

# Catherine Lan Wang

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## EDUCATION

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**The Johns Hopkins School of Medicine** 2021 – Present  
MD/PhD Student

**Stanford University** 2017 – 2021  
B.S. in Biology (Microbes and Immunity), Minor in Art Practice GPA: 3.99

## RESEARCH EXPERIENCE

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**The Carolyn R. Bertozzi Group, Stanford Department of Chemistry** Sep 2018 – Jun 2021  
*Undergraduate Research Assistant* Stanford, CA

- Developed *in vitro* voltage imaging platform for characterizing neuronal network properties
- Investigated the role of membrane sialylation in modulating network behavior under normal and inflammatory conditions

**The Jen Pan Lab, Broad Institute of MIT and Harvard** June 2016 – Sep. 2016  
*Summer Research Assistant* Cambridge, MA

- Developed a membrane expression FRET assay for the CACNA1 voltage-gated calcium channel
- Characterized electrophysiological properties of mutant CACNA1 variants

## ACADEMIC AND PROFESSIONAL HONORS

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Firestone Medal for Excellence in Undergraduate Research	2021
Award for Excellence in Honors Thesis Presentation	2021
Stanford Undergraduate Major Grant	2020
Stanford ChEM-H Undergraduate Entrepreneurship Competition Winner (\$50k grant)	2019
Stanford Dept. of Chemistry Summer Research Fellow	2019
International Biology Olympiad Gold Medal (Team USA)	2017
U.S. Presidential Scholar	2017

## PUBLICATIONS

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Kulkarni, RU, **Wang, CL**, Bertozzi, CR. Analyzing nested experimental designs—A user-friendly resampling method to determine experimental significance. *PLoS Computational Biology* 2022. [Paper link](#)

Kulkarni, RU, **Wang, CL**, Bertozzi, CR. Subthreshold Voltage Analysis Demonstrates Neuronal Cell-Surface Sialic Acids Modulate Excitability and Network Integration. *bioRxiv* 2020. [Preprint link](#)

## SELECTED POSTERS AND PRESENTATIONS

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“Sialic Acid as a Modulator of Neuronal Activity” Catherine L. Wang  
Presentation | *Department of Biology Achauer Honors Symposium, Stanford, 2021*

“Studying the Neuronal Glycocalyx Using Voltage Imaging” Catherine L. Wang, Rishikesh U. Kulkarni, Carolyn R. Bertozzi  
Poster | *Symposium of Undergraduate Research and Public Service, Stanford, 2019*

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## TEACHING EXPERIENCE

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<b>Instructor and Content Generator</b> , USA Biology Olympiad	2018 – Present
<b>Private Biology Tutor</b>	2017 – Present
<b>Instructor and Curriculum Developer</b> , AGN School, Project Dosti	Summer 2018

## SERVICE AND LEADERSHIP

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<b>Volunteer – Department of Energy National Science Bowl</b>	2018 – Present
<ul style="list-style-type: none"><li>Served as an alumni judge and mentor to 500+ middle and high school students at NSB competitions</li><li>Organized invitational tournaments aimed at increasing accessibility of competition</li></ul>	
<b>Volunteer, Chair – Arbor Free Clinics</b>	2018 – 2021
<ul style="list-style-type: none"><li>Connected patients with affordable healthcare and social needs resources</li><li>Responsible for patient intake, health education, history and case presentation, and management of individual cases and follow-up appointments</li></ul>	
<b>Volunteer, President – Project Dosti</b>	2018 – 2020
<ul style="list-style-type: none"><li>Developed high school science curricula through Stanford-funded education project at the AGN School in Tamil Nadu, India over the summer of 2018</li></ul>	

## REFERENCES

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### **Professor Andrea Cox**

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Suite 2-300  
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### **Professor Carolyn Bertozzi**

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(650) 721-4781

### **Professor Susan McConnell**

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