, APRIL 16

7:00pm **Dinner & Plenary Speaker**
Diversity in Science Education: Myths and Opportunities
Dr. David Asai, HHMI Undergraduate Science Education Program Director
Madren Center Ballrooms

SATURDAY, APRIL 17

8:30 - 9:00am **Registration**
Hendrix Student Center - 2nd floor – information desk

9:00 - 9:20am **Opening Remarks**
Dr. Julia Frugoli, Director, HHMI SC Life Undergraduate Research Program and Associate Professor, Genetics and Biochemistry
Dr. Janice W. Murdoch, Clemson University, Vice Provost and Dean of Undergraduate Studies
Hendrix Student Center - 1st floor - A. Foster McKissick Theatre/Room 103

9:30 - 10:45am **Oral Presentations**
Hendrix Student Center - 2nd floor and Jordan Hall
Concurrent Sessions: Meeting Room A/Room 204A, Meeting Room B/Room 204B, Multi-Use Room/Room 206, Conference Room 2/Room 212, Jordan Room, Jordan G33

10:45 - 11:10am **Refreshment Break**
Hendrix Student Center - 2nd floor - across from information desk

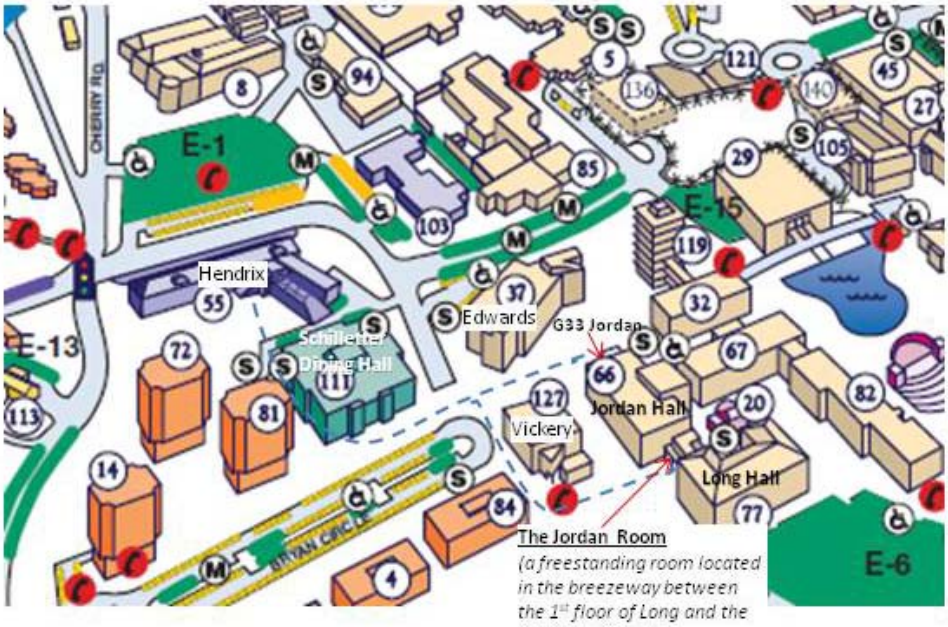
11:10 - 12:34 pm **Oral Presentations**
Hendrix Student Center - 2nd floor and Jordan Hall
Concurrent Sessions: Meeting Room A/Room 204A, Meeting Room B/Room 204B, Multi-Use Room/Room 206, Conference Room 2/Room 212, Jordan Room, Jordan G33

12:45 - 1:45pm **Lunch**
Box lunches - 2nd floor Hendrix – across from information desk

1:45 - 2:45pm **Poster Presentations**
Hendrix Student Center - Almeda Jacks Ballroom
Two 30 minute sessions - students with odd numbered posters should be at their posters from 1:45-2:15pm. Students with even numbered posters should be at their posters from 2:15-2:45 pm.

2:50 pm **Clemson Laboratory Tours**
Meet in front of the Hendrix Student Center information/registration desk for guided tour (if arranged in advance).

