



BIOrhythms

Washington University Biology Department Newsletter

November 2015

Do You Have...

An announcement you'd like to make?

An interesting story or fun fact you'd like to share?

A professor or course you'd like to suggest for a spotlight?

We want your input! Send ideas and information to:

gerrity@biology2.wustl.edu

Helpful Links

[Biology Home Page](#)
[Biology Course Listings](#)
[Faculty Listings](#)

BIOrhythms is a publication of the Washington University Biology Department for Undergraduate Majors

Contact Erin Gerrity to submit articles/info

Erin Gerrity
Editor-BIOrhythms
Biology Department
Washington University
Plant Growth 105
Campus Box 1137
St. Louis, MO 63130-4899
314 935-5064
gerrity@biology2.wustl.edu

Featured in this issue:

Faculty Spotlight: **Maggie Schlarman**

Course Spotlight: **Bio 3493: Bacterial Bioprospecting and Biotechnology**

Organization for Tropical Studies: **Field Work**

Career Center: **Upcoming Events**

Student Groups: **Synapse**

Calendar: **Biology Events and links to event listings**



Faculty Spotlight: Maggie Schlarman



Dr. Maggie Schlarman is originally from the St. Louis area. She completed her undergrad and graduate work at the University of Missouri in Columbia (Mizzou) in the Microbiology and Immunology Graduate Program where she studied malaria in Dr. Brenda Beerntsen's Lab. Dr. Schlarman's parents were both public school teachers. Her father taught high school science and fostered her early interests in science. Growing up in a household of educators sparked her interest in teaching. She had exposure to a broad variety of scientific topics growing up, but became specifically interested in microbiology after

taking an undergrad college course in the subject. She was fascinated by the idea that something so small could have such a positive or negative impact on human health. The course instructor and teaching assistant were a major contribution to her enjoyment of the course and the reason she pursued a graduate degree in microbiology. —cont'd on p. 2

WASHINGTON
UNIVERSITY
CAREER CENTER

Locations:

Danforth University Center,
Suite 110 with satellite of-
fices in Lopata Hall, Brauer
Hall and Steinberg Hall

Main Office Hours in the
Danforth University Center:
Monday-Friday: 8:30-5:00

Contact Us:

Phone: 314.935.5930

Fax: 314.935.5905

E-mail: careers@wustl.edu

Website: careercenter.wustl.edu

Have a Quick Question?

You can always stop by the
Career Center's Quick
Question hours in the main
office Monday-Friday, 11am-
5pm for assistance with
CAREERlink, writing your
resume and cover letters, or
for quick guidance.

UPCOMING CAREER
CENTER EVENTS

Apply now for the ACE
Program

The Alumni Career Extern-
ship (ACE) is Washington
University's career develop-
ment shadowing program
held over Spring Break
2016. Students will have the
unique opportunity to learn
from an experienced alum
on the job. Students must
submit a resume and cover
letter by December 6 to be

—CONT'D ON NEXT PAGE

Course Spotlight: Bio 3493: Bacterial Bioprospecting and Biotechnology

Many bacteria are essential in food industry (fermentation of meats, cheeses, and beverages), agriculture (crop protection against weeds, pathogenic bacteria, and fungi), biotechnology (producing fine chemicals, cofactors, amino acids, and industrial enzymes) and the pharmaceutical industry (producing clinical antibiotics, anticancer, antiviral, veterinary, and immunomodulatory drugs). This laboratory course examines how basic biological understanding can lead to discovery of bacterial products, enzymes and activities useful to humankind. We combine core concepts from biochemistry, bacterial genetics, bioinformatics, chemistry and enzymology to study bacteria from the genus *Streptomyces* and close relatives. Lines of inquiry include environmental isolations, molecular toolbox and host development, plus bioinformatic and laboratory-based analyses of secreted proteins and antibiotics. Prerequisites: Bio 2960 and 2970. One hour of lecture and six hours of laboratory per week. This course fulfills the laboratory requirement for the Biology major. Enrollment limited to 16. Credit 3 units. J. Blodgett

Faculty Spotlight Cont'd— Dr. Schlarman enjoyed her time doing research, but knew that she wanted to teach primarily as a career. She took advantage of programs for science teaching at Mizzou. She wanted to move back to St. Louis to be near family, so she joined the Biology Department at Wash U in August 2014. She teaches all of the Bio 3491 Microbiology Labs and helps with Bio 2960 and 2970 intro biology labs. Many students think that they need to take Bio 349 Microbiology lecture either before or alongside the Lab, but that is not necessary. Bio 3491 is mostly lab work, but also includes some lecture time, hitting the highlights about the important concepts behind the experimental work. Students learn basic skills that apply to all lab studies such as accurate pipetting, how to organize lab materials and record data. The microbiology work covers a broad spectrum of teaching on antibiotics and antibiotic resistance, looking at growth conditions, environmental factors, hygiene and bacterial transmission (specifically with regard to disease), and the importance of a sterile work environment.

