



BIOSPHERE

The Weekly Bulletin of Biology

Biology Colloquium: Friday, 18 September 2015, 2:00 pm in CR 5125

“The Northern Elephant Seal: Nature’s Antioxidant”

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Women in Science

The first WiS meeting will be at **12:30–1:30 pm on Friday, 18 September in CR5102**. WiS is open to all scientists. They will hold elections for officers during this first meeting and discuss up-coming events. Email current WiS President, [Nickie Cammisa](#), for more information about the positions.

Gorchynski Awards

Alumna **Julie Gorchynski**, M.D. established a number of awards in honor of the Dr. **Steve Oppenheimer’s** Center for Cancer and Developmental Biology. Last May’s winners were:

- **Sean Dunagan**: *Graduate Research Award*
- **Erica Holdridge**: *Graduating Masters Student Award*
- **Malachia Hoover**: *Graduate Student Research Award*
- **Thu Duong**: *Undergraduate Research Award*

- **Tania Benjamin**: *Graduating Senior Award*

- **Terri Miller**: *K–12 Teacher Research Award*

Major New Funding—Permafrost

NASA’s Exobiology Program has funded Dr. **Rachel Mackelprang** for three years and \$1,300,000 (some of it going to her collaborators at the USGS). One of NASA’s goals is to investigate how life survives in extreme Earth environments to better understand how life might survive in extraterrestrial environments (i.e., space).

Six of the planets in our solar system (as well as their moons, and nearby asteroids and comets) are frozen. So if life exists on these celestial bodies, it is most likely to be found in subzero environments. If we know how life grows and survives in permanently frozen environments on Earth, it may help to understand how life (if it exists elsewhere) survives in extraterrestrial environments.

Dr. Mackelprang's team studies permafrost, soil that has been frozen for a long time—sometimes for hundreds of thousands of years. It is found in the Arctic and Antarctic. Microbial life exists in permafrost, but we don't know what adaptations enable survival in these very ancient frozen soils. For this research project, Mackelprang's group will collect samples from some of the oldest permafrost in the Arctic. Goals include finding out which organisms are capable of survival and growth and determining what strategies they use to withstand life on ice.

Student Receives Funding

Leah Jacobs received an *Amphibian Survival Alliance Seed Grant* to study sperm production and viability in Red-Eyed Tree Frogs as related to hormones. The funding organization is [blogging](#) about Jacobs's progress.

Grads Receive Fellowships

Each year, the College of Science and Mathematics selects four graduate students to receive the *Graduate Fellowship for Outstanding Research Promise*. The 2015–16 fellows include Biology students **Marjan Akopyan**, **Loni Hands**, and **Zoë Scott**.

Summers in Germany

In August, Dr. **Michael Summers** visited collaborators at the University of Tübingen and gave a seminar. He then presented a talk and poster at the International Symposium on Photosynthetic Prokaryotes meeting, also in Germany.

New Publications

BBRC has published, "Identification of a PEAK1/ZEB1 signaling axis during TGF β /fibronectin-induced EMT in breast cancer," by **Megan Agajanian**, **Farhana Runa**, and **Jonathan Kelber**. This work demonstrates for the first time that the non-receptor tyrosine kinase (PEAK1) is essential for a certain kind of up-regulation in breast cancer. This study employed breast cancer cells to identify a novel signaling axis.

Dr. **Randy Cohen**'s lab wrote a review article, "The use of regenerative medicine to establish structural and functional improvements in the cerebellums of patients with Ataxia." The review was published by *Horizons in Neuroscience Research*. Coauthors include graduate student **Rus Nuryyev** (first author), undergraduate **Brandon Griess** (MRBS-RISE and CSUN-UCLA BRIDGES), former undergraduate students **Leah Streb** and **Brieana Rodriguez**, and vivarium technician **Toni Uhlendorf**.

Herpetological Review published a new distribution record for the Mediterranean House Gecko in California, by **Gillian Larson** (grad), **Tanja Wolfmeyer** (undergrad), **Benjamin Singh** (undergrad), **Robert Espinoza**, **Christopher Huntley** (former Biology grad student), and **Greg Pauly** (adjunct faculty).

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