

# Jilai Cui

Neuroscience Program, University of Illinois  
jilaic2@illinois.edu

## Education

B.S.	ShanghaiTech University	Biological Sciences	2021
Exchange student	University of Illinois	Molecular and Cellular Biology	2020

## Research Experience

**Graduate Research Assistant**, University of Illinois, 2021-2023

Neuroscience Program, 2021-2023

- Recording and modeling the sensory-motor network of Octopus arms movements
- Extra/Intracellular recording of the Peripheral Subepithelial Network in *Pleurobranchaea*
- Electromyography of Octopus arm muscle and Aplysia buccal mass with MicroElectrode Array

Beckman Institute, 2022-2023

- Simulation of the fluid dynamic of the glymphatic system

**Undergraduate Research Assistant**, University of Illinois, 2020-2021

School of Molecular and Cellular Biology

- Electrophysiological recording of the olfactory sensory system in *Pleurobranchaea*
- Modeling Homeostatic Plasticity in decision-making circuits in *Pleurobranchaea*

**Undergraduate Research Assistant**, ShanghaiTech University, China, 2019-2021

School of Life Sciences and Technology

- Designing a light-controlled drug delivery system
- Molecular cloning of the Human Protein Tyrosine Phosphatase gene

## Awards

Graduate College Conference Travel Awards (2023)

Thomas and Margaret Huang Award for Graduate Research (2022)

International Genetically Engineered Machine competition, silver medal (2019)

## Publications

Gribkova, E. D., Lee, C. A., Brown, J. W., **Cui, J.**, Liu, Y., Norekian, T., Gillette, R (2023). A common modular design of nervous systems originating in soft-bodied invertebrates. *Frontiers in Physiology*, 14.

Norekian, T., Liu, Y., Gribkova, E. D., **Cui, J.**, Gillette, R (2023). A Peripheral Subepithelial Network for Chemotactile Processing in the Predatory Sea Slug *Pleurobranchaea californica*. Submitted.

### **Conference & Presentations**

**J. Cui**, E. D. Gribkova, R. Gillette (2023). *Modeling Octopus Arm-Sucker Sensory-Motor Coordination*. MCB Annual Graduate Research Retreat Program, School of Molecular and Cellular Biology

**J. Cui**, E. D. Gribkova, R. Gillette (2023). *Modeling the Sensory-Motor Network in the Octopus Arm*. Graduate Student Seminar, Beckman Institute, University of Illinois

**J. Cui**, E. D. Gribkova, R. Gillette (2022). *Modeling Octopus Arm-Sucker Sensory-Motor Coordination*. Neuroscience 2022

**J. Cui**, E. D. Gribkova, R. Gillette (2022). *Simulating Sensory-Motor Control of Octopus Arms Movements*. CSL Student Conference, Coordinated Science Laboratory, University of Illinois

**J. Cui**, E. D. Gribkova, R. Gillette (2020). *Evolutionary significance of Homeostatic Plasticity*. Undergraduate Research Symposium. School of Molecular and Cellular Biology, University of Illinois

### **Teaching Assistantship**

MCB 462: Integrative Neuroscience, Profs. Rhanor Gillette & Martha Gillette, Spring 2023  
MCB 461: Cell & Molecular Neuroscience, Prof. Hee Jung Chung, Fall 2023

### **Volunteer & Science Outreach**

Brain Awareness Outreach, University of Illinois, 2022, 2023  
WYSE Summer Camp, University of Illinois, 2022  
Neuroscience Program DEI committee member, University of Illinois, 2022-2023  
Neuroscience Seminar committee member, University of Illinois, 2022-2023

### **Certificate**

Professional Skills for Careers in Biosciences (PSCB) curriculum (2022)