Augustine Chemparathy

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EDUCATION

Stanford University, Stanford, CA Sep 2015-Jun 2019

- B.S. candidate, Bioengineering and Computer Science **GPA: 4.033/4.00**
- *Relevant coursework:* Machine Learning (*CS 229*), Biomedical Systems Prototyping (*BioE 123*), Systems Biology (*BioE 101*), Digital Systems Architecture (*EE 180*)

EXPERIENCE

Dror Lab, Stanford Department of Computer Science June 2017-Present

- Developing a computational pipeline to identify unique intramolecular interactions in molecular dynamics simulations. Applying this pipeline to human muscarinic receptors to identify residues that can be targeted for drug discovery.

Porteus Lab, Stanford Institute for Stem Cell Biology Sep 2015-Present

- Using CRISPR-Cas9 to produce chimeric antigen receptor (CAR)-natural killer (NK) cells for cancer immunotherapy against glioblastomas. Developing methods for genome editing of NK cells and investigating the fundamental biology of NK cells' role in tumor surveillance against solid tumors.
- Developing a correction strategy that uses CRISPR-Cas9 to repair the G32V mutation in human insulin, which was observed in a patient with monogenic Type 1 Diabetes.

Jonikas Lab, Princeton Department of Molecular Biology June 2013-August 2014

- Characterized the relationship between synthesis of the biodiesel precursor triacylglycerol (TAG) and cellular redox stress in a model microalgae. Presented research as a finalist at Intel STS 2015.

ACTIVITIES

Teaching Assistant, Linear Dynamical Systems (EE 263), Stanford University Sept 2017-Present
Hold office hours, write midterm and final exam problems, and grade exams for 135 students in Stanford's highest-enrollment electrical engineering course.

Team member, Stanford ChEM-H Entrepreneurship Club Sept 2016-Dec 2016
Developed a scientific and business plan to develop a small molecule agonist for a metabolic regulator protein implicated in cellular energetic dysfunction in Parkinson's Disease; worked with a team of four undergraduates to develop the pitch and present it to a panel of medicinal chemists and VC's.

Co-President, Stanford Students in Biodesign (SSB) May 2017-Present
Coordinate recruitment, activities, and club organization for Stanford's undergraduate organization for interdisciplinary biosciences.

Tau Beta Pi, Stanford University Oct 2017-Present
Selected as a member of the Stanford Tau Beta Pi honor society. Recognizes students of exemplary character and distinguished scholarship.

Writing Tutor, Stanford Hume Center for Writing And Speaking Sept 2016-Present
Assisted undergraduate and graduate students at Stanford with all stages of the writing process including drafting, editing, and revising structure, organization, and clarity for term papers, theses, applications, and other academic writing pieces.

HONORS AND AWARDS

- President's Award for Academic Excellence, Top 5% of Stanford Class of 2019 by GPA 2017
- Intel Science Talent Search Finalist 2015
- Davidson Fellow for Science 2015
- US National Chemistry Olympiad High Honors (Top 50) 2015
- USA Biology Olympiad National Certificate of Achievement (Top 56) 2014
- USA Junior Mathematics Olympiad Qualifier 2013