



**CUR BIOLOGY
DIVISION
NEWSLETTER
WINTER 2017**



**Biology Division
Student Travel
Awards**

More than 30 applications were submitted for the Fall Student Travel Awards. Four deserving students were selected to receive an award of \$250 each.

**Fall 2016
Student Travel Award
Recipients:**

**Beverly Andre
Bloomsburg University**

Mentor: Cynthia Surmacz
Conference: Society for Integrative and Comparative Biology
Abstract Title: Sublethal Stress Associated with Apiary Treatments for Varroa Mites

**Lacey Dickerman
North Dakota State
University**

Mentor: Wendy Reed
Conference: Society for Integrative and Comparative Biology
Abstract Title: Melatonin & Receptor Signaling: Investigating Roles in Embryo Development in Chicken Eggs

**William (Colby) Star
Oklahoma State
University**

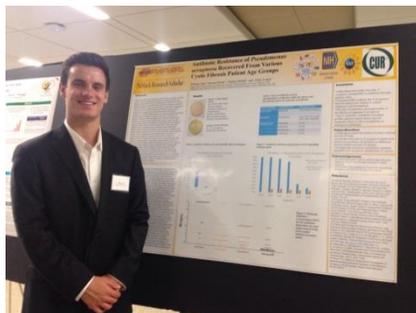
Mentor: Erika Lutter
Conference: Great Plains Infectious Diseases Meeting
Abstract Title: Antibiotic Resistance of *Pseudomonas aeruginosa* Recovered from Various Cystic Fibrosis Patient Age Groups

**Xavier Hernandez
Illinois State
University**

Mentor: Nathan Mortimer
Conference: Midwest Drosophila Conference
Abstract Title: Modelling autoimmune disorders in *Drosophila*: A genetic modifier screen.

Awardee **Colby Star** had this to say about attending the Great Plains Infection Diseases Meeting: "As I pursue my career goals of an MD/PhD, GPID has set me up for an opportunity for immeasurable success. I was able to interact one on one with a Principal Investigator who was doing exactly the research I want to be doing in the years to come. This, of course, would not be

possible without the generous support of the Council on Undergraduate Research.”



Applications for the spring award for meetings held between February 16-June 30, 2017 closed January 13, 2017.

Submitted by:

Karen K. Resendes

Associate Professor of Biology and Molecular Biology Program
Coordinator, Co-PI IQ: STEM Noyce Teacher Scholarship Program
Westminster College
New Wilmington, PA
724-946-7211
resendkk@westminster.edu

**Updates on
Vision & Change
and *PULSE***

David Ribble
dribble@trinity.edu

Have you heard the buzz about **PULSE**-Partnership for Undergraduate Life Science Education? If you have not, I encourage you to check out the PULSE website at www.pulsecommunity.org and join the PULSE community. PULSE grew in response to the publication of *Vision and Change* in 2011 (see visionandchange.org) that focused on improving undergraduate biology education in all types of academic institutions. PULSE began in 2012 and as of April 2016 became a 501(c)(3) nonprofit. PULSE is all about encouraging departments to change through critical assessment and developing a shared

vision of the department's future. One of the many useful tools for change available through PULSE is a set of rubrics (Vision & Change Rubrics v2.0) that departments can use to assess the extent to which their curriculum aligns with *Vision and Change*. Departments have the opportunity to be recognized for their transformation efforts through the Vision and Change Recognition portal (www.pulsecommunity.org/page/recognition). The Vision and Change Rubrics cover five areas, including Curriculum Alignment, Assessment, Faculty Practice/Faculty Support, Infrastructure, and Climate for Change. Undergraduate research is, of course, an important feature of higher level learning among students, so not surprisingly the ideals of CUR are seen throughout this assessment tool.

Furthermore, 4 of the 5 areas of the rubrics are generally applicable across all science disciplines (see Brancaccio-Taras et al. 2016) and therefore of broad interest to all members of CUR, not just those of us in the Biology Division.

