



BIOFEEDBACK

THE NEWSLETTER OF THE BIOLOGY DEPARTMENT AT RHODES

Volume 23

11 March 2009

Number 2

The purpose of *BIOFEEDBACK* is to provide an important and timely vehicle for the dissemination of information concerning BOTH faculty and students of the Biology Department. Any notices or information that you wish to include in *BIOFEEDBACK* should be submitted to either Dr. Carolyn or Dr. Alan Jaslow. *BIOFEEDBACK* will be published each semester.

The Chair's Niche



The other day, as I thumbed through my Furman Alumni magazine, my eyes fell upon a photograph of a professor standing in front of a chalkboard covered with biological icons. His

long sideburns, wide tie, and extra short sleeves placed the date somewhere in the mid 1970s, about the time I was a freshman at Furman. I immediately recognized the engaging smile and enthusiastic eyes of Professor Rex Kerstetter and reminisced about the casual and passionate way that he taught me microbiology, and first enlightened me, in a brief personal conversation during lab, that one could actually cut and paste DNA molecules. Since I am now a molecular biologist, this casual aside clearly had a tremendous impact on me. I read the article accompanying the photograph and was terribly saddened to hear of Dr. Kerstetter's passing.

I have chosen to relate this story to you for two reasons—to honor my former professor and to illustrate that the interactions you have with your professors now may well have great meaning to you long into the future. It is also a two-way street; I have fond memories of many casual conversations with students over the years that allowed me to see interesting sides of them I wouldn't have known from class discussions and exam essays. Many advisors encourage their first-year students to get to know at least one professor each semester on a more per-

sonal level. I'm glad to have known Rex Kerstetter as a friend as well as a professor.

If you're having a hard time choosing whom to get to know, your choices are about to expand. You met Dr. Laura Luque de Johnson in the Fall Biofeedback issue. I'm pleased to announce that Dr. Luque de Johnson will continue with us in a tenure-track position. In the fall, Dr. David Kabelik will take over the position vacated by Dr. Jay Blundon in animal physiology and neuroscience. In addition, Dr. Sarah Boyle, wife of Dr. Kabelik, will join us on a half-time appointment. Look for her Animal Behavior course in the fall, and GIS course in the spring. You will be able to read more complete biographies on these professors in the fall on our website and in Biofeedback.

— Dr. Gary Lindquister

Primary Productivity and Secondary Growth



The following is a list of honors, awards, publications and meeting participation of our faculty and students since October 22, 2008.

Honors and Awards

CONGRATULATIONS TO

-**Dr. Laura Luque de Johnson**, whose one year appointment has been converted to a tenure-track position.
-**Dr. Keith Pecor** (former Fellow in Biology Department), **Kelsey Dean '09**, and **Tyler Cullender '08**, whose paper on crayfish behavior (see *Publications*, below) has been acknowledged as a "research highlight" on the website of the Council on Undergraduate Research (see <http://www.cur.org/highlights/bio.asp#283>).
-**Jackie Ward '10** for winning the Biofeedback contest last fall.



Grants and Fellowships

In December, **Dr. Sara Gremillion** received a postdoctoral travel award of \$1,250 from the American Society of Biochemistry and Molecular Biology to attend their annual conference in New Orleans, LA.

Dr. Jonathan Fitz Gerald received a 2009 Faculty Development Endowment Grant for his project entitled "Visualizing the cytoskeleton of living endosperm."

Dr. Jen Houghton, along with L.D. Urbano of University of Memphis received a grant of \$58,790 for "A Novel Apparatus to Investigate Subsurface Flow and Microbial Biomineralization in Hydrothermal Systems." It was an NSF Small Grant for Exploratory Research (SGER) from the Division of Marine Geology and

Geophysics and will run from November 15, 2008 through January 31, 2010.



Publications

(Be sure to send us copies of your publications when they appear. Thanks!)

Blundon JA, Zakharenko SS. 2008. Dissecting the components of long-term potentiation. *The Neuroscientist* 14:598-608.

Pecor K, Kelsey Dean '09, and Tyler Cullender '08. 2008. Laboratory conditioning to still or flowing water does not affect the responses to a food stimulus by red swamp crayfish (*Procambarus clarkii*) in flowing water habitats. *Mar Fresh Behav Physiol.* 41:43-51.



