



College of Sciences & Mathematics Newsletter  
October 2021

CoSM Faculty Spotlight  
**Shields Joins  
Faculty in  
Microbiology**

Welcome to new faculty member **Dr. Robert Shields**, assistant professor of microbiology. After completing his Ph.D. in microbiology at Newcastle University in the United Kingdom, he spent seven years at the University of Florida on a postdoc and then research faculty. One of his primary interests is employing functional genomics techniques to understand the physiology of the oral pathogen *Streptococcus mutans*. He also enjoys bicycling and soccer.





## CoSM Faculty Spotlight

# Alam and Gilmore Publish on Novel Compounds

A paper by **Dr. Mohammad A. Alam** (left), associate professor of chemistry, and **Dr. David Gilmore** (right), emeritus professor of microbiology, has been published in [RSC Medicinal Chemistry](#) and another is in [Molecules](#). They describe the synthesis of a library of novel compounds as potent antimicrobial agents. These compounds are potent growth inhibitors of MRSA and vancomycin resistant enterococci (VRE), two of the more worrisome of the antibiotic-resistant bacteria. Alam also authored a paper in [Royal Society Open Science](#).

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## CoSM Faculty Spotlight

# Lorence and Yactayo-Chang Secure Patent

**Dr. Argelia Lorence**, Vaughn Endowed Professor of Metabolic Engineering, and **Dr. Jessica Yactayo-Chang**, a Ph.D. graduate from her group, have secured a U.S. patent. “Method of improving chloroplast function and increasing seed yield” describes a novel gene from the model plant *Arabidopsis* involved in vitamin C formation. When an additional copy of this gene is introduced, it leads to plants with improved photosynthesis, more resiliency to stresses, and higher seed yield.





## CoSM Faculty Spotlight Marsico and Bellis Study Traveling Seeds

**Dr. Travis D. Marsico** (left), professor of botany and associate department chair, and **Dr. Emily Bellis** (right), assistant professor of bioinformatics, have been awarded a \$94,739 joint venture grant from the USDA Forest Service – Southern Research Station for a follow-up to their recent collaboration. They are expanding their research into the varieties of risky seed species attached to incoming refrigerated shipping containers, and the timing of the arrivals.

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## CoSM Faculty Spotlight Biology Faculty Experiment with Humor

**Dr. Virginie Rolland** (left), associate professor of quantitative wildlife ecology, and **Dr. John Artim** (right), lecturer in biology, are stepping out of their usual roles and sharing science in a new way. For the Arkansas Science Festival, they [performed stand-up comedy live on stage](#), after prepping for the experience through a crash-course. A watch party for “Stand Up. For Science!” was Oct. 15.





## CoSM Faculty Spotlight

# Six from Science Faculty Adopt Project-Based Learning

Six faculty members and one graduate student from the College of Sciences and Mathematics attended the Worcester Polytechnic Institute's (WPI) Project-Based Learning (PBL) Institute. **Drs. Hashim Ali, John Artim, Travis Marsico, Lori Neuman-Lee, Lisa Rice and Virginie Rolland**, along with graduate student **Emily Donahue**, participated in the four-day workshop to learn more about implementing PBL in various courses, including developing an action plan for incorporating PBL practices and plans for scaling up PBL. On the last day, they presented their plan to the entire WPI PBL institute.



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