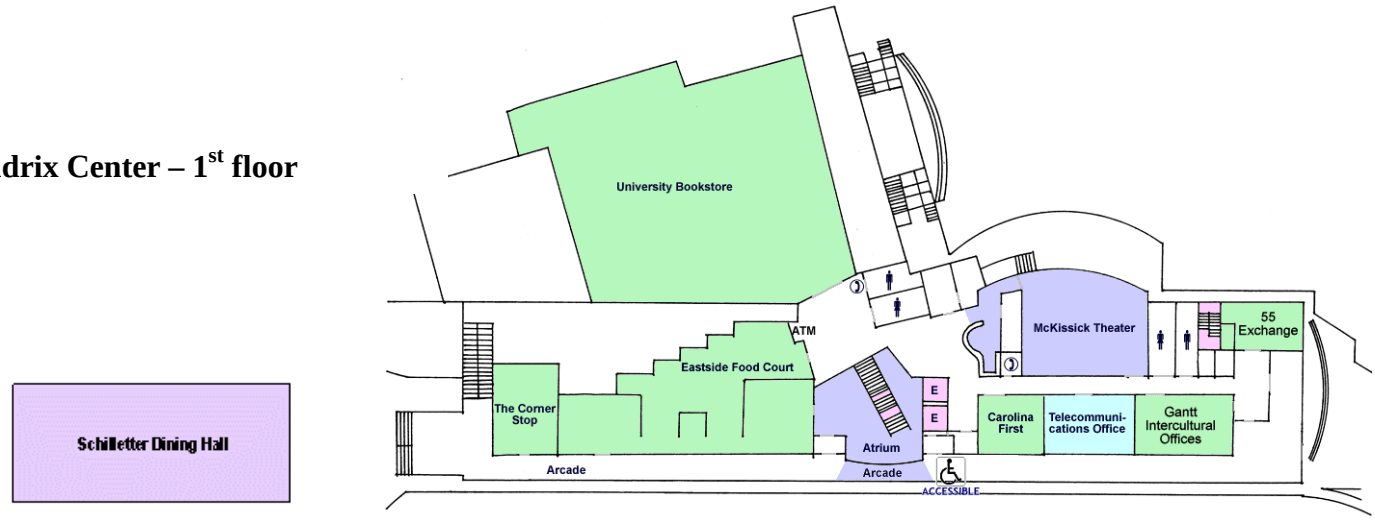
PRESENTATION LOCATIONS



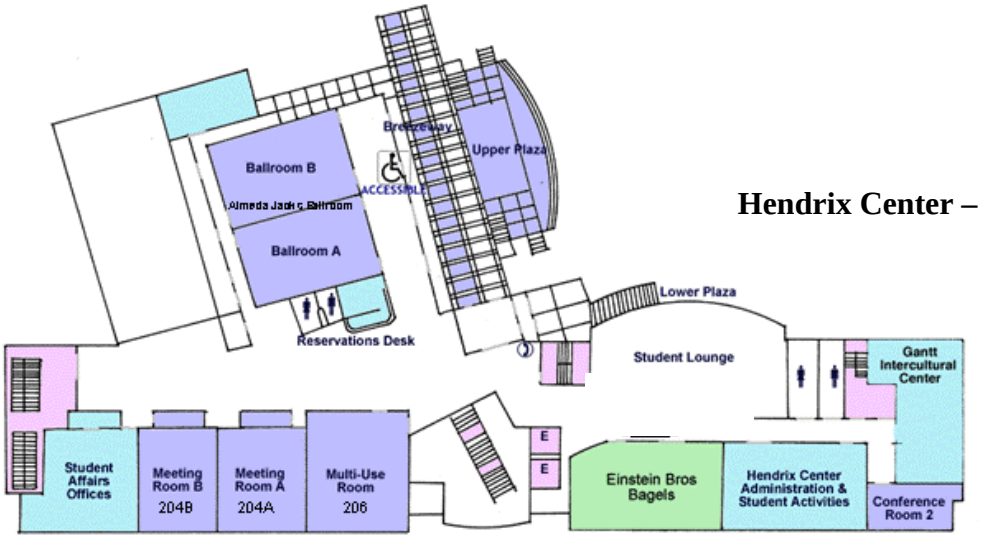
Jordan Hall

G33 Jordan *is just off the lobby of the SC DNA Learning Center – basement level.*

Hendrix Center – 1st floor



Hendrix Center – 2nd floor



SPEAKERS

Opening Remarks - *Dr. Janice W. Murdoch*

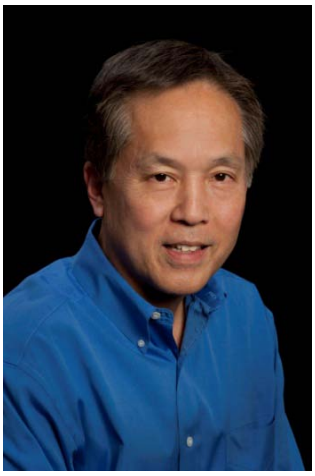
Jan Murdoch, who has taught at Clemson since 1986, received her bachelor's with honors in Psychology from Wake Forest University in 1980, followed by a master's in General Experimental Psychology in 1982. She was elected to Phi Beta Kappa in 1980. A native of Wilmington, NC, she completed her Ph.D, in clinical psychology at Vanderbilt University in 1985, with a clinical internship at Brown University. She became licensed to practice clinical psychology in South Carolina in 1987. She was tenured at Clemson in 1992 and promoted to full professor in 1996.