Meetings

Jackie Hancock '10 and **Dr. Mary Miller** attended the 48th annual meeting of the

American Society for Cell Biology in San Francisco, CA on December 13-18th, 2008. Jackie presented her poster titled "The activity of the *S. cerevisiae* G1 cyclin Cln3 in the absence of TH173" at both the undergraduate education session and the general scientific session of the meeting.

In December, **Dr. Jen Houghton** and **Charlie Forbes '11** attended the national American Geophysical Union fall meeting in San Francisco, CA. Dr. Houghton and Charlie (with co-author L.D. Urbano) presented a paper there entitled "Linking geochemical models and microbial populations within hydrothermal chimneys on the East Pacific Rise."

Curricular Evolution

New Faculty and Course Updates for '09-'10



This year we have some new twists on old favorites. Dr. David Kabelik is replacing Dr. Blundon, who leaves Rhodes next year to do research full time at St. Jude Children's Research Hospital. Dr. Kabelik's Animal Physiology course in the fall will have lecture at the familiar time of Tu/Th 11:00-12:15, but lab will be scheduled on Wednesdays. We are also very excited this fall to be able to offer Animal Behavior (BIOL 207) after a very long hiatus. This class, taught by Visiting Assistant Professor, Dr. Sarah Boyle, not only provides another upper-level Biology selection with lab, but it also counts as an elective for students in the Neuroscience major. If you are looking for other courses that fulfill upper-level Biology requirements this fall, don't forget about Biochemistry (CHEM 414) and Pharmacology (CHEM 416), but keep in mind that both require Organic Chemistry (CHEM 212) as a

prerequisite. Finally, during the spring semester of '09-'10, Dr. Lindquister will be on a sabbatical leave. Nonetheless, we will not leave you without Molecular Biology! Dr. Miller is planning to teach Molecular in spring '10.

Comparative Vertebrate Morphology (BIO 350)

CVM will again be offered with two 9 AM lectures most weeks and two (unequal) formal lab meetings a week. One lab meets Tuesday from 12:30-3:30 PM. The second lab each week meets Friday for a minimum of 50 minutes, either from 1-1:50 PM, or from 2-2:50 PM. Two additional hours in lab are

required, but these may be done at other times during the week. The variable Friday lab time allows students to pre-register in another class meeting MWF at either 1 or 2 PM. CVM has two course numbers. The first includes the lecture and Tuesday lab. This one must be enrolled from the main tree (A, B, or C). The second number allows you to choose one of the two Friday lab times.



Please pick the 1PM Friday time if you can. This Friday section should be added from the Lab portion of the tree. See Dr. A. Jaslow if you have any questions.

Where does the Methods Lab (BCMB 310) go on the tree?

Methods in Cell Biology & Biochemistry (BCMB 310) is the optional laboratory section for Cell Biology (BIOL 307) and/or Biochemistry (CHEM 414). Students who intend to request BCMB 310 as a lab with either Cell or Biochemistry should enter it into the Lab portion of the tree. Students who wish to take the course alone, because they took Cell or Biochemistry previously, or intend to take one or both in the future, cannot sign up for it on the tree. Instead, they should contact Dr. Hill or Dr. Loprete as soon as possible.

What's Up for Next Spring?

In the spring of 2010 we expect to offer the following upper-level Biology classes: Conservation Biology, Mechanisms of Development, Microbiology, Molecular Biology, Mycology, Neuroscience, and Vertebrate Life. Also planned for spring are the two courses that include Maymester field trips, Coral Reef Ecology and Environmental Issues in South Africa. Bear in mind that this list of courses is tentative, and could change if unexpected circumstances arise. In particular, the two field courses will only be offered if they have adequate enrollments.

Environmental Science News

For students who are minoring in Environmental Science, note that **Global Environmental Change (GEOL 116)** will be offered in the fall of 2009, a change from this year. And **Environmental Geology (GEOL 214)**, a course focusing on the hydrologic cycle, water quality and sustainability, will return in the spring of 2010.

