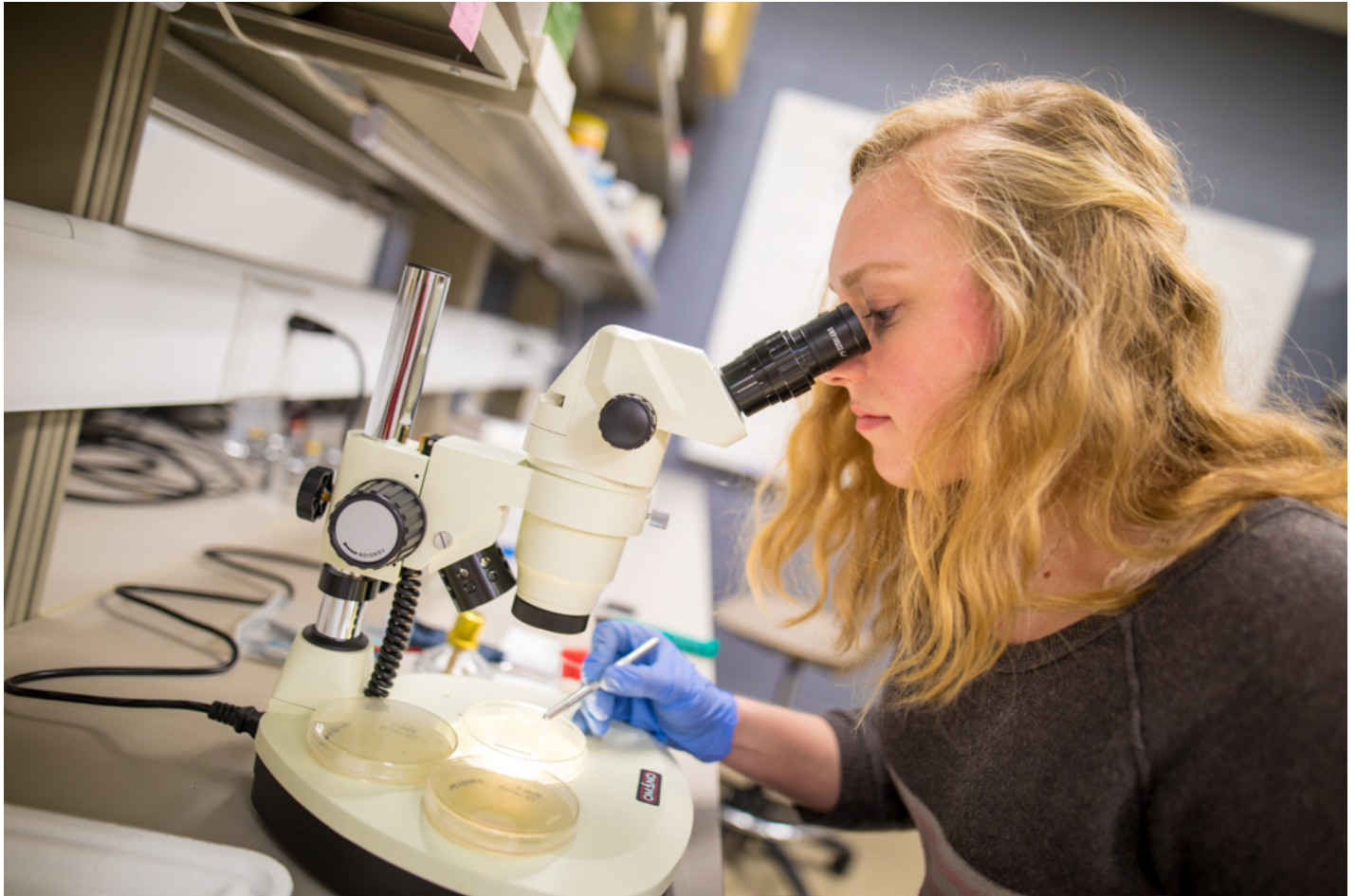


WHAT'S NEW?▼ EVENTS ON CAMPUS▼



Research projects by Caroline Lehman and four other students working this summer with mentoring faculty at Eastern Mennonite University will receive Glenn Kauffman and Roman Miller Research Awards of \$2,500 each. (Photos by Macson McGuigan)

## Expanded science research awards to fund summer research

March 8, 2018 [Last updated March 7, 2018] by Christopher Clymer Kurtz

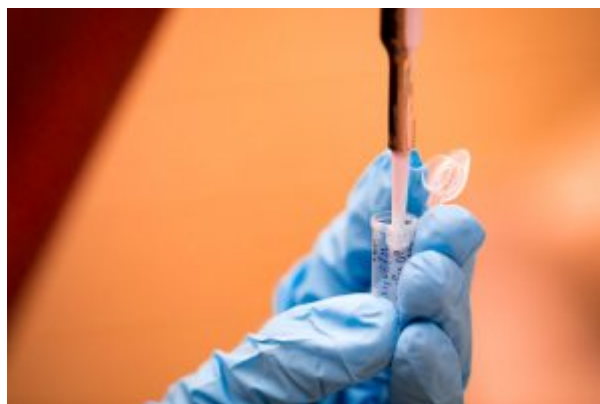
Five undergraduate students at Eastern Mennonite University have been awarded grants to work with faculty on mentored research projects this summer.

