



# BIOFEEDBACK

THE NEWSLETTER OF THE BIOLOGY DEPARTMENT AT RHODES

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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

Rhodes has long valued the environmental and ecological academic interests of its students and faculty. Yet, its institutional commitment to those interests has never been as strong as it is now. With funding from the



Mellon Foundation and Rhodes own budget, four new Faculty Fellows began their three-year appointments this semester. We welcome Jon Davis (Biology and the Memphis Zoo), Robert Lusteck (Anthropology), Tait Keller (History), and Jennifer

Sciubba (International Studies). The Fellows will be working with Dr. David Kesler (program chair) and others to develop an Environmental Studies program that will complement our already successful Environmental Sciences minor (for ES information see <http://www.rhodes.edu/academics/9081.asp>).

**Look for new courses from these faculty members to take as electives or as you seek ways to satisfy Foundation requirements that match your disciplinary interests.**

—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 March 24, 2008.



## Honors and Awards

### CONGRATULATIONS TO

....**Tyler Cullender '08** and **Sarah Mercer '08** who won the Award for Excellence in Biology for the '07-'08 academic year. **Tyler Cullender '08** was also presented the Award for Outstanding Research in Biology. **Michael J. Pluta '11** and **Betsy Parkinson '11** shared the Award for Excellence in First-Year Biology.

....**Jackie Hancock '10** for research already accomplished, and research yet to be done. This spring, Jackie's poster presentation won the first place award for outstanding research at the Southeastern Regional Yeast Meeting in Gatlinburg, TN, March 2008. She was the only undergraduate to receive a poster award at this meeting. Jackie's presentation of another research poster also won at the Tennessee Academy of Science Western Collegiate meeting (See the "Meetings" section below for the titles of her posters). In addition, Jackie received one of the prestigious Goldwater Scholarships for 2008-2009. This scholarship was one of only 321 awarded nationally to highly qualified students intending to pursue careers in science, mathematics or engineering.

....**Brian Darrith, NEUR '08**, who received at commencement the Algernon Sydney Sullivan Award for service. Brian was also given the Kinney Award of Service Leadership, and was one of seven inducted this year into the Rhodes Hall of Fame.

....the Phi Beta Kappa initiates of the class of 2008: **Matthew Breeden '08, Kelly Hoth '08, Loren Kleimeyer '08, Amanda Lutzy '08, Jill McCall '08, Megan McKenna '08, Daniel L. Price '08, Lucas Routh '08, and Matthew Yantis '08.**

....the new ODK honor society members: **Rebekah Russ '09** and **Kristin Wheeler '09.**

....**Sarah Barowka Neuro '09, Kim Green '09, Claire Litherland '09, Anum Minhas '09, and Kristen Wheeler '09,** who were inducted in Mortar Board honor society.

....**Dr. Rosanna Cappellato**, who is Rhodes's new Environmental Fellow. The Environmental Fellow acts as a liaison for environmental initiatives on campus and repre-

sents Rhodes College in environmental programs promoted by the Associated Colleges of the South (ACS).

....**Claire Litherland '09** who was given the Kinney Award in the Mentoring and Education Service Area and **Britt Solar '08** for being awarded the Kinney's Faith and Service Award.

.... **John Musgrove '10**, **Mary Elizabeth Huddleston '10**, and **Erinn Ogburn '11**, who received Summer Research Fellowships to work with Drs. Hill and Loprete on fungal cell biology. They were joined by students from Tougaloo College (Jackson, MS) and Rust College (Holly Springs, MS).

....the five Cell Cycle Fellows who were selected to work with Dr. Miller during the summer. **Jackie Hancock '10**, **Brett Dagen '10**, **Maria Cartegena '11**, **Micaela Moen '11**, and **Larkin Michelle Accinelli '10** were supported by a grant awarded to Dr. Miller from the National Science Foundation.