Senior Seminar Lottery Wednesday March 25th

Next year the Biology Department will offer three sections of Biology Senior



Optimal Foraging

The following courses will be offered next semester

Number	Course Title	Hours Offered
130	Biology I (Hill, Fitz Gerald, Luque de Johnson)	TuTh 8-9:15 or 11-12:15
131	Biology I Lab	Tu 12:30-3:30, Wed 1-4, or Th 12:30-3:30 6 Sections
207	Animal Behavior (Boyle)	MWF 11-11:50, Tu lab 12:30-3:30
304	Genetics (Miller)	TuTh 9:30-10:45, Th lab 12:30-3:30
307	Cell Biology (Hill)	TuTh 9:30-10:45
BCMB 310	Methods in Cell Bio/Bioch (Hill/Loprete)	W 1:00- 5:00
315	Ecology (Kesler)	MWF 9-9:50, Tu lab 12:30-3:30
340	Animal Physiology (Kabelik)	TuTh 11-12:15, Wed lab 1-4
350	Comp Vert Morph (AJaslow)	MWF 9-9:50, Tu lab 12:30-3:30, Fri lab 1-3
360	Histology (CJaslow)	MWF 10-10:50, Wed lab 1-4
380	Topics in Biomedical Science (Luque de Johnson)	MW 7:30-8:45
CHEM 414	Biochemistry (Loprete)	MWF 11-11:50
CHEM 416	Pharmacology (Jackson-Hayes)	TuTh 11-12:15
Senior Seminar Sections		
485-1	Stem Cells and Regeneration (Fitz Gerald)	TuTh 4-5:15
485-2	Immune Evasion by Pathogens (Lindquister)	TuTh 11-12:15

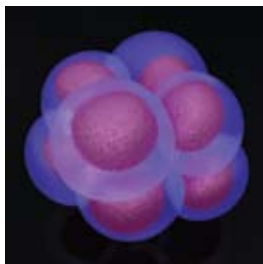
Seminar (topics described below). In addition, two students may enroll in the Neuroscience Senior Seminar (NEUR 485), taught Dr. Gerecke of the Psychology Department. The Neuroscience seminar will meet this fall on M/W from 3-4:30 PM, and the required prerequisites are

PSYC 318 or BIOL 370. For more information contact Dr. Gerecke. **All rising Biology seniors must reserve a slot in a fall or spring Biology senior seminar section or the Neuroscience senior seminar via lottery to be held in the Biology Library at 11:00 on**

Wednesday, March 25th. If you cannot attend the lottery, you must send a representative prepared with an ordered list of your choices. Once you have signed up by lottery, you should list your reserved senior seminar section last on the pre-registration tree under the category of "Other Courses" when you do pre-registration for that particular semester. Biology students will not be allowed to register in a seminar section other than the one which they reserved through the lottery. If you have questions about the lottery, or are **planning to graduate in December**, contact Dr. C. Jaslow by Monday, March 23th.

Senior Seminar Choices for '09-'10

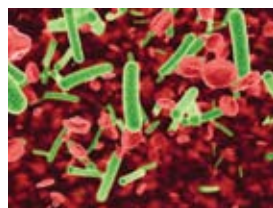
BIOL 485-1: Meeting in the fall on Tu/Th 4:00-5:15, **Dr. Jonathan Fitz Gerald's** seminar is "**Stem Cells and Regeneration.**" Stem cells are a common feature of development in plants and animals. In the adult organism, stem cell populations are self-renewing and can give rise to multiple cell types. Stem cells from the mammalian embryo have the further potential to give rise to any cell or tissue found in the adult. In recent years, stem cells have been heralded as a potential 'miracle cure' for limb replacement, paralysis and other maladies in humans. Interestingly, this ability to regenerate new structures is the norm in many other species. This course will examine 'what makes a stem cell?' and the role of stem cells in development and regeneration. We will also critique the current medical research and biotechnology aimed at utilizing this powerful cell type. Students will develop skills in written and oral expression through presentation of review and primary scientific literature. Background in relevant topics will be covered, so no specific knowledge is prerequisite.



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BIOL 485-2: Meeting in the fall on Tu/Th 11:00-12:15, **Dr. Gary Lindquester's** seminar is "**Immune Evasion by**



Pathogens."

Vertebrate immune systems and pathogenic organisms have co-

evolved. Each has adapted complex means of counteracting the defenses of the other. The fact that both pathogens and their hosts persist in the environment shows that neither group has succeeded entirely at thwarting the other. Instead, pathogen and host populations exist in a delicate balance. This course will explore a variety of ways in which pathogens evade vertebrate immune defenses and will touch on many types of pathogens from parasitic animals to viruses. Students will develop skills in written and oral expression through presentation of review and primary scientific literature. Background in immunology will be covered, so no specific knowledge is prerequisite.