Once the students have learned some different lab techniques, they look at environmental conditions as variables, conduct various staining procedures on bacteria, and use diagnostic media to perform tests. As a final project, students take samples from themselves and use the techniques they learned to isolate bacterial species and determine a preliminary identification. Eventually, DNA is isolated and sent for sequencing to confirm the identity of those species using the DNA sequencing facility in McDonnell Hall on campus. Dr. Schlarman enjoys teaching the basic concepts that will aid students through the rest of their courses and careers in biology. The small size of the lab makes it easier for her to work more closely with students and field their questions and problems. She is also a major advisor helping students map out the courses they need to take to graduate with a Biology degree.

Outside of the classroom, Dr. Schlarman enjoys running, spending time outdoors and doing many of the fun activities St. Louis has to offer with her husband and two small children. She's involved with the Big Brothers Big Sisters program, so she also spends time doing fun things with her Little Sister.

Organization for Tropical Studies Field Work Opportunities



Las Cruces Biological Station

tropical ecosystems throughout Costa Rica, but it also allows students to conduct their own independent research outside of the United States as an undergraduate. Students are housed in biological field stations throughout the semester while working closely alongside faculty and peers. Although coursework is primarily focused on tropical biology, this program also provides students the chance to improve their Spanish speaking skills during a homestay in the capital, San José. The Spring 2016 application deadline is December 1st and the Fall 2016 deadline is April 1st.

For more information contact OTS in Costa Rica alumna, Megan Freiler (mkfreiler@wustl.edu), or visit the program website: <http://education.tropicalstudies.org/en/education/undergraduate-opportunities/programs/tropical-biology-on-a-changing-planet-semester-in-costa-rica.html>.

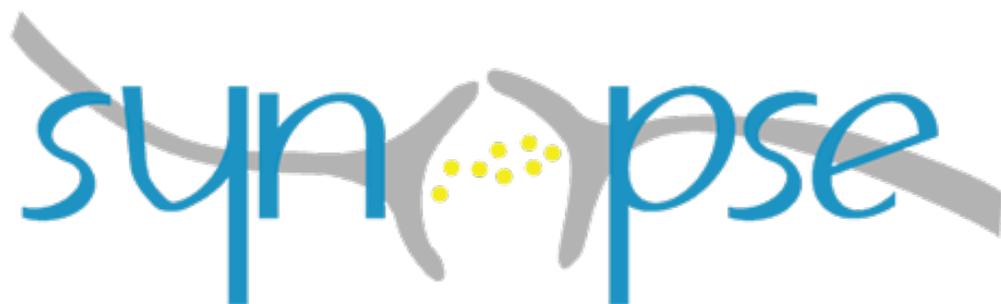
For students interested in conducting international fieldwork in ecology and conservation, the Organization for Tropical Studies (OTS) offers integrative, research-focused study-abroad opportunities. They have both semester and summer sessions for their Tropical Biology on a Changing Planet in Costa Rica program. This is not only a unique experience to live in various diverse

Career Center cont'd— considered for this alumni shadowing opportunity. More details in CAREERlink.

Career and Internship Connections (CIC): Jan 5 – 8
These off-campus events held in Boston, Los Angeles, New York, and Washington, D.C. are an excellent opportunity to network and interview face-to-face for entry-level jobs and internships with a variety of employers. Submit your resume via the CIC website by November 30 to be considered for interviews. Students are still encouraged to attend if they do not register by that date.

Spring 2016 All-Campus Internship & Job Career Fair: February 4
The fair will take place from 4 to 8 p.m. on February 4th, in the DUC, 2nd floor. Students can view registered organizations, research positions, and sign up for employer-hosted information sessions by logging into CAREERlink.

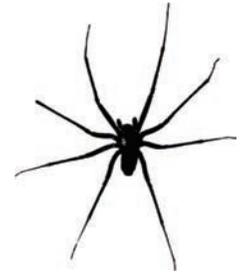
For more upcoming events, go to careers.wustl.edu/events.



Synapse will be hosting a fundraiser at Seoul Taco, 6665 Delmar Blvd, on December 1st from 5:30-8 pm. 10% of all purchases of at least \$12 will be donated to Synapse. Come support Synapse and enjoy some delicious food!



Biology Department Calendar



Links to General Calendars and Regular Events:

Washington University Record Calendar: <http://news.wustl.edu/Pages/Calendar.aspx>

Biology Department Seminars, Mondays, 4:00pm, Rebstock 322, check the website for topics/schedule: <http://wubio.wustl.edu/events>

Evolution, Ecology, & Population Biology Seminars, Thursdays, 4:00pm, Rebstock 322, check the website for topics/schedule: http://wubio.wustl.edu/events?field_event_tags_tid=18

History & Philosophy of Science Seminar Series: <http://pages.wustl.edu/hpbm/events>

PMB Super Group: most Tuesdays 9:00-10:00 in McDonnell 362:
<http://wubio.wustl.edu/events/pmb-supergroup-seminar-series>

Donald Danforth Plant Science Center (DDPSC), Weekly Seminar Series—check the website for event details and topics: <http://www.danforthcenter.org/events/scientific-seminars>

Division of Biology & Biomedical Sciences (DBBS), all lectures and seminars: <http://dbbs.wustl.edu/Pages/Events.aspx>



November 2015

25th Thanksgiving Break

December 2015

5th Last day of classes

7th Reading period and exams begin

January 2016

18th Dr. Martin Luther King Jr Holiday-NO CLASSES

19th First day of classes