....**Kelsie Persaud '10**, who was awarded a Baptist Memorial Health Care Summer Fellowship last summer.

....**Eddie Han '08**, for his appointment to represent the United States in the 2008 Olympics as a volunteer.

....**Sarah Barowka, NEUR '09**, who was named Female Resident Assistant of the Year.

....the new officers of Rhodes's chapter of: **Caroline Cook BCMB '09** (President), **Ryan Jessee NEUR'09** (Treasurer), and **Matthew Marker '09** (President). For more information about, see **p. 5**.

....**Elyssa Rubertino '08** who won last spring's **BIOFEEDBACK** contest by answering questions about items written up in that issue. This semester's contest can be found around Frazier Jelke hang-out spots.

**Please be sure to let us know about your awards, honors and activities.**

## Publications:

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

**Fitz Gerald J**, M. Luo, A. Chaudhury, and F. Berger. 2008. DNA Methylation causes predominant maternal controls of plant embryo growth. *PLoS ONE*. 3:E2298.

Jackson-Hayes, L., **T. W. Hill**, D.M. Loprete, L.M. Fay, B.S. Gordon, S.A. Nkashama, **R.K. Patel, BCMB '09**, and C.V. Sartain. 2008. Two GDP-mannose transporters contribute to hyphal form and cell wall integrity in *Aspergillus nidulans*. *Microbiology* 154: 2037-2047.

**Pecor KW, K.C. Dean '09**, and **T.C. 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. *Marine and Freshwater Behaviour and Physiology*. 41:43-51.

Victor C. Huber, **Loren H. Kleimeyer '08** and Jonathan A. McCullers. 2008. Live, attenuated influenza virus (LAIV) vehicles are strong inducers of immunity toward influenza B virus. *Vaccine*. 26:5381-5388.



## Grants and Fellowships:

The National Science Foundation has awarded Drs. **Terry**

**Hill**, Darlene Loprete and Loretta Jackson-Hayes a grant of \$472, 992 for their research titled, "Subcellular Targeting of Protein Kinase C and a Novel Membrane Protein in Polarized Growth of *Aspergillus nidulans*".

**Dr. Rosanna Cappellato** received a grant from Rhodes Student Research Assistant Program to hire **Jacqueline Gentry '09** to work on a project assessing the ecological and economic values of Memphis urban parks using the Citygreen Urban Ecosystem Analysis Software.

**Dr. Sara Gremillion** was awarded a Rhodes College Faculty Development Endowment Grant of \$5000 to support her 2008 summer research.



## Meetings:

This summer, **Dr. Gary Lindquister** traveled to Estoril, Portugal to the 33rd International Herpesvirus Workshop with

generous support from a Spence Wilson Faculty Travel Grant. There, along with **Kristin Campbell '05** and **Kim Green '09**, he presented "The Epstein-Barr virus vIL-10 gene in a recombinant murine gammaherpesvirus contributes to splenomegaly but not infectious titer or latency".

**Tara Daniel '08** and **Jacy Gentry '09** attended the Southeastern Ecology and Evolution Conference at Florida State University. There, Tara presented "Stella model of carbon storage and sequestration in an urban green space". Jacy also presented a poster, "Carbon storage and sequestration in urban parks of Memphis, TN". **Dr. Rosanna Cappellato** coauthored both presentations.

Last spring, **Dr. Mary Miller** and **Jackie Hancock '10** attended the South Eastern Regional Yeast Meeting in Gatlinburg, TN. Jackie presented a poster entitled "Thi73 dependent function of the G1 cyclin in *S. cerevisiae*". On April 5, **Dr. David Kesler** and four biology students attended the Tennessee Academy of Science Western Collegiate meeting at the University of Memphis. The students gave the following presentations of their research: "Montane rainforest biogeography: geography's effects on arboreal size and distribution" by **Dusty Long '09**, "Morphological and molecular analysis of an invasive species, *Corbicula*" by **Stephanie Juchs '08**, "The gene THI73 and its role in G1 cyclin Cln3 function in *S. cerevisiae*" by **Jackie Hancock '10**, and "Characterization of septation mutants in *Aspergillus nidulans*" by **Frances Benoist '08**.