BIOL 486-1: Meeting in the spring on Tu/Th 4:00-5:15, **Dr. Jon Davis'** seminar is "**The Urban Jungle.**"



For the first

time in history, more humans now live in urban centers than in rural areas. *Why* has this happened and *what* are the implications of urbanization for environments and wildlife ecology? To examine this contemporary issue we will study global urbanization trends, associated environmental changes, and ecological and physiological responses of animals to urbanization. Students will gain insight into this issue by reading and presenting recent research from the primary literature, conducting field-based research during **two required Saturday field trips**, and engaging in class discussions and peer evaluations.



Alumni Luminescence

About thirty percent of Rhodes students are interested in pursuing some sort of health professions career. And most of those, averaging 2:1, intend to go to medical school after they graduate. Keeping that in mind, we thought you would be interested in some feedback from some recent Rhodes graduates who successfully made that leap. Preparing for medical school, filling out applications, going on interviews, and finally, actually moving from our liberal arts atmosphere to the world of medical school can be an overwhelming experience. So, we checked in with some first year medical students who still have that experience fresh in their minds to see what advice they would offer the student contemplating a future in medical school.

Britt Solar '08, currently a medical student at the University of Texas, Houston, has this to pass on "The best advice I could give a pre-med student is to meet with your Health Profession Advisor as much as possible. I would not have been able to make it through the whole process if it wasn't for the help of Dr. Alan Jaslow. There are a lot of components



of applying and it is important to stay on top of the dates. The classes you take in undergrad are important in so far as you must meet the pre-med requirements, ... but be sure to take advantage of the eclectic classes that Rhodes has to offer because once you are in medical school it is all math and science. When it comes to bio classes, learn things to learn things, not just to do well on the test. You will need it all later! ... Medical school is like nothing I had experienced before, but it is infinitely rewarding. It is not school, it is a whole change of lifestyle. In-hospital experience is definitely a bonus as a pre-med student because it shows the medical school that you know what you're getting yourself into and it also solidifies your passion if that is truly what you want to do. Along those same lines, don't go to med school unless you are POSITIVE that it is what you want to do. It is an extremely rigorous experience and you will only make it through it if you have a burning motivation for that type of future..."

Kristina Lynch '08, who is now studying in the medical school at Southern Illinois University, offers this advice, "Pay close attention in Histology and Biochemistry because it will save you a lot of hours to study everything else that you DIDN'T take in undergrad. Take a physiology course

because otherwise you will be a little lost! In your interview, come prepared to sell yourself with a big smile, firm handshake, and confidence in the experience you have." And finally, she wants to remind you that "Medical school isn't 100% studying; we do have some fun too so don't think that your life completely ends once you get here!"



Stuart Martin '08, a first year student at the University of Texas Medical Branch at Galveston, speaks to the experience you are now receiving at Rhodes College. "The best advice I can



give to future Rhodes med school applicants is to be confident in the education they are getting before enter-

ing medical school. Time and time again I heard from certain doctors and administrators that 'undergrad simply didn't matter once you got into medical school.' That may be true for

some schools, but the Rhodes biology and chemistry departments are staffed with some of the smartest and most qualified teachers I have ever had the opportunity to learn from. I can't count the number of times that I've brought up information I learned from classes at Rhodes during Problem Based Learning sessions at UTMB that thoroughly impressed the clinicians I was around. As a matter of fact, I've already used quite a few textbooks required for classes in medical school that were used while in my undergraduate years. Never doubt yourself or Rhodes... know that Rhodes has prepared you as well, if not better, than any other place in the country."



Signals and Displays (short communications)



Shelly Jackson recently joined the Department of Biology as the Laboratory Supervisor and Biological Safety Officer. Shelly graduated from Rhodes in 1997 with a B.A. in Biology. She comes to us from St. Jude Children's Research Hospital, where she was a Senior Research Technologist in the Department of Developmental Neurobiology. Over the course of nearly 10 years in the lab at St. Jude, Shelly sponsored numerous university students from England and Germany, nearby University of Memphis students, as well as a Memphis City Schools Biology teacher. She even had the pleasure of training Dr. Blundon to do cloning and yeast two-hybrid assays several years ago when he took a sabbatical in the lab where Shelly worked. Before her time at St. Jude, Shelly practiced electrophysiology at the University of Tennessee at Memphis, studying the effects of ketamine on the vagal nerve pathway. She also has several years of experience working with small animal veterinarians and surgeons.