Murdoch's primary interest has been in undergraduate teaching. She also works with students on directed research projects and honors research. Courses she teaches include abnormal psychology, substance abuse treatment, and health psychology.

Murdoch's research interests are in college student alcohol use, adherence to health-related behaviors, and women's health issues.

Murdoch's other interests include public policy, including a sabbatical leave during the 1994-95 academic year to serve as an American Psychological Association Congressional Fellow working for Senator Jay Rockefeller's Senate Committee on Veterans' Affairs staff. She also plays bluegrass mandolin with "Any Old Time."

As Dean of Undergraduate Studies, Murdoch is responsible for maintaining and enhancing the quality of undergraduate academic programs and services, including curriculum, academic advising, the Calhoun Honors College, Cooperative Education, the Academic Success Center, and summer pre-college academic programs. She is charged with implementing the Creative Inquiry initiative, as well as the undergraduate portfolio program.



Plenary Speaker - *Dr. David Asai*

David Asai decided to become a scientist when he spent the summer before his senior year in high school in an NSF-funded program in which he worked in a lab at the University of Hawai'i learning how to sequence proteins. He received the B.S. in Chemistry from Stanford (1975), the co-terminal M.S. in Biology from Stanford (1975), and the Ph.D. from the Division of Biology at Caltech (1979). David then was a Muscular Dystrophy Association Postdoctoral Fellow at Caltech for a year, then an NIH Postdoctoral Fellow at the University of California, Santa Barbara. He served as an assistant research professor at UCSB (1982-1985), then moved to a tenure-track faculty position in the Department of Biological Sciences at Purdue University beginning in 1985. At Purdue, David was Assistant, Associate, and Full Professor, served five years as Associate Head of Biological Sciences, and three years as Head. He was elected to the Purdue University Teaching Academy in 2000 and was inducted into the Purdue Book of Great Teachers in 2003. In 2003, David moved his lab and himself to Harvey Mudd College in Claremont, California, where he served as Stuart Mudd Professor and Chair of Biology until 2008; he continues to have a faculty appointment at Harvey Mudd. David's research focuses on the molecular motor dynein; his lab has published over 70 research papers, and he has edited two books, *Antibodies in Cell Biology* (1993) and *Tetrahymena thermophila* (2000). His lab has been continuously supported by extramural grants since 1982. David was Program Director of HHMI Undergraduate Science Education grants at Purdue and at Harvey Mudd. In the autumn of 2008, David joined the Howard Hughes Medical Institute as Director of the Precollege and Undergraduate Science Education Programs. These Programs, with annual disbursements of approximately $50 million, include precollege science education grants to biomedical research institutions, precollege grants to local institutions, undergraduate science education institutional grants to colleges and universities, the HHMI professors program, and the EXceptional Research Opportunities Program aimed at undergraduates from disadvantaged backgrounds.

ORAL PRESENTATIONS

TIME	SESSION A *Meeting Room A/Room 204A* Chair – Dr. Saara Dewalt	SESSION B *Meeting Room B/Room 204B* Chair – Dr. Rush Oliver
9:30	Comparative study of resistance of *Capsicum chinense* and *annuum* germplasms (PA-350, PA-426 and PA-136) and a *Capsicum chinense* cultivar to *Meloidogyne incognita*- **Ezinne Okpan**	Effects of growth factor concentration gradients on cells in culture- **Aesha Y. Desai**
9:42	Ubiquitin-mediated proteolysis in microgravity-induced muscle degradation- **Rodney Bostic**	Identification of most organogenic cucumber variety through variety x medium interaction study- **Ashanti Callender**
9:54	Drought tolerance in epiphyte species: *Polypodium polypodioides* (resurrection fern) and *Tillandsia usneoides* (Spanish moss)-- **Brittany Jones**	*Trypanosoma brucei* Fatty Acid Uptake with ATP inhibiting 2-Deoxyglucose - **Sarah Cain**
10:06	A proteomics approach to measure bile protein fluctuations as a result of chemical stressors- **Jessica Martin**	Characterization of acid phosphatase activity during flight muscle histolysis- **Angela Dennard**
10:18	Population Genetics of Red Rice in Three Distinct Arkansas Cultivated Rice Ecozones- **Kyle Gettler**	Gap Junctions and Cellular Immunity in Drosophila- **William Dylan Hale**
10:30	Stem Cell Seeding of Tissue Engineered Heart Valve Scaffolds- **Jordan Maivelett**	Biological Production of Hydrogen by *Thermotoga neapolitana*: Investigation of Hydrogen Inhibition- **Kara Kopf**
10:45 – 11:05	**Refreshment break**	**Refreshment break**

