

BIOrhythms

Washington University Biology Department Newsletter

April 2015

“The essence of life is statistical improbability on a colossal scale”

—Richard Dawkins

Helpful Links

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[Faculty Listings](#)

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

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Featured in this issue:

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Course Spotlight: Bio 349: Microbiology

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Faculty Spotlight: Arpita Bose, Assistant Professor of Biology



Arpita Bose grew up in New Delhi, India, where her father was a mathematician and political scientist, applying math to national and global politics. Her parents could see her interest in science at an early age and encouraged her to explore it by exposing her to museums and other educational outlets. She completed her undergraduate degree in microbiology at the University of Delhi, citing her first exposure to microbiology in 9th grade as the catalyst for her educational path to the research she conducts now. She was fascinated

by the fact that we are surrounded by a whole world of microbes that we can't see yet they play important roles in all of our lives. During her graduate work and post-doctoral research, she used genetics, biochemistry and molecular biology to understand microbial metabolism.

Dr. Bose earned her master's degree at the All India Institute of Medical Sciences in New Delhi, where her research dealt with understanding the physiological response of *Mycobacterium tuberculosis* to hypoxia. She decided to study abroad to complete her PhD in the lab of William Metcalf at the University of Illinois at Urbana-Champaign. At this point she changed her research focus from immunology & microbial

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WU CAREER CENTER SUMMER OPPORTUNITIES

Locations:

Danforth University
Center, Suite 110 with
satellite offices in Lopa-
ta Hall, Brauer Hall and
Steinberg Hall

Main Office Hours in
the Danforth University
Center: Mon-Fri: 8:30-
5:00

Contact Us

Phone: 314.935.5930

Fax: 314.935.5905

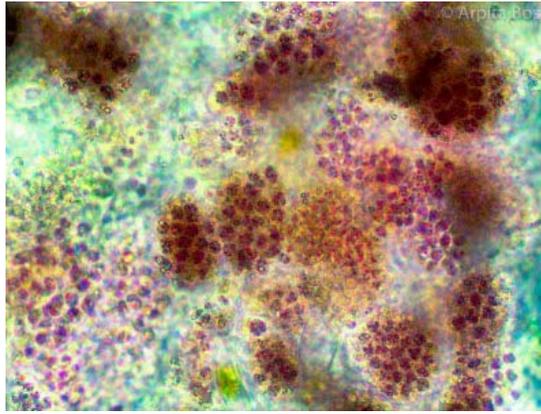
Email: careers@wustl.edu

Web: careercenter.wustl.edu

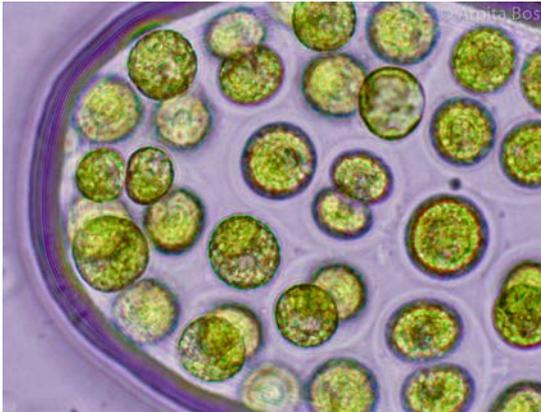
Have a Quick Question?

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

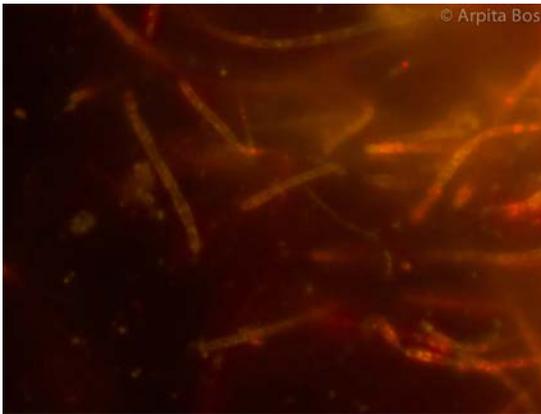
*****SEE NEXT PAGE FOR
UPCOMING SUMMER & POST-
GRADUATE OPPORTUNITIES**



Phototrophic consortia from Little Sippewissett Salt Marsh



A mistake - Chlamydomonas where you don't want it:)



Another mistake - Cyanobacteria showing autofluorescence where you don't want them!