Shelly currently lives down in Independence, MS with a menagerie of cats, dogs,

fish, a parrot and a bearded dragon. She and her husband, Rick Jackson, who is a local structural ironworker, were married on September 13, 2008. They both enjoy the outdoors; fishing, bonfires, and “mud-riding” are favorite activities.

Shelly is very excited to have the opportunity to give back to Rhodes and to be able to make a positive difference in the scientific experience of our Biology students.

TN Academy of Science Meetings

Don't miss this opportunity! This year the Collegiate Division of the Tennessee Academy of Science will be meeting right here at Rhodes during the morning of April 4th. Undergraduates from our area will be on campus presenting their research. This meeting is an excellent opportunity for you to do a number of things:

- Experience a science meeting
- Practice for URCAS
- Learn about research of other undergraduates
- Have your abstract published in the *Journal of the Tennessee Academy of Science*, i.e., build your curriculum vitae
- Get a free lunch!

Abstract instructions are at <http://faculty.rhodes.edu/kesler/TAS.html> and abstracts are to be e-mailed to Dr. Kesler by March 27th.

The keynote speaker at this year's TAS Collegiate Division meeting will be **Dr. Laura Luque de Johnson**. Her talk, **“Traveling germs: infectious diseases in an era of globalization”**, will discuss how infectious diseases that are currently confined to certain regions have the potential to spread around the world given the right conditions. History tells us that this has happened before during the Flu Pandemic of 1918. The question is what have we learned from past experiences and are we prepared now?

Even if you don't present, you are encouraged to come for any or all of the talks. Your attendance will also be tangible support for Rhodes! We hope to see you in Frasier Jelke on the morning of April 4th!



Tri-Beta News

Beta Beta Beta (βββ) is the biological honor society for the Rhodes Biology Department. βββ has a two-fold purpose. The first is to provide a club where individuals with a shared interest in biology can get together, in a setting free of classroom pressures, and have a little social interaction and fun. The other purpose is that of an honor society. βββ is a national honor society and is dedicated to the enrichment of its members' scientific experiences and to the sharing and dissemination of information gleaned from those experiences. Current chapter activities include participation in the Rhodes Journal of Biological Science, Science Fair judging at Memphis City Schools, student research presentations, and a proposed URCAS reception for the biological sciences. βββ provides a forum to recognize those students, with a biological science as their undergraduate major, who excel academically. Regular membership can only be attained through invitation, but any student meeting the criteria below who is interested in becoming an associate member for the next school year should contact the βββ president. If you are interested in membership, please contact current βββ president, Caroline Cook (cocoj@rhodes.edu).

βββ Associate Membership requirements:

- 1 completed biology course (grade of B or better)
- An interest in biology
- One time \$50 initiation fee

βββ Regular Membership requirements:

- Must be a Biology Undergraduate
- 3 completed semesters of Biology at Rhodes
- At least a 3.0 average in Biology at Rhodes and 3.0 average overall
- General good academic standing at the college
- One time \$45 initiation fee*

*Those associate members who now qualify for a regular membership will have a \$10 promotion fee.

\$\$ Biology Research Award \$\$

This spring, the Biology Department will be presenting the **“Award for Outstanding Student Research in Biology”**. Any student who has completed research at Rhodes or elsewhere is eligible for this award. The winner will receive a cash prize, be honored at the awards convocation ceremony, and have his or her name engraved on the Biology Research Award plaque that is displayed outside of the Biology office. To be considered, a student must submit a three to five page research paper, plus a recommendation from the research supervisor, to Dr. Miller by Monday, March 30th. Copies of the application and recommendation forms may be obtained from Dr. Miller. Announcement of the award winner will be made at spring awards convocation on Friday, May 1st.

Undergraduate Research and Creative Activities Symposium (URCAS)

The Rhodes Undergraduate Research and Creative Activities Symposium (URCAS) provides you the opportunity to showcase your outstanding work to the entire campus community. You will gain first-hand experience in communicating your research and creative activity, an essential part of professional growth. It will take place on Friday, May 1st, this year – keep your eyes open for a final schedule of paper/poster presentations.

Those wishing to present a paper or poster need to identify a faculty sponsor and must submit an abstract via the online submission process by March 25. Online submission will open well in advance of this deadline; you will receive notification when it is open.

