Beyond the Columns

Thank you to everyone who came out to support this year’s Beyond the Columns poster session on September 16th, and congratulations to all of our presenters who got to showcase the off-campus research they did during Summer 2014!

MAXIMIZE YOUR UNDERGRADUATE RESEARCH EXPERIENCE

with the Undergraduate Research Workshop Series in 572 Bond Life Sciences Center!

Tuesdays at 4:00 – 5:00 pm, ALL majors welcome!

SEPTEMBER 9: Undergraduate Research 101 - Getting Started

OCTOBER 14: The Faculty Perspective - Faculty Mentor Panel

NOVEMBER 18: Summer Research Internships On and Off Campus - Application Tips and Tricks

JANUARY 27: Including Your Research on Your Resume

FEBRUARY 17: Writing a Research Abstract

MARCH 10: Creating and Designing a Successful Research Poster

APRIL 28: Making the Most of Your Summer Research Experience
Dismukes has found his budding math background useful in the laboratory, where he is researching what science has yet been able to explain: how insect galls are induced onto grapes. Galls are damaging growths on plants often introduced by insects.

“We sample grape leaves that have been infected by this insect, and we look at the genes that are expressed in ones that are infected and ones that aren’t,” he says. Though the task of solving such a modern mystery may sound daunting, Dismukes says the research’s progress has been promising.

“We’ve just sequenced all the genes that are expressed in gall tissue versus ungalled tissue,” he says. “Our hypothesis is the insects are using the plant’s reproductive tissue, ‘Our project focuses on increasing concentrations of chemicals within a plant because these chemicals contain anti-inflammatory properties that could possibly be used in pharmaceuticals,’” Lynch says. “I’ve used caterpillars and abiotic stresses that might induce this chemical from the plant, such as sunlight, drought, possibly wind.” Lynch says she’s made a lot of progress over several years of the research, but it didn’t come without its dues.

“At first it was really hard to tackle all those things, but this past year I figured out how to do TLC (thin-layer chromatography) by myself,” Lynch says. “Watching videos, reading articles, figuring out how to mix reagents… simple techniques you’re supposed to learn from your aspirations to become a physician scientist. “My project focuses on increasing concentrations of chemicals within a plant because these chemicals contain anti-inflammatory properties that could possibly be used in pharmaceuticals,” Lynch says. “I’ve used caterpillars and abiotic stresses that might induce this chemical from the plant, such as sunlight, drought, possibly wind.” Lynch says she’s made a lot of progress over several years of the research, but it didn’t come without its dues.

At first I struggled because the PhD student I was supposed to work with left,” Lynch says. Suddenly, the myriad duties of an entire laboratory rested on her. “I was tackling on a graduate project as an undergraduate. I wasn’t trained, not trained for anything, and it was all up to me. The stresses that were overwhelming two years ago are now points of pride for Lynch.

“At first it was really hard to tackle all those things, but this past year I figured out how to do TLC (thin-layer chromatography) by myself,” Lynch says. “Watching videos, reading articles, figuring out how to mix reagents… simple techniques you’re supposed to learn from somebody else, I did all on my own.”

Lynch says her passion for science started when her high school biology teacher inspired her to take AP Biology, but she still wasn’t sure what she wanted to pursue when she arrived at MU. After she joined the Initiative for Maximizing Student Diversity program her second semester, she started to find her niche.

Lynch says she’s had the opportunity to work with the most interesting scientists she could find in her four years at MU. She spent the summer measuring the toxicity of nanoparticles against white blood cells to gauge how they relate to the human lungs.

Upon graduation in May, Lynch plans to enjoy a gap year, either focusing on more of her research or embarking on a volunteer trip, possibly to Africa. Afterwards, she’ll tackle the medical school cycle next June.

Looking back on her career as a student researcher, Lynch is glad she never got too cozy in one lab. MU is one of the leading research universities in the country, and has the diverse laboratories to show for it; Lynch encourages students to explore.

Don’t just settle on one lab, because I didn’t,” Lynch says. “Don’t just stay and be stuck, it’s not like you have to. There’s so many departments, so many labs.”

But as graduation approaches, now is the time for Lynch to look forward as well. And while many college seniors wistfully list the dream cities they’d like to live in come summer, such concerns are secondary for Lynch.

“I don’t care about traveling, about being someplace else — as long as I’m happy, it doesn’t matter where I am,” Lynch says.

“Wherever my job takes me.”
The official Office of Undergraduate Research newsletter, The Connection, provides undergraduate researchers and faculty mentors with information regarding research-related events and workshops, as well as featured faculty mentors and student research projects at the University of Missouri. The Connection is published on the first of every month.

The publication’s goal is to connect undergraduate researchers from science and non-science disciplines across MU’s campus. Check out the newsletter’s monthly featured research websites and fellowships! Readers are welcome and encouraged to submit story tips and ideas. If you want to receive an electronic copy of the newsletter each month, email Joey Fening (jwfvyc@mail.missouri.edu) at the Office of Undergraduate Research.

Be sure to keep up with us online. We will be posting events and updates regularly on social media.

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