

# JENNIFER JAHNCKE

📍 Portland, OR

## 🎓 EDUCATION

2024  
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2018

### Oregon Health & Science University

PhD in Neuroscience

📍 Portland, OR

• Advisor: Kevin M. Wright, PhD, Vollum Institute, OHSU

2014  
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2010

### University of California, Davis

BS in Psychology, Minor in Neuroscience

📍 Davis, CA

#### Selected Courses

- Analytical and Quantitative Light Microscopy, MBL, 2024, Woods Hole, MA
- Behavioral Neuroscience Responsible Conduct of Research, OHSU, 2024, Portland, OR
- Neurohackademy, UW, 2023, Seattle, WA
- Programming for Biology, CSHL, 2022, Cold Spring Harbor, NY
- Biostatistics, OHSU, 2020, Portland, OR
- Data Visualization, OHSU, 2020, Portland, OR
- Practice and Ethics of Science, OHSU, 2018, Portland, OR
- Light and Fluorescence Microscopy, UC Davis, 2017, Davis, CA

## 💻 RESEARCH EXPERIENCE

Present  
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2024

### Postdoctoral Researcher

Vollum Institute, OHSU

📍 Portland, OR

- Systematic analysis of seizure activity in mouse models of dystroglycanopathy.
- Development and validation of gene therapy to alleviate neurological deficits in mouse models of dystroglycanopathy.

2024  
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2018

### Graduate Student Researcher

Neuroscience Graduate Program, OHSU

📍 Portland, OR

- Functional characterization of the scaffolding protein Dystroglycan at inhibitory synapses across the brain in mouse models of dystroglycanopathy.
- Identified novel interacting partners of Dystroglycan in the central nervous system.

2018  
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2014

### Staff Research Associate

Zito & Fioravante Labs, UC Davis

📍 Davis, CA

- Characterization of genetically encoded fluorescent glutamate sensors using 2-photon glutamate uncaging.
- Elucidation of a novel protein signaling cascade in non-ionotropic NMDA receptor mediated LTD.

2014  
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2011

### Undergraduate Research Assistant

Trimmer & Trainor Labs, UC Davis

📍 Davis, CA

## CONTACT INFO

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☎ +1 925-895-2421

🌐 [jennifer-jahncke.netlify.app](https://jennifer-jahncke.netlify.app)

🐙 [github.com/jnjahncke](https://github.com/jnjahncke)

🆔 0000-0003-2319-6109

## SKILLS

🔗 R, Python, Bash, Git

📊 Statistical analysis

🔬 IHC + Microscopy

⚡ Slice electrophysiology

🧪 Biochemistry

🧬 Mouse genetics

*Extended skills: genetic manipulation (in mouse), immunohistochemistry, confocal microscopy, electrophysiology, biochemistry, immunoprecipitation, SDS-PAGE, western blot, virus design, intracerebroventricular virus injection, primer design, PCR, 2-photon microscopy, glutamate uncaging, organotypic slice culture, biolistic transfection, genetically encoded fluorescent biosensors, experimental design, data analysis, figure design, Adobe Photoshop, Adobe Illustrator, R, Python, Bash, Git*

## REFERENCES

Kevin M. Wright, PhD

📍 Vollum Institute, OHSU

✉ [wrightke@ohsu.edu](mailto:wrightke@ohsu.edu)

Eric Schnell, MD, PhD

📍 Anesthesiology and Perioperative Medicine, School of Medicine, OHSU

✉ [schneler@ohsu.edu](mailto:schneler@ohsu.edu)

Karen Zito, PhD

📍 Center for Neuroscience, UC Davis

✉ [kzito@ucdavis.edu](mailto:kzito@ucdavis.edu)

*This resume was made with the R package [pagedown](#).*

*Last updated on 2024-06-17.*



## PUBLICATIONS

- In Prep **Functional domains of Dystroglycan in synapse formation and maintenance at inhibitory synapses in cerebellar cortex.**  
Jahncke JN, Schnell E, Wright KW. *In preparation*.
- 2024 **Tools for Cre-Mediated Conditional Deletion of Floxed Alleles from Developing Cerebellar Purkinje Cells.**  
Jahncke JN, Wright KW. eNeuro 22 May 2024, 11 (6) ENEURO.0149-24.2024; doi: [10.1523/ENEURO.0149-24.2024](https://doi.org/10.1523/ENEURO.0149-24.2024)
- 2024 **Inhibitory CCK+ basket synapse defects in mouse models of dystroglycanopathy.**  
Jahncke JN, Miller DS, Krush M, Schnell E, Wright KW. eLife. 2024; 12:RP87965. doi: [10.7554/eLife.87965.3](https://doi.org/10.7554/eLife.87965.3)
- 2023 **An adhesion signaling axis involving Dystroglycan,  $\beta$ 1-Integrin, and Cas adaptor proteins regulates the establishment of the cortical glial scaffold.**  
Wong W, Estep JA, Treptow AM, Rajabli N, Jahncke JN, Ubina T, Wright KM, Riccomagno MM. PLoS Biol. 2023 Aug 4;21(8):e3002212. doi: [10.1371/journal.pbio.3002212](https://doi.org/10.1371/journal.pbio.3002212)
- 2023 **The many roles of dystroglycan in nervous system development and function.**  
Jahncke JN, Wright KW. Developmental Dynamics. 2023; 252( 1): 61-80. doi: [10.1002/dvdy.516](https://doi.org/10.1002/dvdy.516)
- 2022 **Shared and Distinct Functional Effects of Patient-Specific Tbr1 Mutations on Cortical Development.**  
Co M, Barnard RA, Jahncke JN, Grindstaff S, Fedorov LM, Adey AC, Wright KM, O'Roak BJ. Journal of Neuroscience 14 September 2022, 42 (37) 7166-7181; doi: [10.1523/JNEUROSCI.0409-22.2022](https://doi.org/10.1523/JNEUROSCI.0409-22.2022)
- 2020 **Molecular Mechanisms of Non-ionotropic NMDA Receptor Signaling in Dendritic Spine Shrinkage.**  
Stein IS, Park DK, Flores JC, Jahncke JN, Zito K. Journal of Neuroscience 22 April 2020, JN-RM-0046-20; doi: [10.1523/JNEUROSCI.0046-20.2020](https://doi.org/10.1523/JNEUROSCI.0046-20.2020)
- 2017 **A Dual Role for the RhoGEF Ephexin5 in Regulation of Dendritic Spine Outgrowth.**  
Hamilton AM, Lambert JT, Parajuli LK, Vivas O, Park DK, Stein IS, Jahncke JN, Greenberg ME, Margolis SS, Zito K. Molecular and Cellular Neuroscience 80 (2017): 66-7 doi: [10.1016/j.mcn.2017.02.001](https://doi.org/10.1016/j.mcn.2017.02.001)