The best presentation or poster with an Environmental Science theme at this year's URCAS will be eligible for a \$300 award. Be sure to notify Dr. D. Kesler if you would like to be considered for this.

Work in the Biology Department!

The Biology Department is looking for several students to work as lab Teaching Assistants for the core biology classes next fall and spring. These TA positions will consist of approximately 8-10 hours per week of work. We prefer someone who has an interest in Biology and has taken Bio I and II for the job. Pay and further details concerning being a TA will be discussed on an individual basis. Please feel free to contact Shelly Jackson at 843-3431 (email: jacksons@rhodes.edu) for additional information. Applications for the

lab TA job can be found outside room FJ 102E. The deadline for the fall/spring positions is April 28, 2009.

Your Chance to Win a Fabulous Prize

Biology contest forms will be distributed throughout FJ when BIOFEEDBACK comes out. Look for your chance to win a \$15 Bookstore gift card, and be sure to keep your copy of BIOFEEDBACK handy when you fill it out! If you can't find a contest form nearby, you may request one electronically from Biology Department Assistant Karen Thomas (thomask@rhodes.edu). All contest entries must be turned in to the Biology Department Office FJ102 before 4:00 PM on Friday April 10, 2009. If there are multiple correct entries, the winner will be selected by a random draw.

Student Research 2008-2009 Sponsored by Programs at Rhodes (Rhodes faculty supervisors listed)

Atiq, Mohammed '10 *Characterization of GFP-tagged and promoter-replaced strains of Aspergillus nidulans using Southern Blotting.* Bio 451 & 452 (Drs. Terry Hill, Darlene Loprete, and Loretta Jackson-Hayes)

Cartagena, Maria '11 *Quantitative genetic modeling of parental effects during adult development in Arabidopsis thaliana.* Bio 451 & 452 (Dr. Jonathan Fitz Gerald)

Cassel, Stephanie '10 *Conservation physiology of amphibians & reptiles.* Bio 451 & 452 (Dr. Jon Davis)

Castellarin, Michael '11 *Ecosystem services of the Fat Floater in Garner Lake, TN.* Bio 452 (Dr. David Kesler)

Chan, Jenkin '11 *Genetic analysis of the polarized localization of the Arabidopsis formin, AtFH5, in the pollen and ovule.* Bio 451 & 452 (Dr. Jonathan Fitz Gerald)

Chavez, Brittany '11 *Tagging and microscopic evaluation of Aspergillus nidulans PkcA using mCherry and tdTomato fluorescent markers.* Bio 451 & 452 (Drs.

Terry Hill, Darlene Loprete, and Loretta Jackson-Hayes)

Conn, Allison '11 *Blood parasites in urban reptiles* Bio 451 & 452 (Dr. Jon Davis)

Conway, Ciara '10 *Sperm dimensions: Their relationship with one another and their impact on motility.* Bio 451 & 452 (Dr. Carolyn Jaslow)

Copeland, Blake '11 *Constructing novel reporters for examining the cytoskeleton in the Arabidopsis seed endosperm.* Bio 451 & 452 (Dr. Jonathan Fitz Gerald)

Covic, Cybil '10 *Conservation physiology of amphibians & reptiles.* Bio 451 (Dr. Jon Davis)

Dagen, Brett '10 *Bro1 dependent activity of the G1 cyclin Cln3 in S. cerevisiae.* Bio 451 & 452 (Dr. Mary Miller)

Eberly, Logan '10 *Description of gene expression patterns of two GDP-mannose transferases during development of Aspergillus nidulans.* Bio 451 & 452 (Drs. Terry Hill, Darlene Loprete, and Loretta Jackson-Hayes)

Fuller, Shannon '11 *Recombinant expression of Plasmodium falciparum Rhoptry Protein 4 (PFRH4).* Bio 451 & 452 (Dr. Laura Luque de Johnson)

Gentry, Jacy '09 *Carbon storage of Memphis urban parks.* Research Associate with Dr. Rosanna Cappellato

Goss, Julia '10 *Predator-prey dynamics in lizards.* Bio 451 & 452 (Dr. Jon Davis)

Graham, Allison '10 *Predator-prey dynamics in lizards.* Bio 451 & 452 (Dr. Jon Davis)

