Ashlyn Biology

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Education

Rose-Hulman Institute of Technology, Terre Haute, IN

Bachelor of Science, Biology

Senior Thesis: "Investigating Magnetotactic Bacteria"

Minor: Art

Professional Experience

Rose-Hulman Institute of Technology, Terre Haute, IN

Independent Undergraduate Researcher, Weaver Grant

"Investigating Magnetotactic Bacteria"

- Performed literature reviews and designed experiments
- Wrote MATLAB software to analyze the taxis of bacteria sensitive to magnetic fields to gain insight on little-studied microbes

National Institute of Standards and Technology, Gaithersburg, MD

NIST Center for Neutron Research

Summer Undergraduate Research Fellow

"Effect of Nanoparticle Architecture on Mechanical Properties of Polymer Composites"

Used small-angle neutron scattering and rheology determine that particle compactness in nanoparticle-polymer composites is inversely proportional to resultant sample viscosity

Material Measurement Laboratory, Bioassay Methods Group

Summer Undergraduate Research Fellow

"Reproducible, Multispecies, Microbial Biofilms"

Investigated bacterial growth using metabolic activity assays and R statistical analysis to develop a protocol for growing reproducible, multispecies, microbial biofilms to imitate the human oral environment

Material Measurement Laboratory, Bioassay Methods Group

Summer High School Intern

Characterized pipetting abilities of automated liquid handler with absorbance readings and R statistical analysis to determine experimental pipetting limits for the purpose of culturing bacteria

Publications

Forry S, Madonna M, Lopez-Perez D, Lin N, Biology, A. Automation of Antimicrobial Activity Screening. AMB Express. 2016; 6:20. doi:10.1186/s13568-016-0191-2.

Bro G, Mead J, Biology, A. Landoltia punctata clone 62MP1.12 mRNA, partial cds., NCBI, Dec 13, 2013. Accession # JZ531476.

Bro G, Mead J, Biology, A. Landoltia punctata clone 62AX1.10 mRNA, partial cds., NCBI, Dec 13, 2013. Accession # JZ531369.

Leadership **Experience**

Alpha Omicron Pi Sorority, Delta Xi Chapter

Social and Activities Chairman

Coordinated venue, decoration, and catering for formal events to optimize

- experience while staying within a limited budget
- Initiated social events with multiple campus Greek organizations for the first time in two years to increase positive image within campus Greek community and promote social activities

Chapter Treasurer

Feb 2016 - 2017

Feb 2017 – Present

- Managed financial situation at a time of fiscal crisis, in which approximately 25% of accounts receivable were a year in arrears and fiscal expenditures lacked internal controls
- Negotiated with fraternity governance and members struggling financially to make sure everyone was able to pay their bill

Summer 2016

May 2018

GPA: 3.00/4.00

Summer 2017

Summer 2015

Summer 2014