PULSE is organized into regional networks that have been important in sponsoring workshops for departments willing to engage in departmental transformation. So check into your geographic region on the PULSE website to see what is happening! And lastly, for departments seeking assistance with changing their curriculum and pedagogical practices, PULSE can provide workshops on facilitating departmental change on your campus through an Ambassador Program (www.pulsecommunity.org/page/ambassador-program).

I encourage you to visit PULSE and join the PULSE community if you have not done so already —there is much to offer for those of us engaged in undergraduate education.

Resources

Vision and Change 2011 Report in Undergraduate Education: A Call to Action. Available at: www.visionandchange.org/files/2011/03/VC-Brochure-V6-3.pdf

Brancaccio-Taras L, Pape-Lindstrom P, Peteroy-Kelly M, et al.; Tomanek D, ed. The PULSE Vision & Change Rubrics, Version 1.0: A Valid and Equitable Tool to Measure Transformation of Life Sciences Departments at All Institution Types. *CBE Life Sciences Education*. 2016; 15(4):ar60. doi:10.1187/cbe.15-12-0260.



2016 CUR Outstanding Mentor Awards Biology Division

**Submitted by
Shere Byrd, Fort Lewis
College, Durango, CO**

AWARD WINNERS

Dr. Gina Lamendella, Assistant Professor of Biology at Juniata College in Huntingdon, PA, was selected as the outstanding early-career mentor in the CUR Biology Division for 2016. Dr. Lamendella received her doctorate in Environmental Science and Engineering in 2009 from the University of Cincinnati and began working with undergraduates at Juniata College in 2012. Since that time, she has mentored 47 undergraduates and coauthored 14 publications with many of her mentees. Her students have presented their research nationally and internationally and

many have received awards for their work. Additionally, Dr. Lamendella received the 2016 Juniata College Gibbel Award for Teaching Excellence. One student nominator had this to say: "She leads by example in teaching how to trouble shoot and produce creative solutions to complex problems. Through working with Dr. Lamendella, I learned that research is a process rather than an end-goal." Her colleagues say that "[s]he has lent her expertise to elevate the academic program within biology and other departments at Juniata."

Dr. Ryan Bavis, the Helen A. Papaioanau Professor of Biological Sciences at Bates College in Lewiston, ME, and currently chair of the Department of Biology, is the recipient of the mid-career mentor award. Dr. Bavis received his PhD in Organismal Biology and Ecology from

the University of Montana. He started his career at Bates in 2003 and during his tenure there has mentored 59 biology, neuroscience, biological chemistry, and interdisciplinary study majors in their thesis work. Additionally, he has sponsored 34 summer research students and numerous independent study and internship students. These efforts have resulted in over 19 publications with undergraduate coauthors. His mentees say that Dr. Bavis taught them that "science is an ever-evolving collection of facts, ideas and windows of opportunity" and that "life works out in its own way and if you put your mind to it, you can reach your own goals."



Academic Program Review Services

**Submitted by
Shere Byrd, Fort Lewis
College, Durango, CO**

The CUR Biology Division offers program review services to academic departments, divisions, and schools or colleges. We provide these services by calling upon CUR members in different subfields of biology who share our vision and goals for best practices in undergraduate research and creative activities, and who have thought deeply about undergraduate education. Our reviewers are experienced in visiting biology programs where they listen to you and provide the help you need.

Our reviewers have a wide range of expertise. They can assist you in:

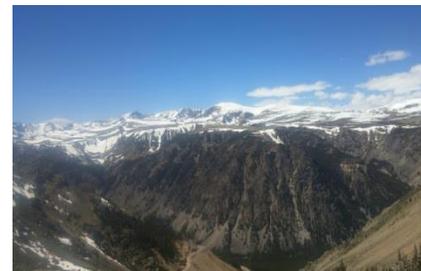
- Evaluating your curriculum, program,

- department, or division,
- Assessing or evaluating your undergraduate research program on various types of campuses,
- Preparing for an accreditation visit, and
- Transforming or rejuvenating a department.