**Drs. Terry Hill**, Loretta Jackson-Hayes, and Darlene Loprete, along with students L. M. Fay, B. S. Gordon, S. A. Nkashama, **Ravi Patel BCMB '08**, and C.V. Sartain traveled to Edinburgh, Scotland in April 2008. At the 9th

European Congress on Fungal Genetics, they presented “Two GDP-mannose transporters contribute to hyphal form and cell wall integrity in *Aspergillus nidulans*”. At the same conference, **Drs. Sara Gremillion**, Loprete and **Terry Hill**, with students K. Camara, F. Samuels, and **Sara Mercer '08**, presented “A mutation in a COG4 homologue affects polarity establishment in *Aspergillus nidulans*” In August, **Dr. Gremillion** also delivered this presentation at the 2008 Annual Meeting of the Mycological Society of America at Penn State University.

**Dr. Rosanna Cappellato** gave a presentation on September 23, 2008, to more than one hundred members of the Memphis Rotary Club. Her presentation, “It is all down the river from here”, focused on the connection between anthropogenic input of nitrogen to the Mississippi river and the problem of hypoxia in the Gulf of Mexico.

At the October, 2008 Meeting of the Geological Society of America in Houston, **Dr. David Kesler** presented, “From the headwaters to the mouth of the hatchie river: freshwater mussel distribution and abundance”, as well as a poster, “Freshwater mussel shells as a proxy for stream salinization from road salt”, that was coauthored with M.J. Winnick, D.P. Gillikin, and D. Goodwin.

**The following student presentations were given in April at Rhodes's Undergraduate Research and Creative Activity Symposium:**

**Lesley Baker '10**, T. Geiger and R. Alli. T-cell recognition of a myelin peptide responsible for autoimmune encephalomyelitis.

**Joel Chasan '09** and S.G. Matta. Gestational drug exposure alters VTA GABAergic response to nicotine.

**Tyler Cullender '08** A novel connection between the nuclear pore complex and the cell division cycle of *Saccharomyces cerevisiae*: nucleoporins Nup84 and Nup188 are significant to the activity of Cln3, while Nup2 is not.

**Tara Daniel '08** Carbon storage and sequestration in Overton Park.

J. Davis, **Audrey Marsidi '09** and G. Lindquenter Using semi-quantitative

PCR to measure murine gammaherpesvirus viral load in splenocytes as a model for Epstein-Barr virus.

**Kelly Hoth '08**, M. Krasin, and C. Hua Dosimetric Correlation of pneumonitis in pediatric sarcoma and Hodgkin's lymphoma patients receiving radiation therapy.

**Natasha Jain '08**, A. Reiner, and Y. Den. The impact of Huntington's disease on the correlation of cortical and striatal mutant neurons of R6/2 chimera mice.

**Stephanie Juchs '08** Morphological and molecular analysis of an invasive species, *Corbicula*.

**Anum Minhas '09**, S.C. Kaste, M.L. Metzger, Z. Xiong, and S.N. Rai. Bone density deficits in survivors of pediatric Hodgkin lymphoma (HL).

**Frances Benoist '08**, S. Gremillion, D. Loprete, and T. Hill Characterization of septation mutants in *Aspergillus nidulans*.

**Jacqueline Gentry '09** and R. Cappellato. Carbon storage of Memphis urban parks.

**Jacquelyn Hancock '10** and M.E. Miller. Genetic interactions between the G1 cyclin CLN3 and THI73 may link the endoplasmic reticulum to regulated cell division.

**Mary Huddleston '10**. GFP tagging of

a membrane protein affecting cell wall integrity in *Aspergillus nidulans*.