Groover, Chassidy '10 *Description of gene expression patterns of two GDP-mannose transferases during development of Aspergillus nidulans.* Bio 451 & 452 (Drs. Terry Hill, Darlene Loprete, and Loretta Jackson-Hayes)

Gurkovich, Lindsey '11 *Generation of a novel Alca-promoter cassette for use in regulated gene transcription studies in Aspergillus nidulans.* Bio 451 & 452 (Drs. Terry Hill, Darlene Loprete, and Loretta Jackson-Hayes)

Hancock, Jackie '10 *Thi73 dependent activity of the G1 cyclin Cln3 in S. cerevisiae.* Fall and spring research through the Rhodes Student Associate Program (Dr. Mary Miller).

Hickey, Rachel '11 *Tagging and microscopic evaluation of Aspergillus nidulans PkcA using mCherry and tdTomato fluorescent markers.* Bio 451 & 452 (Drs. Terry Hill, Darlene Loprete, and Loretta Jackson-Hayes)

Hoge, Brianna '12 *Description of gene expression patterns of two GDP-mannose transferases during development of Aspergillus nidulans.* Bio 451 & 452 (Drs. Terry Hill, Darlene Loprete, and Loretta Jackson-Hayes)

Holt, Jonathan '09 *Two-hybrid screening for proteins binding the N-terminal domain of Arabidopsis formin, AtFH5.* Student Research Assistant (Dr. Jonathan Fitz Gerald)

Huddleston, Mary Elizabeth '10 *Sxm1 dependent activity of the G1 cyclin Cln3 in S. cerevisiae.* Fall and spring research (Dr. Mary Miller)

Johnson, Anna '11 *Blood parasites in urban reptiles.* Bio 451 & 452 (Dr. Jon Davis)

Johnson, Laura '10 *Description of gene expression patterns of two GDP-mannose transferases during development of Aspergillus nidulans.* Bio 451 & 452 (Drs. Terry Hill, Darlene Loprete, and Loretta Jackson-Hayes)

Lambeth, Jennifer '09 *Soil quality and English Ivy in Overton Park.* Bio 451 & 452 (Dr. Rosanna Cappellato)

Lieb, Lauren '10 *Conservation physiology of amphibians & reptiles.* Bio 452 (Dr. Jon Davis)

Miller, Brett '09 *Do the age and growth of Garner Lake Micropterus salmoides reflect fishing regulations?* Bio 452 (Dr. David Kesler)

Morgan, Zach '10 *The transformation of Rbl-10 retinoblastoma cells by transfection of pluripotency-inducing genes.* St. Jude Summer Plus Research Program with Dr. Michael Dyer, St. Jude (Dr. Jay Blundon)

Musgrove, John '10 *Characterization of GFP-tagged and promoter-replaced strains of Aspergillus nidulans using Southern Blotting.* Bio 451 & 452 (Drs. Terry Hill, Darlene Loprete, and Loretta Jackson-Hayes)

Ogburn, Erinn '11 *Generation of a novel Alca-promoter cassette for use in regulated gene transcription studies in Aspergillus nidulans.* Bio 451 & 452 (Drs. Terry Hill, Darlene Loprete, and Loretta Jackson-Hayes)

Pluta, Michael '11 *Tagging and microscopic evaluation of Aspergillus nidulans PkcA using mCherry and tdTomato fluorescent markers.* Bio 451 & 452 (Drs. Terry Hill, Darlene Loprete, and Loretta Jackson-Hayes)

Roads, Andy '09 *Assessing soil carbon sequestration in Memphis golf courses.* Bio 451 & 452 (Dr. Rosanna Cappellato)

Shang, Ke '11 *Genetic and phenotypic characterization of septation mutants in Aspergillus nidulans.* Bio 451 & 452 (Drs. Terry Hill, Darlene Loprete, and Loretta Jackson-Hayes)

White, Miranda '12 *Genetic and phenotypic characterization of septation mutants in Aspergillus nidulans.* Bio 451 & 452 (Drs. Terry Hill, Darlene Loprete, and Loretta Jackson-Hayes)

Winston, Nadia '10 *Correlation of seed size to fitness traits in Arabidopsis thaliana using recombinant inbred lines.* Bio 452 (Dr. Jonathan Fitz Gerald)



BIOFEEDBACK

THE NEWSLETTER OF THE BIOLOGY DEPARTMENT AT RHODES



Rhodes College

—1848—