Reviewers come to your campus to perform a traditional departmental or divisional review and provide a report for your department or administration. The recommended fee structure for reviews is \$600 per consultant per day on site, plus a \$300 report writing fee and a \$500 CUR Charge (not charge to CUR Institutional Members), but prices and needs are negotiable. Additionally, the institution is responsible for all travel and related costs (housing and meals) for the reviewers associated with the site visit.

The Biology Program Review Liaison will work with you to develop a work plan. The committee will ask you for background information on your campus and what you expect to gain from the review. This allows the liaison to work with you to identify the best people to meet your review needs.

Institutions wishing to set up a review should contact Program Review Committee Chair Kimberley Frederick (kfreder1@skidmore.edu) four to six months prior to the expected date of the visit, as scheduling reviewers often requires significant lead time.



**Summer 2017:
BIO 430
Field Ecology—
Ecology of
the Rockies
July 23-Aug 14, 2017**

Dr. Lonnie J. Guralnick will be offering his field ecology course, "Ecology of the Rocky Mountains," this summer. This is a 3-credit-hour field course teaching techniques in community and ecosystem ecology of the Greater Yellowstone Ecosystem.

Students study the roles of fire, the white pine bark beetle, and climate change in the ecology of the Beartooth Mountains. Students learn field techniques and design a research project. The group will visit Yellowstone National Park and stay at the

Yellowstone-Bighorn research station in Red Lodge, MT. A visit to the Museum of the Rockies is included. The cost for the course is ~\$3,000, which includes room & board, entrance fees, and tuition. Airfare to Billings, MT, is not included.

Prerequisite: one course in introductory biology covering ecology and evolution.

Contact:
Dr. Lonnie Guralnick at lguralnick@rwu.edu for more information.

Building a National CUR Student Ambassador Program (CURSAP)

Submitted by Vicki Martin, chair of CUR Student Programs Task Force, North Carolina State University

The CUR Student Programs Task Force is laying the groundwork to pilot a proposed new

national student advocacy and leadership program called the CUR Student Ambassador Program (CURSAP). This program is designed to recruit from throughout the United States outstanding undergraduate students who have excelled in research and creative activity; train and empower these students to promote the practice of undergraduate research, scholarship, and creative activity; and provide them with valuable leadership skills and professional development. In the first year of full operation, the CUR Student Ambassadors Program (CURSAP) will recruit three juniors from each state, Puerto Rico, and the District of Columbia to serve as ambassadors. These students will attend a CURSAP fall conference and then return to their schools/state to promote undergraduate research and creative activity. The

same students, as seniors, will return to the following year's fall CURSAP conference and mentor/engage/train the next new cohort of juniors recruited to the program.

When the program is fully operational, institutions may nominate up to two juniors each year. If an institution nominates two students, they must represent two of the three following areas: natural sciences and engineering, social and behavioral sciences, and arts and humanities. Nominations must be endorsed by the institutional leader (president or chancellor) with the promise of institutional support for an ambassador's participation in two fall CURSAP conferences (attending once as a junior and a second time as a senior). Nomination letters must also provide evidence that the institution is committed

to supporting student advocacy through faculty mentorship and outreach on behalf of undergraduate research.

CURSAP will provide a venue/opportunity for students (and their faculty mentors and institutions) to be recognized for outstanding accomplishments or potential in undergraduate research and creative activity. It will also assist in the effort of establishing CUR as a key voice and source of inspiration for undergraduate research throughout the United States. CURSAP will provide a valuable venue for student professional development and networking with peers. It is especially important that we provide this group of future leaders with an understanding of scholarly practices across the disciplines, so as informed citizens (educators, parents, future faculty, future donors), they may be

further inclined to engage in interdisciplinary research and poised to advocate for undergraduate research and creative activity in all disciplines.