Bose cont'd—pathogenesis to micro-
bial physiology, specifically metha-
nogenesis, performed by the poorly
understood archaea. During this period
she took, and subsequently taught, the
Microbial Diversity Summer course
at the Marine Biological Laboratory
in Woods Hole, MA that exposed her
to a wide range of microbial capabili-
ties. She was particularly fascinated by
phototrophic bacteria and decided to
pursue research on them in the lab of
Dianne Newman at MIT.

Following this research experience she
transitioned to Peter Girguis' lab at
Harvard University, where she used a
combinatorial approach to study micro-
bial metabolism at the environmental
level.

The Bose Lab's research focuses on un-
derstanding various microbial metabo-
lisms and leverages that information to
find sustainable solutions to issues such
as the energy crisis, climate change and
environmental pollution.

In addition to her lab research, Dr.
Bose will be teaching Bio 349 for un-
dergrads and developing a future work-
shop on Geomicrobiology. For more
information on Bose Lab's research and
opportunities for undergrads to get
involved, visit the website at: [https://
sites.google.com/site/arpitaboselab/home](https://sites.google.com/site/arpitaboselab/home).

Course Spotlight: Bio 349: Microbiology

This four - credit lecture course focuses on the molecular biology of bacteria, archaea, and viruses. Topics include: the bacterial cell cycle, gene regulation, stress response, cell-cell communication, viral and bacterial pathogenesis, microbial ecology, and metabolic diversity. Friday tutorials stress analysis of the primary literature with an emphasis on current research related to material covered in lecture. Prerequisites: Biology 2960, and 2970, or permission of instructor.

Spector Prize Winner: Will Pierson



Each year, the Department of Biology in Arts & Sciences at Washington University in St. Louis awards a prize to a graduating senior in memory of Marion Smith Spector, a 1938 graduate who studied zoology under the late Viktor Hamburger, PhD.

This year, Will Pierson has won the prize.

The Spector Prize, first awarded in 1974, recognizes academic excellence and outstanding undergraduate achievement in research. Students are nominated by their research mentors for outstanding research that has made substantial contributions to a field.

Pierson worked in the lab of Hani Zaher, PhD, assistant professor of biology. His thesis was titled “Release Factor Methylation: a Mechanism for Kinetic Uniformity in Translation Termination.”

After graduation, Pierson will work in technical services at Epic Systems Inc. in Madison, Wisconsin.

Stalker Award Winner: Adam Schefkind



Adam Schefkind has been selected to receive the 2015 Harrison D. Stalker Award from the Department of Biology in Arts & Sciences at Washington University in St. Louis.

This award is named in honor of the late Harrison D. Stalker, a renowned evolutionary biologist and a world-class photographer.

The award is given annually to a graduating biology major whose undergraduate career combines outstanding scientific scholarship with significant contributions in the arts and humanities.

Schefkind, a biology major with minors in public health and in jazz studies, all in Arts & Sciences, also plays the alto saxophone in small jazz ensembles. This year, he became the first student to headline Jazz at Holmes.

Report Your Plans – Win \$100

Report your summer or post-graduate plans by June 1 for a chance to win \$100!

Whether you're traveling, taking classes, starting an internship or full-time job, or planning on attending graduate school, we want to know! Please take 30 seconds to **report your plans** for summer 2015 or after graduation before the contest ends June 1.

Upcoming Internship and Full-time Job Opportunities

Medical Scribe

St. Anthony's Medical Center
Apply here – Deadline May 1

Memorial Hospital Scribe

MedAmerica, Inc.
Apply here – Deadline May 1

Computational Chemistry and Biology Opportunities

The D.E. Shaw Group
Apply here – Deadline May 9

Part-time Blood Lab Technologist

American Red Cross
Apply here – Deadline May 15

Clinical Information Manager (CIM) / Medical Scribe

Emergency Medical Associates
Apply here – Deadline June 1

For more upcoming opportunities, visit **CAREERlink**.

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 Wednesdays 12:00-1:00 in McDonnell 412: <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 and Biomedical Sciences (DBBS), all lectures and seminars: <http://dbbs.wustl.edu/Pages/index>

May 2015

13th Honors Reception for Students, Mentors and Families

14th Arts & Sciences Recognition Ceremony
Biology Major Graduates Celebration

15th **COMMENCEMENT**

18th Summer Session I begins

25th Memorial Holiday-NO CLASSES

