

Marty Mule

City, State

Email | Phone | LinkedIn URL

EDUCATION

Muhlenberg College, Allentown, PA

Expected: May 2018

Bachelor of Science: **Biochemistry**

GPA: 3.72

HONORS AND AWARDS • Presidential Merit Scholarship • Provost's Collaborative Research Grant

RESEARCH EXPERIENCE

Exploring Polymorphism in Amino Acids and Benzamide using Nonphotochemical PolarizationDependent Laser-Induced Nucleation, Nanoconfinement, and Raman Spectroscopy

Muhlenberg College, Chemistry Department, Dr. Justin Sparks

June 2016 – Present

- Use linear or circular polarized light to create an electric field to induce polymorph specific nucleation, to control which polymorph is present in amino acids crystals.
- Investigate whether the polymorphs of benzamide would be stabilized if the crystals were confined within Anodized Aluminum Oxide Templates.
- Once process is complete, use tera-hertz Raman spectroscopy to analyze the crystal structure of the products from the different experiments.

Collaborating with the Genomics Education Project to Annotate in Drosophila Melanogaster using in silico Modeling

Muhlenberg College, Biology Department, Dr. Amy Hark

January – May 2016

- Using tools provided by the Genomics Education Project, annotated a specific contig of Drosophila Melanogaster DNA which was used in evolution based studies.
- Relied on the Drosophila Melanogaster model to make predictions of human evolution involving how genes are duplicated, transposed, or deleted.

Analyzing Visual Stimuli and Attention in Musca Domestica using a Choice Maze

Muhlenberg College, Neuroscience Department, Dr. Patrick Williams

January 2015 – May 2016

- Optimized a maze experiment which would allow the Musca Domestica to make choices based upon the available paths and the visual stimuli presented, to better understand how insects process visual stimuli and attention.

ACADEMIC SERVICE

Muhlenberg College Biochemistry Program

Volunteer Department Representative

- Junior / Senior Open House October 2015 – 2017
- Accepted Students Day April 2016, April 2017

RELATED WORK EXPERIENCE

Head Resident, Muhlenberg College, Allentown, PA

August 2017 – Present

- In addition to responsibilities of resident advisor, keep up two residence halls, hire staff, resolve staff conflicts, assist with training sessions, and interview for various positions on campus.

Resident Advisor, Muhlenberg College, Allentown, PA

August 2015 – August 2017

- Resolved peer conflict, fostered a welcoming environment, and mentored younger students.

Research Assistant, Muhlenberg College, Allentown, PA

June – August 2016

- Assisted Primary Investigator by developing methods and carrying out experiments involving materials chemistry and Polymorphism.

LEADERSHIP POSITIONS

President, Biology Club, Muhlenberg College Allentown, PA

August 2015 – Present

- Implement two new positions on the executive board to incorporate more community engagement.
- Organize events where first-year students and sophomores are able to talk to faculty members about their research.
- Promote science activism by planning a trip to the March for Science in Philadelphia.

Secretary, Class Council, Muhlenberg College Allentown, PA

December 2015 – Present

- Organize the Class Council as a whole.
- Collectively, raise thousands of dollars for class while planning yearly traditions held by the college.

Member, Chemistry Club, Muhlenberg College Allentown, PA

January 2015 – Present

- Assist with various outreach programs like the Chemistry Olympiad Exam.
- Promote conversation with faculty in nonacademic settings.

TECHNICAL SKILLS

- Terahertz-Raman Spectroscopy
- Scanning Electron Microscopy
- NMR Spectroscopy
- Atomic Force Microscopy
- Confocal Microscopy
- Differential Scanning Calorimetry
- Surface Chemistry
- KinTek Explorer
- PyMol