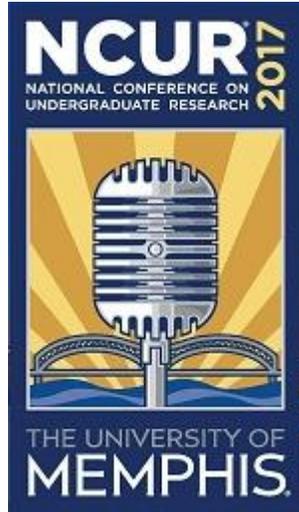
CURSAP will use the ambassadors to promote and advocate for the practice of undergraduate research and creative activity at the local, regional, and state levels. Potential topics that students might be mentored in include: beginning/enhancing a campus undergraduate research ambassador program; talking about their research skills to employers and graduate schools; promoting NCUR, Posters on the Hill, and other student presentation opportunities; serving as a keynote speaker or introduce a keynote speaker at a campus "celebration of scholarship and creative activity day" and/or state capitol advocacy event; meeting with board of governors, alumni

leaders, development/fundraising staff, campus student leaders to discuss the transformational impact of the educational practice of undergraduate research and creative activity; working with student leaders and undergraduate researchers to advocate for resources, events, policies that support the practice of undergraduate research; working with their campus URO/URC to help deliver needed student programming; providing information on best practices in undergraduate research and creative activity to their department and campus leaders; meeting with state and federal elected officials; advocating for undergraduate research at professional conferences in their discipline; and cultivating relationships between CUR and students which will hopefully continue once these students become faculty members.

The task force will present two sessions on CURSAP at NCUR 2017 Memphis, one for students and one for faculty. We will use these sessions to gather input from faculty, directors, and students to help shape the direction and content of this program. If you plan to attend NCUR 2017, please make plans to attend a session. The task force will launch a small pilot phase of CURSAP in 2017 with a limited number of students from a single state or region. We hope that the proposed CUR Student Ambassador Program will be a signature student program empowering students to be advocates for undergraduate research on their campuses, in their states, and nationally.

For additional information and/or if you would like to provide feedback on the proposed program, please contact Vicki Martin at vjmartin@ncsu.edu

MARK YOUR CALENDARS!



31st National Conference on Undergraduate Research, University of Memphis, April 6-8, 2017

CUR ANNUAL BUSINESS MEETING 2017

NORTHERN ARIZONA UNIVERSITY, FLAGSTAFF, AZ, JUNE 29-JULY 1.

For details, see the CUR website:

www.cur.org/conferences_and_events/annual_business_meeting/



NCUR 2018

UNIVERSITY OF CENTRAL OKLAHOMA, EDMOND, OK APRIL 4-7, 2018

Council on Undergraduate Research Statement on Diversity

The Council on Undergraduate Research is committed to inclusivity and diversity in all of its activities; therefore, CUR will increase and nurture participation of individuals and groups that have been traditionally underrepresented in undergraduate research.

Source: www.cur.org/

NEWSLETTER CONTACTS

The *CUR Biology Division Newsletter* is published twice in most years (fall/winter and spring/summer). To contribute articles of general interest to the division (announcements and notices are also welcome), contact either of the editors:

Terry Conley,
Cameron University,
Lawton, OK
tconley@cameron.edu

-or-

Diana Spencer,
Tulsa Community College
Diana.Spencer@tulsacc.edu



CUR Biology Division
Council on
Undergraduate Research
734 15th St NW, Ste 550
Washington, DC 20005
Tel: 202/783-4810
Email: cur@cur.org
WWW: www.cur.org

Connect with CUR



Otherwise unattributed images used in this newsletter are copyright-free, public domain images and are available from the Agricultural Research Service (ARS) Office of Communications. Their use herein does not infer or imply any ARS endorsement. These resources are available online at:

www.ars.usda.gov/oc/images/image-gallery/