



Scientists and Teachers in Education Partnerships, STEPs, Program  
Oregon State University, 2011 ALS Bldg, Corvallis, Oregon 97331-7303  
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## Express Yourself! Advances in Genetic and Epigenetic Control of Gene Expression

### Explored through the Isolation and Characterization of New Natural Products

#### A Workshop for High School STEM Educators

**Monday and Tuesday, June 27-28, 2016**  
**at Oregon State University, Corvallis campus**

**Michael Freitag**, Associate Professor, Department of Biochemistry and Biophysics  
**Kari van Zee**, Program Coordinator, STEPs and Department of Biochemistry-Biophysics

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Questions contact Kari van Zee, [vanzeek@science.oregonstate.edu](mailto:vanzeek@science.oregonstate.edu), 541-737-1773

**How do scientists isolate new natural products such as antibiotics?**  
**What genetic and epigenetic processes control the production of secondary metabolites?**  
**How is the revolution in sequencing technologies and quantitative molecular biology helping researchers in their quest to find new antibiotics?**

Join us June 27-28th to explore how OSU researchers are isolating and characterizing novel antibiotics from Oregon soil microbes or engineering fungal strains to express new compounds. Send in a soil sample from your favorite place and join us at the workshop as we screen for novel compounds with interesting antimicrobial properties. Through a series of talks, tours, and hands-on laboratory work, we will introduce you to current research going on at OSU in the Departments of Biochemistry and Biophysics, Chemistry, and Pharmacy.

Michael Freitag: <http://biochem.science.oregonstate.edu/content/michael-freitag>  
Sandra Loesgen: <http://chemistry.oregonstate.edu/loesgen>  
Kerry McPhail: <http://pharmacy.oregonstate.edu/users/kerry-mcphail>  
BJ Philmus: <http://pharmacy.oregonstate.edu/users/benjamin-philmus>  
Joseph Spatafora: <http://bpp.oregonstate.edu/spatafora>

There will be opportunities for roundtable discussions with scientists, graduate students, and advisors to ask questions, brainstorm ideas for collaborative projects to involve high school students in research projects, and explore career pathways for students. Participants will have access to the STEPs molecular biology equipment library to use in their classrooms.

**Cost:** Free. Breakfast and lunch included. Limited funds are available to assist participants from out of the area (greater than 1-hour drive) with lodging in Corvallis for one night.

**Registration:** Email Kari van Zee at [vanzeek@science.oregonstate.edu](mailto:vanzeek@science.oregonstate.edu) to reserve a spot. Provide your name, school, subjects taught, and contact information. Limited to 18 participants.

**Deadline to register:** June 15, 2016.