**Natasha Jain '08**, A. Reiner and Y. Den. The impact of Huntington's disease on the correlation of cortical and striatal mutant neurons of R6/2 chimera mice.

**Lauren Lambeth '09** The effects of English ivy on the biodiversity and mean DBH of tree species in Overton Park: implications for park maintenance.

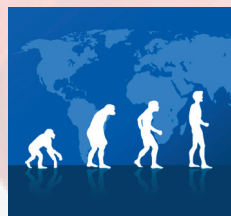
**Audrey Marsidi '09**, G. Lindquenter and C. Davis. Using semi-quantitative PCR to measure murine gammaherpesvirus viral load in splenocytes as a model for Epstein - Barr virus.

**Crystal Phelps '08** Cloning of the SepH allele and its effect on development of a calA mutant strain of *Aspergillus nidulans*.

**Michael Pluta '11**, **Chris Pan '11**, **Brittany Chavez '11** and T. Hill. Determination of mutant loci affecting CFW sensitivity in *Aspergillus nidulans*.

**Xue-Lin Wang '08** and **Lane Lovett '09**. Exploring the synthesis of febrifugine and derivatives: potential for anti-malarial drugs.

**Jacqueline Ward '10**. Identification of a gene affecting hyphal development in *Aspergillus nidulans*.



## Curricular Evolution Course Changes and Announcements

### SPRING SENIOR SEMINARS

If you are a senior taking a spring senior seminar, you should remember signing up during last year's lottery for one of the two classes listed below. Although we have your name on a

list, you will still need to enroll yourself by entering the seminar CRN on your tree under “other courses” when you pre-register this fall. If you suddenly find that your scheduled senior seminar conflicts with another course you need or want, consider the option of taking the BCMB senior seminar. The BCMB seminar meets Mon & Wed from 4:30-6, and students enrolling need to have taken Molecular, Cell, or Biochemistry. Contact Dr. Loprete if you are interested.

If you are a senior taking a spring senior seminar, you signed up during last year's lottery for either Dr. Hill's “Medical Mycology” (Tu/Th 4-5:15) or Dr. Davis's “Conservation Physiology” (Tu/Th 11-12:15). Although we have your name on a list, you will still need to enroll yourself by entering the seminar CRN on your tree under “other courses” when you pre-register this fall. If you suddenly find that your scheduled senior seminar conflicts with another course you need or want, consider the option of taking the BCMB senior seminar. The



BCMB seminar meets Mon & Wed from 4:30-6, and students enrolling need to have taken Molecular, Cell, or Biochemistry. Contact Dr. Loprete if you are interested.

### **BIOL 486 (1):**

Dr. Terry Hill's spring seminar, "Medical Mycology," will meet on Tu/Th 4:00-5:15. The course will focus on fungal pathogens of humans and other animals – with student elected topics such as molecular mechanisms of pathogenesis, the ecology of fungal pathogens, cellular aspects of development, molecular biology of drug resistance, recent



advances in vaccine development. Emphasis will be placed upon recent research from the primary literature, selected, presented, and discussed by students in the class. All students will be responsible for

submitting summaries and discussion questions from the assigned readings and for evaluating one another's work.

**BIOL 486 (2):** Meeting on Tu/Th 11:00-12:15, the spring seminar offered by Dr. Jon Davis will cover the topic of Conservation Physiology. The course will use readings and discussions of recent primary literature to examine three aspects of

this emerging field. We will begin with contemporary physiological approaches to conservation biology and continue on to conservation physiology in zoos – with key examples



from the Memphis Zoo. The course will culminate with student-led critical evaluations of the manner in which recent discoveries and techniques may be applied to important conservation questions.

### **Environmental Science Minor**

If you have an interest in environmental issues, perhaps an Environmental Science Minor is for you. Check out <http://www.rhodes.edu/academics/9081.asp> for specific information and/or stop by Drs. Kesler or Cappellato's offices to chat.