ORAL PRESENTATIONS

TIME	SESSION C *Conference Room 2/Room 212* Chair – Dr. Min Cao	SESSION D *Multi-Use Room/Room 206* Chair – Dr. Margaret Ptacek
9:30	Understanding Acetate Kinase Metabolism: The Search for Answers- **Tara Doucet**	Comparative Analysis of Surface Scratching of Retrieved Femoral Components in the NexGen PS Design- **Marci Elpers**
9:42	Increasing the Conductance of Collagen Gels with Gold Nanoparticles- **James Alaimo**	Comparative Analysis of the Lipids of the Eastern Oyster (*Crassotrea Virginica*): Mantle, Labia, and Adductor Muscles- **Natasha Osbey**
9:54	Using *Caenorhabditis elegans* as a tool to control *Listeria monocytogenes* biofilm formation- **Ellen Pinto**	The effect of selenium on the Cox-2 gene expression in the human monocytic THP-1 cells- **Lashaina McKnight**
10:06	Phytic Acid Accumulation in Soybean Somatic Embryos- **Zachary Johns**	Population genetic divergence in Hawaiian stream gobies: a role for local adaptation by natural selection?- **Sabrina Hunter**
10:18	The effect of temperature and salinity on *Hematodinium* infection in South Caroline blue crabs- **Charles Kaighn Morlok**	Cloning and Expression of *Cegst-10*, an oxidative stress resistant longevity gene in *C. elegans*- **Lee Roggenkamp**
10:30	Tissue culture and transformation of sugarcane- **Victoria DeSormeaux**	Re-Engineering of a Central Venous Catheterization Simulator- **George Fercana**
10:45 – 11:05	**Refreshment break**	**Refreshment break**

ORAL PRESENTATIONS

TIME	SESSION E *Jordan Room* Chair – Dr. James Morris	SESSION F *Jordan G33* Chair – Dr. Anand Jayakaran
9:30	Comparative Analysis of the Lipids of the Eastern Oyster (*Crassotrea Virginica*): Heart, Hemocytes,Digestive Tract and Gills- **Christa Caperton**	Isolation of bacteria from Charleston, SC capable of growth on glycerol or methanol- **Brennen Jenkins**
9:42	Range shifts in North American butterflies- **Jamie Rodgers**	Identification of the ATP binding pocket for *Cryptococcus neoformans* through kinetic analysis of Acetate Kinase variants- **Ashley Lawhon**
9:54	Origins and Genetic Diversity of the Recent Red Rice Infestation in California- **Jessica Gancar**	Cloning the human INTS3 gene- **Kristina Kesel**
10:06	A Comparison of Sediment Loading Rates of Urban and Rural Coastal Plain Streams- **Natasha Bell**	Genetic and Physiological Investigations of Nodulation Genes in *Medicago truncatula*- **Austin DeMoss**
10:18	Biphasic Properties of Bovine Cartilaginous Endplate- **Sarah Cisewski**	Functional Characterization of a Potential Transcription Factor in Rice- **Jordan Hopkins**
10:30	Cloning of Human Single Strand Binding Protein 1- **Sierra Cutchin**	Crosslinking Gold and Collagen using Mercaptoundecanoic Acid- **Andrew L. Marshall**
10:45 – 11:05	**Refreshment break**	**Refreshment break**

ORAL PRESENTATIONS

TIME	SESSION G *McKissick Theatre/Room 103* Chair – Dr. Shelby Duffy
9:30	Vessel Wall Inflammation and Cholesterol Lowering: Evaluation of Squalene Synthase Inhibitors and Microsomal Triglyceride Transfer Protein Inhibitors in the Zebra Fish Model- **Shekelia Baccus**
9:42	Microbial Degradation of B20 Biodiesel in the Marine Environment- **Audrey Thompson**
9:54	Isolation and characterization of bacteria from Lake Hartwell sediments capable of growth on glycerol or methanol- **Allyson Somers**
10:06	Engineering Phosphoryl-Donor Specificity in Acetate Kinase- **Rachel Hesler**
10:18	Mechanism for Hexokinase-1 Disassembly in *Trypanosoma brucei*- **Sameka Rouse**
10:30	Analysis of Lipid Content of *Pinus Strobus* Needles- **Erica Okwuazi**
10:45 – 11:05	**Refreshment Break**

ORAL PRESENTATIONS

TIME	SESSION H *Meeting Room A/Room 204A* Chair –Ms. Twaina Harris
11:10	Effects of proteasome inhibition on CKS1 protein expression in breast cancer cells-**Amber Samuel**
11:22	Nano-Surface Fabrication for Cell and Antimicrobial Studies- **James Chow**
11:34	The Evaluation of a Transposon Mutagenesis System in *Moraxell catarrhalis*- **Lynelle Pompey**
11:46	Introduction of Ultrasoundable Tissue Analogue Into Medical Simulation Devices- **Shawn Becker**
11:58	Classification of Dextran-Conjugated Metronidazole, a Novel Drug for Treatment of *Entamoeba histolytica* Infections- **Donald Mackay**
12:10	Characterization of Chemically Stabilized Hydrogels for Tissue Engineering the Nucleus Pulposus- **Richard Pascal III**
12:45	**Lunch**
1:45	**Poster Presentations**

