

DYLAN ARRAZATI

Advice

My main piece of advice for students considering research is to find a project that they're super passionate about. Research requires commitment and dedication, and having an interesting project makes the whole process that much more fulfilling. Furthermore, I would also advice students to embrace the struggle and be okay with not always knowing the answer. Research is meant to allow students to have productive conversations so that they can come to conclusions. I've enjoyed every moment of research and would highly encourage other students to find on campus research.

Current Research

My work focuses on a specific bacterial organism that uses the body's natural defense system in order to evade death. One of the body's most potent defense systems and weapons that is produced during inflammation in order to combat foreign bacterial organisms is hypochlorous acid, or more commonly known as bleach. Bleach is produced in neutrophils, which are the most abundant white blood cells of the mammalian innate immune system. Even though we know from the literature that the Hsp33 protein uses a zinc finger domain to detect biological oxidants and evade death, molecular insights of the HOCl sensing mechanism is still in its infancy. My work incorporates computational techniques to investigate the HOCl-sensing mechanism of a [Zn(Cys)₄] model for the Hsp33 protein and I hope to address the following questions. What is the mechanism? What is the role of zinc? What is the role of the chlorine ion?



Involvements

- Founding father of the Delta Sigma Phi Eta Lambda chapter at Chapman University.

Awards & Distinctions

- SURF Fellow- 2020