### **Coral Reef Ecology**

Have you ever thought about SCUBA diving in the Caribbean? Do you want to learn to recognize different species of coral or tell the difference between a hogfish and a grouper? If so, think about registering for Coral Reef Ecology.

The two-hour course, Bio 253, is given on campus next

term and the two-hour Bio 254 (counts as an F11) is given in Honduras, tentatively from May 30- June 13, 2009. Together these four hours count as an upper-level biology course, and they fulfill an Environmental Science Minor requirement. Students taking Bio 140 next semester are eligible to enroll in Bio 253. Since admission into this course is by permission only, you must talk with Dr. Kesler before registration if you are interested in gaining admittance to BIO 253. There will be an information session October 30th in FJB at 4:15 PM. Please try to attend if you have any interest in taking Coral Reef Ecology.



**Environmental Issues in Southern Africa (BIO 212)** and the **Environmental Field Study in Namibia (BIO214)** are not currently scheduled for next semester. However, if enough students wish to go (7 students), then the class and the trip will be offered. In previous years, the class visited the Namib Desert, dry thornveld savannas, and the Kalahari sands, along with meeting indigenous people, NGOs, and governmental officers involved in local environmental issues. This year, the trip (if offered) would include the Okavango Delta in Botswana, home to numerous species, including elephants, hippos, and Nile crocodiles. Together, the 2-credit spring course at Rhodes (Bio 212) and the 2-credit summer trip to Namibia (Bio 214) fulfill an upper-level Biology course requirement, an Environmental Science requirement, and the F11 requirement. Students who are interested in going should attend an informa-



tional session held by Dr. Cappellato on October 28th at 4:00 PM in the Biology Seminar room (FJ140E). Because the response of students attending this meeting will

help to determine if the course is offered, please contact Dr. Cappellato if you are interested but cannot attend on the 28th.

**Spring into Biochemistry** For those of you who couldn't get into Biochemistry this semester, or can't wait until next fall, Dr. Loprete will be offering Biochemistry (CHEM 414) this spring on MWF at 11-11:50.

**Alumni Luminescence** In Ecology class, you may have mapped the distribution and migration patterns of lake microfauna, but what are the dispersal patterns of Rhodes Biology majors? Our students often pass through a diversity of graduate, medical, and other health professions schools, to jobs in universities, labs, the pharmaceutical industry, and other fields. Sometimes, they even come back to Rhodes for a visit. Next semester, alumnus Mike Sears will be a featured speaker

in our spring seminar series. A graduate of the class of 1993, Dr. Sears earned his Ph.D. at the University of Pennsylvania, and received postdoctoral grants afterward to support his research on the physiology



of lizards in the southwestern US. Currently, Dr. Sears is an Assistant Professor of Zoology at Southern Illinois University in Carbondale. He works on the physiological and behavioral ecology of reptiles and small mammals, especially using Geographic Information Systems (GIS) for remote sensing. Dr. Sears began his long string of scholarly publications with a paper based on undergraduate research he did here at Rhodes. "Two larval odonate communities of the Edward J. Meeman Biological Station in western Tennessee," coauthored with Dr. Kesler and other Rhodes students, was published in the Journal of the Tennessee Academy of Science



in 1994. Since then, Dr. Sears's publications have focused on thermal effects and adaptations, and he is particularly interested in how climate change and urbanization can affect community ecology. We look forward to hosting Dr. Sears this spring when he comes to give a seminar on his research. Those of you interested in going on to graduate school may find some helpful hints and insights if you ask Dr. Sears about his "migration" from Rhodes to graduate school, to postdocs, and finally to a university faculty position.

## Signals and Displays (short communications)

### Tennessee Academy of Science Meeting Held Here!

The Western Collegiate Tennessee Academy of Science Meeting will be held at Rhodes on April 4th, 2009. Please start thinking about presenting your research at this meeting. Getting to the meeting should be fairly easy. Contact Dr. Kesler if you have any questions.