The Glenn Kauffman and Roman Miller Research Awards of \$2,500 each will fund the following research projects:

- Sierra Martin will work with [Professor Greta Ann Herin](#) on a project titled “The role of redox and amino terminal domains of NMDA receptors in excitotoxicity,”
- Yonas Ketsela with Herin on “Metabolic glutamate receptor 7a is inhibited by lead (Pb<sup>2+</sup>) in a concentration dependent manner in *Xenopus oocytes*,”
- Hannah Walker with [Professor Matthew Siderhurst](#) on “Analyzing of volatile profiles of roasted Hawai’ian coffee damaged by the coffee borer (*Hypothenemus hampei*),”
- Leah Lapp with Siderhurst on “Differentiating coffee damage using an electronic nose,” and
- Caroline Lehman with [Professor Kris Schmidt](#) on “A study of apoptotic pathways in *Caenorhabditis elegans*: Is unc-53 involved?”

Last year’s sole award funded data collection in the Bergton area watershed to build water quality research. Senior Amanda Williams and recent graduate Hannah Daley [investigated the relationship between canopy cover and stream water temperature in two headwater streams.](#)

The awards are sponsored by donors to the [Daniel B. Suter Endowment Fund](#) and the CT Assist Grant Fund, and can be used for student summer research wages, research supplies, and travel and fees to present ongoing or past work at a scientific meeting.



The funding provides “opportunities for biology and chemistry students to build the key skills of scientific inquiry,” said Professor Stephen Cessna.

“Encouraging student research is an important goal of the Daniel B. Suter Endowment Fund,” said [Stephen Cessna](#), a biochemistry professor who holds the Daniel B. Suter Endowed Chair at EMU. “These awards will provide opportunities for biology and chemistry students to build the key skills of scientific inquiry from writing the proposal to presenting and potentially publishing their findings.”

The awards are named for emeritus professors Glenn Kauffman (chemistry) and Roman Miller (biology), each of whom were “champions of undergraduate involvement in authentic scientific research at EMU,” said Cessna. Over each of their 30-plus year tenures, each worked with more than 40 EMU undergraduates on research projects ranging in topics from organic blueberry production to the synthesis of new cyclic organic compounds.

[Read about the award application requirements.](#)

Such grants bolster the ever-growing spectrum of [biology](#) and [chemistry](#) research projects by students and faculty at EMU:

- [Cerrie Mendoza](#) interned with a collaborative pilot project between the Smithsonian Institution's National Museum of Natural History, the U. S. Geological Survey, Eastern Mennonite University and James Madison University, gathering and sequencing the DNA of genetic samples from certain North American species of salamanders that were first collected and described 50 years ago.
- Hannah Daley and Janaya Sachs, working with professors [Tara Kishbaugh](#) and [Doug Graber Neufeld](#), gathered baseline water quality information and barium and strontium levels in a stream in northwest Rockingham County, in anticipation of possible hydrofracking. The data will give a baseline from which to compare post-hydrofracking samples, in order to assess the extent of any contaminant releases.
- [Diego Barahona and Katherine Lehman](#), along with Siderhurst and collaborators from the University of Guam, conducted a pilot project to evaluate the concept of using radio-tagged coconut rhinoceros beetles to detect cryptic breeding sites, a technique they hope will eventually be useful in eradication efforts. During the study they followed 19 beetles at two locations in Guam.
- Sam Miller investigated how noni volatiles change with ripening as part of Siderhurst's exploration of the importance of odors in the way humans taste and experience food. [They were coauthors of a \*Journal of the Science of Food and Agriculture\* article published in February, 2018.](#)
- Rachel King, Jason Spicher, Kaylee Ferguson, Braden Herman and Jared Fernandez assisted with Professor [Julia Halterman](#)'s research about how diet affects gene expression in hypertension, by studying rats on intermediate-salt or high-salt diets. Students learned how to carry out animal studies, collect blood pressure measurements, dissect tissues and organs, purify RNA from tissue samples, create cDNA, and run quantitative RT-PCR experiments.
- Several students have worked with professors [Jim Yoder](#) and Neufeld to conduct a watershed assessment, restore two sections of stream and assess strategies to encourage adoption of best management practices by community members.

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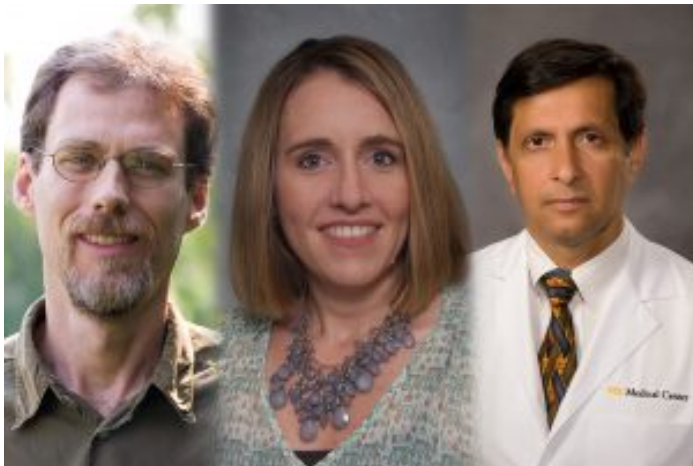
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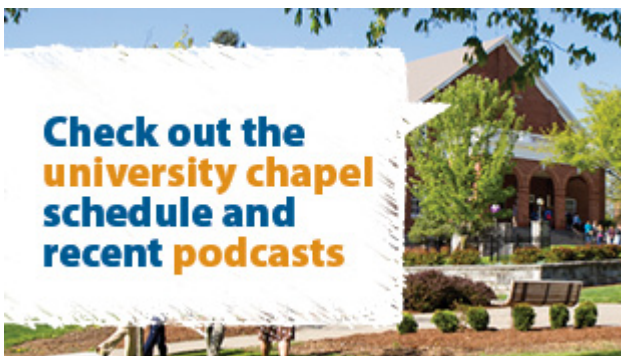
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