## TALKS






- 2024 **A functional role for Dystroglycan at inhibitory synapses across multiple brain regions**  
Dissertation Defense 📍 Portland, OR
- 2023 **A conserved role for Dystroglycan at inhibitory synapses across multiple brain regions**  
Vollum Works In Progress 📍 Portland, OR
- 2023 **Inhibitory Basket Synapse Formation in Mouse Models of Dystroglycanopathy**  
Vollum Works In Progress 📍 Portland, OR

## HONORS





- 2023 Vollum/NGP Paper of the Year
- 2023-2024 OHSU School of Medicine N.L. Tartar Trust Research Fellowship
- 2020-2023 Ruth L. Kirschstein National Research Service Award
- 2020 NSF GRFP Honorable Mention
- ARCS Foundation Scholar
- Phi Beta Kappa

- 2021 **A functional role for Dystroglycan at inhibitory cerebellar synapses**  
Vollum Works In Progress  Virtual
- 2020 **Dystroglycan: a scaffold for inhibitory synapses in cerebellar cortex**  
Vollum Works In Progress  Virtual

## ABSTRACTS

- 2023 **Purkinje neuron Dystroglycan is required for inhibitory synapse formation and maintenance.**  
Jahncke JN, Schnell E, Wright KM. OHSU NGP Retreat  Government Camp, OR
- 2022 **Dystroglycan is necessary for the formation of functional inhibitory CCK+/CB1R+ basket synapses in hippocampus.**  
Jahncke JN, Miller DS, Schnell E, Wright KM. CSHL Molecular Mechanisms of Neuronal Connectivity  Cold Spring Harbor, NY
- 2020 **Purkinje cell Dystroglycan may promote the function of inhibitory basket synapses in cerebellar cortex.**  
Jahncke JN, Schnell E, Wright KM. CSHL Molecular Mechanisms of Neuronal Connectivity  Cold Spring Harbor, NY
- 2019 **Non ionotropic NMDA receptor signaling mechanisms driving dendritic spine plasticity.**  
Stein IS, Park DK, Jahncke JN, Zito K. Society for Neuroscience  Chicago, IL
- 2018 **Genetically-encoded glutamate sensors for monitoring large populations of individual synapses in vivo.**  
Mizuno GO, Dong C, Jahncke JN, Natan R, Papadopoulos S, Jaffe D, Lambert JT, Ji N, Zito K, Tian . Fourth Annual Brain Initiative Investigators Meeting  Bethesda, MD

## TEACHING EXPERIENCE

- 2023 **OHSU NGP Bootcamp: Model Organisms**  
Hands on dissection of mouse and sheep brains.  Portland, OR
- 2023 **Rigor and Reproducibility in Light Microscopy**  
Lecture on best practices in light microscopy, aimed at incoming neuroscience graduate students.  Portland, OR
- 2023 **OHSU MD Foundations of Medicine: Nervous System and Function**  
Instruction of first year medical students learning about brain structure and function. Taught human cerebellum and brain stem anatomy in a hands on lab working with donated specimen.  Portland, OR
- 2021 **OHSU NGP Bootcamp: Patch Clamp Electrophysiology**  
Hands on patch clamp instruction.  Portland, OR
- 2021, 2019 **Graduate Level TA Positions**  
Biostatistics (CONJ 620) Winter 2021, OHSU  Portland, OR  
Cellular Neurophysiology (NEUS 624) Fall 2019, OHSU

2018

### **MBL Neurobiology, Imaging Section**

Teaching assistant at the Marine Biological Laboratory Neurobiology Course for the imaging section.

📍 Woods Hole, MA



## **VOLUNTEER & MENTORSHIP EXPERIENCE**

2022

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2020

### **Alliance for Visible Diversity (AVDS)**

Communications Committee Member

📍 Portland, OR

2022

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2019

### **OHSU Graduate School Organization (GSO)**

#### **Peer Mentoring Program**

Peer Mentor

📍 Portland, OR

2020

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2019

### **Women In Science PDX (WIS)**

STEMpowerment Committee Member

📍 Portland, OR

2019

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2018

### **NGP Alumni Invite Committee**

Committee Member

📍 Portland, OR

2018

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2015

### **Brain Awareness Week - Davis Chapter**

Event Organizer, Volunteer

📍 Davis, CA

2015

### **UC Davis Neurobiology, Physiology, & Behavior Club**

Guest Speaker

📍 Davis, CA

2018

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2014

### **Undergraduate Researcher Mentor**

Mentored two undergraduates in the lab setting, overseeing their independent research projects and providing support through poster presentations, fellowship applications, and career development.

📍 Davis, CA