## TRI-BETA: The Biology Honor Society

Students interested in associate membership in the Mu Rho chapter of Tri Beta ( $\beta\beta\beta$ ) should contact Caroline Cook at cocj@rhodes.edu . Requirements for associate membership are 1) the completion of at least one Biology course at Rhodes with an overall 'B' average and 2) a \$40 initiation fee, which may count later towards regular membership. Fall induction will be in November. Eligible sophomores and juniors will be contacted within the next two weeks.

Tri-Beta Officers for 2007-2008 are: **Caroline Cook '09 BCMB** (President), **Ryan Jessee '09 Neuro** (Treasurer), and **Matthew Marker '09** (Historian). The positions for Vice President and Secretary are being held for Juniors after full induction.

This semester Tri Beta is offering many opportunities to get involved in the biology department at Rhodes. Details on all events will be posted on the Tri Beta bulletin board. The faculty advisor for Tri Beta is Dr. Rosanna Cappellato (cappellator@rhodes.edu).

### Get Your Work in Print!

After hours of hard work in the lab or field, why not publish your research in the Rhodes Journal of Biological Science? If you're doing research this year or have a completed project, contact Dr. Kesler about submitting your paper. Dr. Kesler is also looking for students to work as editors for this year's journal.

### St. Jude research program going strong

Applications for next year's Summer Plus Research Program will be due in mid-January. Keep a lookout for notices or e-mails informing you of the details. See <http://www.rhodes.edu/academics/1115.asp> for additional information, or contact Dr. Ann Viano (viano@rhodes.edu or x3912).



## Optimal Foraging

The following courses will be offered next semester

NUMBER	COURSE TITLE	HOURS OFFERED
140	Biology II	MWF 9 -9:50, 10-10:50, 11-11:50, or TuTh 9:30-10:45 4 Sections
141	Biology II Lab	Tues 12:30-3:30, Thurs 12:30-3:30, or Wed 1-4:00 5 Sections
204	Mechanisms of Develop. (FitzGerald)	MWF 9:00-9:50, F lab 1:00-4:00
209	Embryology (CJaslow)	TuTh 8:00-9:15
253	Coral Reef Ecology (Kesler)	M 3-3:50 and W 7:15-8:30 pm
301	Microbiology (Luque de Johnson)	TuTh 9:30-10:45, Tues lab 12:30-3:30
320	Conservation Biology (Cappellato)	TuTh 9:30-10:45, Mon lab 1:00-4:00
325	Molecular Biology (Lindquenter)	MWF 10:00-10:50, Thurs lab 12:30-3:30
370	Neuroscience (Blundon)	TuTh 8:00-9:15, Tues lab 1:00-5:00
380	Topics in Biomed Science (Lindquenter)	MW 7:30-8:45 am
CHEM 414	Biochemistry (Loprete)	MWF 11-11:50
<b>Senior Seminar Sections</b>		
486-1	Medical Mycology (Hill)	TuTh 4:00-5:15
486-2	Conservation Physiology (Davis)	TuTh 11:00-12:15
<b>For Non-Majors</b>		
105	Molds and Mushrooms: A Survey of Fungi (Gremillion)	TuTh 9:30-10:45, W lab 1:00-4:00



### Biology Seminar Series

Don't forget the remaining seminar this fall sponsored by the Biology Department. On November 17, our own faculty fellow, Dr. Sara Gremillion,

will be our guest speaker. Dr. Gremillion will present "Cellular traffic jam: mutations in two COG homologues in polarized vesicle trafficking in *Aspergillus nidulans*". Her seminar will focus on the link between vesicle

movement within the Golgi apparatus and growth of the *Aspergillus nidulans* fungus.