ORAL PRESENTATIONS

TIME	SESSION I *Meeting Room B/Room 204B* Chair – Dr. Kim Paul	SESSION J *Conference Room 2/Room 212* Chair – Dr. Amy Lawton-Rauh
11:10	The effect of cut-line location on the 3D Rotational stiffness of an ankle foot orthosis- **Tim Warrick**	Directed Evolution of Increased Thermostability in a Cold-active Luciferase; Structural Effectors that Enhance Stability- **Ifeanyi Emole**
11:22	The Effects of Herbivory on the Tolerance and Resistance of Two Vines, *Lonicera japonica* and *Gelsemium sempervirens*- **Vincent James**	Isolation of genes encoding *E. histolytica* homologs for mammalian meiotic genes, Rad51, Dmc1, and RPA- **Christopher Attaway**
11:34	Effect of parthenolide on the expression of the PER1 gene in the human leukemic U937 cell line- **Jennifer Gavin**	Characterization of BDTS1, a novel rice gene involved in plant reproductive growth- **Stephen Bolus**
11:46	Expression of HSP-70 during flight muscle histolysis- **Jocelyn Holden**	Evolutionary Genetics of the Herbicide-resistant Species *Amaranthus palmeri*- **Amanda Allison**
11:58	Acetyl-CoA Carboxylase of *Trypanosoma brucei*: A New Drug Target for Treatment of African Trypanosomiasis **Morgan E. Teachey**	Effects of Metallic Nanoparticles on Cell- **Laura Wiles**
12:10	PCR Optimization in Directed Evolution Studies on the cold active enzyme Luciferase from psychrophile *Vibrio Harveyii*- **Tamuka Chidyausiku**	Effects of strophanthidol on cell cycle progression in breast cancer-**Dachelle Randolph**
12:22		Novel Linear Programming Models for Feature Selection in Genome-Wide Association Studies- **Shari Carter**
12:45	**Lunch**	**Lunch**
1:45	**Poster Presentations**	**Poster Presentations**

ORAL PRESENTATIONS

TIME	SESSION K *Multi-Use Room/Room 206* Chair – Dr. Randall Harris	SESSION L *Jordan Room* Chair – Dr. Jiro Nagatomi
11:10	An Initial Analysis of the Evolution of Gap Junction Genes- **Charles Thomas**	Localization of *Entamoeba histolytica* acetate kinase- **Ann Guggisberg**
11:22	Effects of proteasome inhibition on CKS1 gene expression in breast cancer cells- **Alena Marbury**	Functional characterization of LSS2 gene potentially involved in rice seed development- **Shane Reighard**
11:34	Effect of Microenvironment on Differentiation of Dental Pulp Cells- **Matthew Cupelli**	Screening of *Methlyobacterium* sp. isolated from an arid habitat in Utah for the production of EPS and small molecular weight molecules- **Brittany D. Jenkins**
11:46	The Development of Human Extremity Functional Ranges of Motion Measurement Protocols with Application to Activities of Daily Living in Space- **Brendan Roach**	Post-Transcriptional Regulation of *Trypanosoma brucei* Hexokinases- **Andrew Sayce**
11:58	Fungal biofilm formation: Observations with light and scanning electron microscopy- **Jordon Gruber**	Characterization of Semi-synthetic Collagen/poloxamine hydrogel containing hyaluron for 3D Bladder Smooth Muscle Cell Culture- **Rachel Ostendorff**
12:10	Production of recombinant ADP-forming acetyl-CoA synthetase from the pathogenic protozoans *Entamoeba histolytica* and *Plasmodium falciparum* in *Escherichia coli*- **Jane Welch**	Effects of Nanoparticles on Rat Mesenchymal Stem Cells- **Jackson G. Turbeville**
12:45	**Lunch**	**Lunch**
1:45	**Poster Presentations**	**Poster Presentations**

