

Hui Ji, Ph.D.
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EDUCATION	<i>Ph.D. in Genetics</i> Cornell University, Ithaca, NY	Dec. 2022
	<ul style="list-style-type: none">• Ph.D. research in mechanisms of neurodegeneration under direction of Prof. Chun Han.	
	<i>B.S. (highest honor) in Biological Sciences (Zhiyuan College)</i> Shanghai Jiao Tong University (SJTU), Shanghai, P.R. China	July 2016
RESEARCH EXPERIENCES	<i>Postdoctoral Fellow</i> The Lab of Liqun Luo Department of Biology, Stanford University, Stanford, CA	Oct 2022 – Present
	<ul style="list-style-type: none">• Mechanisms of neural circuit assembly<ul style="list-style-type: none">– Discovering repulsive ligand-receptor pairs instructing precise neurite patterning of genetically defined neurons in the <i>Drosophila</i> olfactory system.	
	<i>Graduate Research Assistant</i> The Lab of Chun Han Weill Institute for Cell and Molecular Biology, Cornell University, Ithaca, NY	May 2017 – Sept. 2022
	<ul style="list-style-type: none">• Roles and mechanisms of phagocytosis in neurodegeneration<ul style="list-style-type: none">– Demonstrated that phosphatidylserine (PS) is an “eat-me” signal on neurons during neurite degeneration.– Discovered the role of phagocytosis in driving Wallerian degeneration of dendrites in <i>Drosophila</i>.– Revealed the role of a secreted protein “Orion” as a bridging molecule between PS and the engulfment receptor Draper during phagocytosis of neurons.– Examined the regulation and consequences of PS exposure on healthy sensory neurons of <i>Drosophila</i>.• Tool developing<ul style="list-style-type: none">– Developed LarvaSPA, a long-term time-lapse live imaging method for <i>Drosophila</i> larvae.– Contributed to the development of CRISPR-TRiM, a tissue-specific genome-editing tool in <i>Drosophila</i>.	
	<i>Visiting Undergraduate</i> The Lab of Chun Han Weill Institute for Cell and Molecular Biology, Cornell University, Ithaca, NY	Aug. 2015 – May 2016 July 2014 – Sept. 2014
	<ul style="list-style-type: none">• Screened for tissue-specific enhancers in <i>Drosophila</i>.• Illustrated temporal profile of dynamic PS exposure during dendrite degeneration in <i>Drosophila</i>.	
	<i>Undergraduate Research Assistant</i> The Lab of Shigang He School of Biomedical Engineering, SJTU, Shanghai, P.R. China	Mar. 2014 – July 2015
	<ul style="list-style-type: none">• Evaluated mitochondrial functions in rat retinal ischemia-reperfusion model.• Explored a rat chronic glaucoma model using intravitreal microbead-injection.	

**PEER-
REVIEWED
PUBLICATIONS**

See also [my google scholar](#) page.

- **Ji, H.**, Han, C. Regulation of neuronal morphogenesis by engulfment. In Yaron, A. & Tran, T. (Eds.), *Wiring the Nervous System: Mechanisms of Axonal and Dendritic Remodelling in Health and Disease*, River Publishers, 2024, pp 137-186 (Book chapter)
- **Ji, H.**, Wang, B., Labib, D., Lei, J., Chen, X., Sapor, M. L., Boulanger, A., Dura, J., Han, C. (2023). *The *Drosophila* chemokine-like Orion bridges phosphatidylserine and Draper in phagocytosis of neurons*, *PNAS*, 120(24). p. e2303392120, doi:10.1073/pnas.2303392120
- **Ji, H.***, Sapor, M. L.*, Sarkar, A., Wang, B., Han, C. (2022). *Phagocytosis and self-destruction break down dendrites of *Drosophila* sensory neurons at distinct steps of Wallerian degeneration*, *PNAS*, 119(4). pii: 2111818119. doi: 10.1073/pnas.2111818119. (* The authors have contributed equally to the work)
- **Ji, H.** & Han, C. (2020). *LarvaSPA, A Method for Mounting *Drosophila* Larva for Long-Term Time-Lapse Imaging*, *J Vis Exp*, (156). doi:10.3791/60792.
- Poe, A. R., Wang, B., Sapor, M. L., **Ji, H.**, Li, K., Onabajo, T., . . . Han, C. (2019). *Robust CRISPR/Cas9-Mediated Tissue-Specific Mutagenesis Reveals Gene Redundancy and Perdurance in *Drosophila**, *Genetics*, 211(2), 459-472. doi:10.1534/genetics.118.301736.
- Sapor, M. L.*, **Ji, H.***, Wang, B., Poe, A. R., Dubey, K., Ren, X., . . . Han, C. (2018). *Phosphatidylserine Externalization Results from and Causes Neurite Degeneration in *Drosophila**, *Cell Rep*, 24(9), 2273-2286. doi:10.1016/j.celrep.2018.07.095. (* The authors have contributed equally to the work)