## Welcome to Our Newest Department Members

**Dr. Jon Davis:** Dr. Jon Davis is an environmental physiologist who is beginning a three-year post-doctoral fellowship in the Department of Biology at Rhodes and at the Memphis Zoo as a member of the environmental sciences group. He comes from



Arizona, where he earned his B.S. in biology from Northern Arizona University in 2001 and his Ph.D. from Arizona State University in 2008. Dr. Davis's research combines field and lab studies to examine how animals meet physiological needs in variable environments. His dissertation research focused on the morphological, behavioral, and physiological responses used by a desert lizard to tolerate drought in the Sonoran Desert.

During the fall and spring, Dr. Davis will be teaching Introductory Biology labs, and he will teach a Senior Seminar (BIOL 486) on Conservation Physiology during the spring semester. Dr. Davis is also developing his research program in environmental physiology and conservation biology of animals at Rhodes in conjunction with the Memphis Zoo, and he is looking forward to conducting research with students and colleagues at Rhodes. Dr. Davis comments, "If you're interested in gaining field or lab research experience in animal physiology, behavior, and conservation, feel free to swing by my office (142-E) or drop me an e-mail (davisj@rhodes.edu)".

Dr. Davis and his wife, Dr. Hilary Davis, a clinical pharmacist at the VA Medical Center, spend their free time trying to keep their two pugs, Dia and Noche, and German short-haired pointer, Ella, out of trouble by hiking, camping, and exploring their new surroundings in the mid-south.

**Dr. Laura Luque de Johnson:** Dr. Laura Luque de Johnson, a native of Mexico, joins the Department of Biology as an Assistant Professor. She received her B.S. in Biology from Florida International University. Dr. Luque de Johnson went on to receive her M.S. and Ph.D. in Molecular and Cell Biology from the University of Texas at Dallas. She then continued her training as a postdoctoral research fellow at St. Jude Children's Research Hospital, where she studied viral entry and focused on vaccine development.

While at Rhodes, Dr. Luque de Johnson will be studying Malaria (*Plasmodium spp.*) entry into red blood cells as a potential drug target. This semester, she is teaching a course on Biology of Human Parasites as well as Biology Lab I (Bio 131). During the spring semester she will be teaching Microbiology and Microbiology Lab.

Outside of Rhodes, Dr. Luque de Johnson enjoys sharing her native country with others and traveling with her



husband who does research at St. Jude Children's Research Hospital. Together they have visited several archeological sites in the Yucatan peninsula. They are planning other trips to more archeological sites in the near future.



**Dr. Jen Houghton** Dr. Jennifer Houghton will be teaching geology as part of the Environmental Science Program at Rhodes this year. She received a B.A. in Geology from the College of Wooster in 1996 and a Ph.D. in Geology from the University of Minnesota in 2003, specializing in geo-

chemistry. Her research interests focus on the interactions between microorganisms and their geochemical environment, particularly involving iron and sulfur redox reactions in the high temperature and pressure conditions found at seafloor hydrothermal vents.

Dr. Houghton has traveled to the bottom of the ocean in the research submarine, ALVIN, to study hydrothermal alteration of the earth's crust in action. During graduate school, Dr. Houghton discovered a beautiful thing called microbiology, which, she says, "...involves catalyzing virtually any redox reaction into overdrive so that geochemical experiments that used to take 3 months, now take 3 hours. How cool is that?"

After taking a break to "just be a mom" when her first son was born with an endocrine problem, Dr. Houghton realized it was impossible to stop doing science. She is excited to be in the Environmental Science interdisciplinary program at Rhodes. When asked about her life outside the classroom, Dr. Houghton commented, "When I'm not trying to do too many projects at once, I am trying to simplify the convoluted engineering plans of my older son while trying to prevent my younger son from dismantling his older brother's creations ("trying" being the operative word)".

### 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 November 14, 2008. If there are multiple correct entries, the winner will be selected by a random draw.



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