ORAL PRESENTATIONS

TIME	SESSION M *Jordan G33* Chair – Dr. Sam Sparace	SESSION N *McKissick Theatre/Room 103* Chair – Dr. Caye Drapcho
11:10	Effect of Radiation on Articular Cartilage Using a Murine Model- Alex **Lindburg**	Detecting small molecules produced by biofilm-generating methylobacteria- **Nora Livengood**
11:22	Highly Efficient Tandem Affinity Purification of *Trypanosome brucei* Hexokinase 2 Reveals Unique Protein Complex- **Stephen Carek**	The Leaky Cell Hypothesis- **Casey Yarborough**
11:34	Evaluation of Nitrosative Stress Resistance Genes- **Jennifer Kraft**	Analysis of nutraceuticals, anthocyanins, and phytochemicals in muscadine grapes- **Stephanie Monesson**
11:46	Adaptation to Temperature in Alpha/beta Barrels; Directed Evolution Studies of the Largest Protein Family- **Jennifer Ozonma**	Immune response in flight muscle histolysis- **Whitney Rountree**
11:58	Cloning of the human chromatin remodeler HELLS- **Kristin Leskoske**	A Study of the Impact of *Batrachochytrium dendrobatidis* (Bd) in Rana in the Southern Appalachian Region- **Lisa Young**
12:10	Production of two soluble pigments by *Streptomyces* HDK1135 is dependent upon nutrient concentration **Krutika N. Mediwala**	Glucose Availability Affects Mitochondria Production in *Arabidopsis thaliana*- **Heather Craven**
12:45	**Lunch**	**Lunch**
1:45	**Poster Presentations**	**Poster Presentations**

POSTER PRESENTATIONS

1:45 – 2:45pm – Hendrix Student Center – Almeda Jacks Ballrooms

The poster presentations are divided into two 30-minute sessions. Students with odd numbered posters should be at their posters from 1:45-2:15pm. Students with even numbered posters should be at their posters from 2:15-2:45pm.

Your poster number is also your abstract number.

Poster #	Student Name
1.	James Alaimo
2.	Amanda Allison
3.	Chris Attaway
4.	Shekelia Baccus
5.	Natasha Bell
6.	Shawn Becker
7.	Stephen Bolus
8.	Rodney Bostic
9.	Sarah Cain
10.	Ashanti Callender
11.	Christa Caperton
12.	Stephen Carek
13.	Shari Carter
14.	Tamuka Chidyausiku
15.	James Chow
16.	Sarah Cisewski
17.	Matthew Cupelli
18.	Sierra Cutchin
19.	Perry Davis Jr.
20.	Austin DeMoss
21.	Angela Dennard
22.	Aesha Desai
23.	Victoria DeSormeaux
24.	Tara Doucet
25.	Marci Elpers
26.	Ifeanyi Emole
27.	George Fercana
28.	Heather Franklin
29.	Jessica Gancar
30.	Jennifer Gavin
31.	Kyle Gettler
32.	Jordon Gruber
33.	Ann Guggisberg
34.	Dylan Hale
35.	Rachel Hesler
36.	Jocelyn Holden
37.	Jordan Hopkins
38.	Sabrina Hunter
39.	Vincent James
40.	Brennen Jenkins
41.	Brittany Jenkins
42.	Zachary Johns
43.	Brittany Jones
44.	Kristina Kesel
45.	Kara Kopf
46.	Jennifer Kraft
47.	Ashley Lawhon
48.	Kristin Leskoske
49.	Alex Lindburg
50.	Nora Livengood
51.	Donald Mackay
52.	Jordan Maivelett
53.	Alena Marbury
54.	Andrew Marshall
55.	Jessica Martin
56.	LaShaina McKnight
57.	Krutika Mediwala
58.	Stephanie Monesson
59.	Charles Morlok
60.	Ezinne Okpan
61.	Erica Okwuazi
62.	Natasha Osbey
63.	Rachel Ostendorff
64.	Jennifer Ozonma
65.	Richard Pascal III
66.	Ellen Pinto
67.	Lynelle Pompey
68.	Dachelle Randolph
69.	Shane Reighard
70.	Brendan Roach
71.	Jamie Rodgers
72.	Lee Roggenkamp
73.	Whitney Rountree
74.	Sameka Rouse
75.	Amber Samuel
76.	Andrew Sayce
77.	Allyson Somers
78.	Morgan Teachey
79.	Charles Thomas
80.	Rebecca Thomas
81.	Audrey Thompson
82.	Jackson Turbeville
83.	Tim Warrick
84.	Jane Welch
85.	Laura Wiles
86.	Casey Yarborough
87.	Lisa Young