PRESENTATIONS

Oral

“Orion bridges phosphatidylserine and Draper in the phagocytosis of somatosensory neurons in *Drosophila*”

- Annual *Drosophila* Research Conference (Virtual) Apr. 2022
- Cold Spring Harbor meeting: Neurobiology of *Drosophila* (Virtual) Oct. 2021
- Weill Institute Science Round-Up Aug. 2021

“A bridge to recognition: a secreted protein required for phagocytosis”

- Membrane Signaling Group, Cornell University, Ithaca, NY Jan. 2020

“Investigating the role of phosphatidylserine exposure in degenerating and healthy neurons”

- Membrane Signaling Group, Cornell University, Ithaca, NY Apr. 2019

“Dynamic phosphatidylserine exposure is linked to neurite degeneration in *Drosophila*”

- Superfly Group, Cornell University, Ithaca, NY May 2018
- Membrane Signaling Group, Cornell University, Ithaca, NY Oct. 2017

Poster

“Orion bridges phosphatidylserine and Draper in the phagocytosis of somatosensory neurons in *Drosophila*”

- Weill Institute Science Round-Up Aug. 2021

“Phagocytosis drives NAD^+ reduction-induced dendrite degeneration in *Drosophila*”

	<ul style="list-style-type: none"> • Cold Spring Harbor meeting: Neurodegenerative Diseases: Biology & Therapeutics (Virtual) Dec. 2020 • Cold Spring Harbor meeting: Molecular Mechanisms of Neuronal Connectivity (Virtual) Oct. 2020
	<p><i>“Contribution of phosphatidylserine exposure in engulfment of dendrite debris by phagocytes”</i></p> <ul style="list-style-type: none"> • Flash talk, Keck Biomembrane Retreat, Ithaca, NY June 2019 • Flash talk, Annual <i>Drosophila</i> Research Conference, Dallas, TX Mar. 2019
	<p><i>“Dynamic phosphatidylserine exposure is linked to neurite degeneration in Drosophila”</i></p> <ul style="list-style-type: none"> • Gordon Research Conference on Cell Biology of the Neuron (GRC), Waterville Valley, NH June 2018 • Gordon Research Seminar on Cell Biology of the Neuron (GRS), Waterville Valley, NH June 2018
MENTORSHIP	<p>Trained 26 students/postdocs on confocal microscopy July 2017 – Sept. 2022</p> <p>Mentored two undergraduates on their honored thesis projects Mar. 2019 – May. 2021</p>
SERVICE	<p>GGD Climate Committee member, Cornell University Aug. 2020 – Sept. 2022</p> <p>Cell Biology Journal Club coordinator, Cornell University Mar. 2019 – July 2021</p> <p>GGD Graduate Student Association panelist, Cornell University June 2021</p> <p>BMCB-GGD Symposium organizer, Cornell University Oct. 2019 – Oct. 2020</p> <p>Student host for Weill Symposium, Cornell University Oct. 2018</p>
SELECTED PRESS	<p>Cornell MBG Diversity Council: MBG Student Spotlight 2021</p> <p>Cornell Chronicle: Faulty ‘eat-me’ signal may trigger neurodegeneration 2018</p>
TEACHING EXPERIENCES	<p>TA and guest lecturer, Survey of Cell Biology, Cornell University Spring 2021</p> <p>TA, Survey of Cell Biology, Cornell University Spring 2018</p>
AWARDS & HONORS	<p>American Heart Association (AHA) Postdoctoral Fellowship Award 2023</p> <p><i>Drosophila</i> Image Award Honorable Mention 2023</p> <p>Cornell CALS Outstanding Teaching Assistant 2022</p> <p>Hsien and Daisy Yen Wu Scholarship 2022</p> <p>Cornell Graduate Student Travel Grants 2018, 2019</p> <p>Cornell Fellowship 2016</p> <p>Elite Graduate of Shanghai 2016</p> <p>(awarded to top 5% college or university graduates in Shanghai)</p> <p>SJTU-Zhiyuan Outstanding Student Scholarship 2016</p> <p>SJTU-Zhiyuan Best Honored Thesis 2016</p> <p>SJTU-Zhiyuan Oversea Research Award 2014</p> <p>Chinese National Scholarships 2014, 2015</p> <p>(the highest honor awarded to the top 0.2% undergraduate students in China for academic excellence)</p>