

Aarya Venkat

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EDUCATION

UNIVERSITY OF GEORGIA

PHD BIOCHEMISTRY
Future Faculty Fellow
Present | GPA: 3.7

UC, SAN DIEGO

MS CHEMISTRY
June 2017 | GPA: 3.8

LINKS

ResearchGate:// Aarya_Venkat
LinkedIn:// AaryaVenkat
Github:// Arikat
Website:// Arikat

ACCOMPLISHMENTS

- Future Faculty Fellowship, 2019
- Outstanding Teacher Award, 2019
- Outstanding Teacher Award, 2018
- General Chemistry Guest lecture to 400 students at UC, San Diego in 2017

SKILLS

PROGRAMMING

Java • Python • L^AT_EX • GIT • Bash

BIOINFORMATICS

Cytoscape App Development •
Quantitative Structure-Activity
Relationship • Cluster Analysis •
Multivariate Statistical Analysis

COMPUTATIONAL CHEMISTRY

Molecular Dynamics

Amber suite • GROMACS suite

Quantum Mechanics

Gaussian • Natural Bond Orbital Analysis

Molecular Modeling

Maestro • Rosetta • Autodock • VMD •
PyMOL • Homology Modeling

MISCELLANEOUS

PCR • Western Blot • 3D Printing •
Photoshop • Illustrator

EMPLOYMENT HISTORY

KANNAN LAB | GRADUATE RESEARCH ASSISTANT

July 2018 – Present | Athens, GA

- Gaining structural insights for Glycosyltransferases via Molecular Dynamics.

UNIVERSITY OF GEORGIA | GRADUATE TEACHING ASSISTANT

Aug 2017 – May 2020 | Athens, GA

- Teaching Assignments: Chem 1211, Chem 1212, Bio 1103.
- Grader Assignments: BCMB 3100, BCMB 3600

GILSON LAB | GRADUATE RESEARCH ASSISTANT

Oct 2015 – May 2017 | La Jolla, CA

- Developed PathInsight, a program to model the downstream effects of small binding compounds in a biological pathway.

UC, SAN DIEGO | GRADUATE TEACHING ASSISTANT

Jan 2017 – June 2017 | La Jolla, CA

- Taught three general chemistry lecture classes every week to 90 students.

NATIONAL RESOURCE FOR NETWORK BIOLOGY | INTERN

April 2016 – Dec 2016 | San Francisco, CA

PUBLICATIONS

Patents

Venkat, A., Castro, Y. and Manning, T. "Using Computational QSAR Methods to Propose a New Group of Antibiotics for Dental Applications," U.S. Provisional Patent Appl. 62/359,638, July 22, 2016.

Papers (citations: 13)

Huang, L., Yeung, W., Wang, Y., Cheng, H., Venkat, A., et al. (2020) Quantitative Structure-Mutation-Activity Relationship Tests (QSMART) Model for Protein Kinase Inhibitor Response Prediction

Taujale, R., Venkat, A., et al. (2020) Deep evolutionary analysis reveals the design principles of fold A glycosyltransferases. Elife, 9, p.e54532.

Venkat, A. (2017). PathInsight: A Novel Tool for Modeling Biomolecular Pathways. UC San Diego: Chemistry.

Venkat, A., Amerson, A. L., and Bielmyer-Fraser, G. K. (2016) "Influence of Water Hardness on Accumulation and Effects of Silver in the Green Alga, Raphidocelis subcapitata," Georgia Journal of Science: Vol. 74: No. 2, Article 5.

Park, S., Venkat, A., Gopinath, A., and Kang, J. (2015). Quantitative Analysis of the Trends Exhibited by the Three Interdisciplinary Biological Sciences: Biophysics, Bioinformatics, and Systems Biology. Journal of Microbiology & Biology Education, 16(2), 198.

VOLUNTEERING

SCIENCE OLYMPIAD LAB MANAGER

2017-2020 | Athens, GA

Aid in setting up Chemistry and Forensic labs for high school Science Olympiad. Ensure lab safety protocols are followed as students compete.

NATIONAL HISTORY DAY JUDGE

2020 | Athens, GA

Judged Performances and Documentaries for middle school and high school students. Provided critiques to aid them in state and national competitions.

UNDERGRADUATE SYMPOSIUM JUDGE

2019 | Athens, GA

Judged Biochemistry poster presentations.

TEACHING LEADERSHIP COURSES

2018 | Atlanta, GA

Developed a curriculum focused on understanding ethics, morals, and empathy and their roles in good leadership.

TEACHING COMPUTER LITERACY

2018 | Athens, GA

Established weekend computer literacy courses at the Athens-Clarke county library.

OUTREACH ADVANCEMENT TOWARDS HOPE (OATH)

2015-2016 | San Diego, CA

UCSD organization helping the underserved in downtown San Diego through medical outreach, performing medical screenings under the guidance of a certified physician.

AIDING VILLAGES AFTER THE 2015 NEPAL EARTHQUAKE

2015 | Badrinath, India

Helped organize and hand deliver supplies, including food and oil, to villagers in the Himalayan mountains affected by the earthquake and landslides.

RESOURCE AND INSURANCE NAVIGATOR GROUP (RING)

2013-2015 | Georgia

Emory student organization focused on helping underserved communities acquire affordable health care. Worked in public relations, developed marketing campaigns, and served as a graphic designer.

PRESENTATIONS/POSTERS

2019

Deep Evolutionary Analysis Reveals the Design Principles of Fold A Glycosyltransferases. Glycobiology Conference Poster. PI: Natarajan Kannan, UGA

Cancer Immunotherapies. Biochemistry Symposium Host. University of Georgia.

Teaching and Laboratory Assistant Orientation. Delivered Lecture on Efficient Grading Practices. University of Georgia.

2018

Teaching and Laboratory Assistant Orientation. "Teaching Tips" Q&A Panelist. University of Georgia.

2017

PathInsight: A Novel Tool for Modeling Biomolecular Pathways. Thesis Defense. UCSD.

Guest Lecture on Chemical Equilibrium. Chemistry 6B, UCSD.

2016

Does Competition Enhance Learning Over a Relaxed Guided Lesson? Teaching Methods Poster Presentation. Natural Sciences Building, UCSD.

2015

Influence of Water Hardness on Accumulation and Effects of Silver in the Green Alga, *Raphidocelis subcapitata*. Biology Poster Presentation. PI: Gretchen Bielmyer, VSU.

Using Computational QSAR Methods to Propose a New Group of Antibiotics for Dental Applications. Chemistry Poster Presentation. PI: Thomas Manning, VSU.

Thermodynamics of Calcium Metal Reactions. Chemistry Poster Presentation. PI: Thomas Manning, VSU.

2014

Proposal of a Novel Glucometer Implant. Chemistry Poster Presentation. PI: Tolulope Salami, VSU.

WORKSHOPS

2020

Writing a Diversity Statement - GradTeach Workshop - Workshop leader, 2020

Spring Teaching Symposium - Workshop leader

Spring Teaching Symposium - Organizer

MENTORSHIP

Nathan Gravel - UGA PREP scholar

Jamini Patel - UGA Biology student

Raga Dasana - High school student

Victor Valbuena - Young Dawgs - High school student