

Molly Culle

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Education

Bachelor of Science in Chemistry and Biochemistry | Miami University | Oxford, Ohio | May 20XX

Experience

Quality Control Chemist and HPLC R&D Intern | May 20XX to August 20XX

EMD Millipore, an Affiliate of Merck KGaA, Solvent Characterization Lab | Norwood, Ohio

- Tested high-purity solvents in manufacturing facility, including KF titration, FTIR, UV/Visible Spectroscopy, GC assays, HPLC gradient analyses, wet chemistry analysis, and both quantitative and qualitative tests for trace contaminations and metals
- Qualified new columns and optimized methodology for a new Waters Alliance HPLC system, including both silica particle and monolithic columns; shortened analysis by 84%
- Performed study of longevity of chemically inert, air-tight seals for anhydrous solvents
- Submitted patent idea to Merck's legal team modifying design for EMD Millipore's single-time use sterile filtration system for use in cell culture

Miami Chemical Society, Miami University | Oxford, Ohio

President | August 20XX to present

- Coordinates annual American Chemical Society national conference to present findings in undergraduate research across the United States, including Dallas, Texas (20XX), Denver, Colorado (20XX), and San Diego, California (20XX)
- Broaden scope of the organization on Miami University's campus and the community by increased outreach, including a segment on FOX19 morning news channel
- Raised over \$20,000 for organization, including University funding requests, NGO grants for non-profit organizations, study guide sales, fundraisers, and grants from national American Chemical Society
- Established a new program to demonstrate engaging chemical concepts for over 120 high school students in greater Cincinnati and volunteered time to perform chemical demonstrations for children at local libraries, increasing interest in fields of science as a future career path

Laboratory Associate | August 20XX to May 20XX

Researcher in the Del Rio-Tsonis Regeneration Lab, Department of Biology, Miami University | Oxford, Ohio

- Coordinated with doctoral candidate and post-doctoral fellows on multiple projects investigating the Sonic Hedgehog (Shh) Pathway, focusing on how retina is regenerated in embryonic chicks
- Characterized Shh transcriptional factors Gli-1 and Gli-3R
- Presented novel research to multiple scientific bodies, including national American Chemical Society (20XX-XX), Miami University Undergraduate Research Forum (20XX-XX) and Miami University Cellular, Molecular, and Structural Biology annual Symposium (20XX-XX)

Professional Membership

American Chemical Society | Chemistry Ambassador | September 20XX

- Presented research results at the 20XX national conference: *Shh inhibits FGF-induced transdifferentiation through its canonical downstream targets* and explained novel findings at national conference in 20X: *Shh transcriptional factors Gli-1 and Gli-3R: modulators of retina regeneration*
- Sponsored 16 students to present research outcomes and demonstrated my own conclusions at the 20XX national conference: *Zonulin and T1D progression in the enteric epithelium: modulation of cellular spacing*

Volunteer Experience

Miami University | August 20XX to present

- Volunteer panelist for incoming students for ten programs to attract new students, including Bridges, LSAMP (a program to increase number of well-prepared underrepresented STEM graduate students), Discover the Sciences, and Chemistry 147 (Intro to the major)