2009-2010 SC LIFE UNDERGRADUATE RESEARCH PROGRAM PARTICIPANTS

Faculty Mentor		*School - Department*	Student	*Major*	Class
Florence	Anorou	*Claflin University - Biology*	Ezinne Okpan	*Biology*	Senior
Min	Cao	*Clemson University - Biological Sciences*	Ellen Pinto	*Microbiology*	Junior
Weiguo	Cao	*Clemson University - Genetics and Biochemistry*	Jennifer Kraft	*Genetics and Microbiology*	Junior
Chin-Fu	Chen	*Clemson University - Genetics and Biochemistry*	Jennifer Gavin	*Genetics*	Senior
			LaShaina McKnight	*Genetics and Biochemistry*	Senior
Michael	Childress	*Clemson University - Biological Sciences*	Charles Kaighn Morlok	*Biological Sciences*	Senior
Kamal	Chowdhury	*Claflin University - Biology*	Ashanti Callender	*Biology*	Junior
			Victoria DeSormeaux	*Biotechnology*	Junior
Delphine	Dean	*Clemson University - Bioengineering*	Aesha Y. Desai	*Biological Sciences*	Junior
			James Alaimo	*Mathematical Sciences*	Senior
			Andrew L. Marshall	*Polymer Fiber Chemistry*	Senior
			James Chow	*Bioengineering*	Senior
			Laura Wiles	*Bioengineering*	Sophomore
			Jackson G. Turbeville	*Bioengineering*	Freshman
			Matthew Cupelli	*Bioengineering*	Junior
			Alex Lindburg	*Bioengineering*	Junior
Brian	Dean	*Clemson University - School of Computing*	Shari Carter	*Mathematical Sciences*	Freshman
John	DesJardins	*Clemson University - Bioengineering*	Brendan Roach	*Bioengineering*	Junior
			Tim Warrick	*Mechanical Engineering*	Junior
			Marci Elpers	*Bioengineering*	Junior
Saara	DeWalt	*Clemson University - Biological Sciences*	Brittany Jones	*Biological Sciences*	Senior
			Vincent James	*Biological Sciences*	Senior
Yuqing	Dong	*Clemson University - Biological Sciences*	Lee Roggenkamp	*Biochemistry*	Junior
Caye	Drapcho	*Clemson University - Biosystems Engineering*	Kara Kopf	*Biosystems Engineering*	Senior
Shelby	Duffy	*TriCounty Technical College - Science*	Erica Okwuazi	*Biology, Microbiology*	Sophomore
Julia	Frugoli	*Clemson University - Genetics and Biochemistry*	Austin DeMoss	*Genetics*	Senior
Twaina	Harris	*Claflin University*			
Randall	Harris	*Claflin University - Biology*	Lynelle Pompey	*Biology*	Sophomore
J. Michael	Henson	*Clemson University - Biological Sciences*	Audrey Thompson	*Microbiology*	Senior
Anand	Jayakaran	*Clemson University - Biosystems Engineering*	Natasha Bell	*Biosystems Engineering - Natural Resources and Environment*	Junior
Julia	Kerrigan	*Clemson University - Entomology, Soils, and Plant Sciences*	Jordon Gruber	*Microbiology*	Senior
Harry D.	Kurtz, Jr.	*Clemson University - Genetics and Biochemistry*	Krutika N. Mediwala	*Genetics*	Junior
			Nora Livengood	*Genetics*	Senior
			Allyson Somers	*Genetics*	Junior
			Brennen Jenkins	*Bioengineering*	Sophomore
			Brittany D. Jenkins	*Genetics*	Senior

2009-2010 SC LIFE UNDERGRADUATE RESEARCH PROGRAM PARTICIPANTS

Faculty Mentor		*School - Department*	Student	*Major*	Class
Amy	Lawton-Rauh	*Clemson University - Genetics & Biochemistry*	Kyle Gettler	*Genetics*	Junior
			Amanda Allison	*Genetics*	Senior
			Jessica Gancar	*Genetics*	Senior
Hong	Luo	*Clemson University - Genetics and Biochemistry*	Stephen Bolus	*Biochemistry*	Sophomore
			Jordan Hopkins	*Genetics*	Junior
			Shane Reighard	*Genetics*	Senior
David	Magnin	*Morris College - Natural Sciences & Mathematics*	Perry Davis, Jr.	*Mathematics*	Junior
Tamara	McNealy	*Clemson University - Biological Sciences*	Rebecca Thomas	*Genetics*	Senior
Brandon	Moore	*Clemson University - Genetics and Biochemistry*	Heather Franklin	*Biochemistry*	Senior
James	Morris	*Clemson University - Genetics and Biochemistry*	Sameka Rouse	*Genetics*	Junior
			Andrew Sayce	*Biochemistry, Genetics*	Senior
			Stephen Carek	*Genetics*	Senior
Jiro	Nagatomi	*Clemson University - Bioengineering*	George Fercana	*Bioengineering*	Senior
		Clemson University - Bioengineering	Shawn Berker	*Bioengineering*	Senior
		Clemson University - Bioengineering	Rachel Ostendorff	*Bioengineering*	Junior
Rush	Oliver	*Benedict College - Biology, Chemistry & Environmental Health Sciences*	Rodney Bostic	*Biology*	Senior
			Amber Samuel	*Biology*	Junior
			Angela Dennard	*Biology*	Junior
			Jocelyn Holden	*Biology*	Senior
			Dachelle Randolph	*Biology*	Junior
			Alena Marbury	*Biology*	Junior
			Whitney Rountree	*Biology*	Junior
Nick	Panasik	*Claflin University - Biology & Chemistry*	Tamuka Chidyausiku	*Biochemistry*	Sophomore
			Ifeanyi Emole	*Biochemistry*	Sophomore
			Jennifer Ozonma	*Biochemistry*	Junior
Kimberly	Paul	*Clemson University - Biological Sciences*	Morgan E. Teachey	*Microbiology*	Sophomore
			Sarah Cain	*Microbiology*	Senior
Margaret	Ptacek	*Clemson University - Biological Sciences*	Sabrina Hunter	*Biological Sciences*	Junior
John	Rodgers Jr.	*Clemson University - Forestry & Natural Resources*	Casey Yarborough	*Environmental and Natural Resources*	Junior
Michael	Sehorn	*Clemson University - Genetics and Biochemistry*	Kristin Leskoske	*Biochemistry*	Junior
			Kristina Kesel	*Biochemistry*	Junior
			Sierra Cutchin	*Genetics*	Senior
Dan	Simionescue	*Clemson University - Bioengineering*	Jordan Maivelett	*Bioengineering*	Junior
		Clemson University - Bioengineering	Richard Pascal III	*Bioengineering*	Senior

2009-2010 SC LIFE UNDERGRADUATE RESEARCH PROGRAM PARTICIPANTS

Faculty Mentor		*School - Department*	Student	*Major*	Class
Kerry	Smith	*Clemson University - Genetics and Biochemistry*	Ann Guggisberg	*Genetics*	Junior
			Rachel Hesler	*Biochemistry*	Senior
			Ashley Lawhon	*Genetics*	Junior
			Tara Doucet	*Biological Sciences*	Senior
			Jane Welch	*Genetics*	Junior
Edward	Smith	*Morris College - Natural Sciences and Mathematics*	Shekelia Baccus	*Biology*	Senior
Salvatore	Sparace	*Clemson University - Biological Sciences*	Zachary Johns	*Biological Sciences*	Junior
Kathy	Sparace	*TriCounty Technical College - Science*	Christa Caperton	*General Studies*	Freshman
Lesly	Temesvari	*Clemson University - Biological Sciences*	Donald Mackay	*Biological Sciences*	Senior
			Chris Attaway	*Biological Sciences*	Senior
David	Tonkyn	*Clemson University - Biological Sciences*	Jamie Rodgers	*Biological Sciences*	Senior
			Lisa Young	*Genetics*	Junior
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			Dylan Hale	*Biological Sciences*	Sophomore
Peter	van den Hurk	*Clemson University - Biological Sciences*	Jessica Martin	*Genetics*	Junior
Xi	Wang	*Clemson University - Genetics & Biochemistry*	Stephanie Monesson	*Genetics and Biochemistry*	Junior
Donny	Winkler	*TriCounty Technical College - Science*	Natasha Osbey	*Marine Biology*	Freshman
Hai	Yao	*Clemson University - Bioengineering*	Sarah Cisewski	*Bioengineering*	Senior

SC LIFE: Education & Outreach

Clemson University's SC Life Project, supported since 1998 by $5.4 million from the Howard Hughes Medical Institute (HHMI) Undergraduate Science Education Program and additional leveraged funding, provides life sciences education and outreach programs to middle and high school students and teachers throughout South Carolina and supports undergraduate research at five South Carolina institutions.

The SC Life Undergraduate Research Program has supported 511 undergraduate student research projects guided by 95 members of the faculties at Benedict College, Claflin University, Clemson University, TriCounty Technical College and Morris College, and 270 high school researchers mentored by 97 Clemson University faculty researchers. More than 800 K-12 students and their teachers have participated in SC LIFE Community-based Research projects.

The SC Life International Undergraduate Research Program sends 1-2 students each year to work in the laboratories of HHMI International Scholars or other foreign researchers. Since the start of this program in the summer of 2007, Clemson students have completed research projects in Croatia, Tasmania, Portugal, and South Africa. Two students will work in international laboratories – in France and in Australia – during the Summer of 2010.

In Summer 2009, SC Life had its first HHMI EXROP undergraduate researcher. Two Clemson students will participate in EXROP during the Summer of 2010.

SC Life also supports outreach to K-12 students and teachers, including the Biology Merit Exam, laboratory field trips to the South Carolina DNA Learning Center, virtual field trips (www.knowitall.org), loans of equipment footlockers to teachers, workshops, and graduate-level science courses for in-service teachers.

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