

# Curriculum Vitae: **Kassandra M. Ori-McKenney**

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## **Education**

### **Columbia University, New York, NY**

2011 Ph.D. *with distinction*, Biological Sciences  
2009 M.Phil., Biological Sciences  
2007 M.A., Biological Sciences

### **Vassar College, Poughkeepsie, NY**

2005 B.A. *cum laude*, Neuroscience and Behavior (Major GPA: 3.91/4.00)

## **Professional Appointments**

Jan 2016-Present Assistant Professor, Department of Molecular and Cellular Biology, University of California, Davis.

## **Research Experience**

2011-2015 **Postdoctoral Research Fellow**, Department of Physiology, University of California, San Francisco.  
Advisor: Yuh-Nung Jan, Ph.D.  
Project: Dissecting the regulation of the cytoskeleton during dendrite development and neuronal function in *Drosophila*.

2005-2010 **Graduate Student**, Department of Biological Sciences, Columbia University.  
Advisor: Richard Vallee, Ph.D.  
Thesis: Characterization of a cytoplasmic dynein tail mutation in neurodevelopmental and neurodegenerative disease.

## **Research Publications**

**Ori-McKenney KM**, McKenney RJ, Younger S, Jan LY, Vale RD, Jan YN. Phosphorylation of  $\beta$ -Tubulin by the Down Syndrome Kinase, Minibrain/DYRK1a, Regulates Microtubule Dynamics and Dendrite Morphogenesis. *Neuron*, *In press*.

**Ori-McKenney KM**, Jan LY, Jan YN. Golgi outposts shape dendrite morphology by functioning as sites of acentrosomal microtubule nucleation in neurons. *Neuron*, **76**, 921-30 (2012).

Preview: “Neuronal Morphogenesis: Golgi Outposts, Acentrosomal Microtubule Nucleation, and Dendritic Branching.” Lewis TL and Polleux F. *Neuron*, **76**, 862-4 (2012).

Editor’s Choice in Neuroscience: “Branching Out: Satellites of the Golgi apparatus generate microtubules used to grow outer dendrite branches in *Drosophila* neurons.” Cossins D. *The Scientist*, 52 (2013).

F1000 Review

Song Y, **Ori-McKenney KM**, Zheng Y, Han C, Jan LY, Jan YN. Dendrite and axon regeneration of sensory neurons in *Drosophila* is regulated by the *bantam-Pten-Akt* pathway. *Genes and Development*, **26**, 1612-25 (2012).

F1000 Review

Harms M, **Ori-McKenney KM**, Scoto M, Tuck E, Bell S, Ma D, Masi S, Allred P, Al-Lozi, M, Reilly M, Miller L, Jani-Acsadi A, Shy M, Pestronk A, Muntoni F, Vallee RB, Baloh R. Mutations in the tail domain of cytoplasmic dynein (DYNC1H1) cause motor neuron disease in humans. *Neurology*, **78**, 1-7 (2012).

Yi JY, **Ori-McKenney KM**, McKenney RJ, Vershinnin M, Gross SP, Vallee RB. High-resolution imaging reveals indirect coordination of opposite motors and a role for LIS1 in high-load axonal transport. *Journal of Cell Biology*, **195**, 192-201 (2011).

**Ori-McKenney KM**, Vallee RB. Neuronal migration defects in the Loa dynein mutant mouse. *Neural Development*, **6**, 1-13 (2011).

**Ori-McKenney KM\***, Xu, J\*, Gross SP, Vallee RB. A neurodegenerative mutation reveals novel features of cytoplasmic dynein motor regulation. *Nature Cell Biology*, **12**, 1228-34 (2010). (\*Co-first authors)

News and Views: “Dynein at Odd Angles?” Hendricks AG, Lazarus JE, Holzbaur ELF, *Nature Cell Biology*, **12**, 1126 (2010).

Varma D\*, Dawn A\*, Ghosh-Roy A, Weil SJ, **Ori-McKenney KM**, Zhao Y, Keen J, Vallee RB, Williams JC. Development and application of *in vivo* molecular traps; trapping dynein light chains differentially affects dynein-mediated processes. *PNAS* **107**, 3493-8 (2010). (\*Co-first authors)

## **Book Chapters and Reviews**

Vallee RB, McKenney RJ, **Ori-McKenney KM**. (*Invited Review*) Multiple modes of cytoplasmic dynein regulation. *Nature Cell Biology*, **14**, 224-30 (2012).

**Ori-McKenney KM**, McKenney RJ, and Vallee RB. (*Invited Review*) Studies of Lissencephaly and Neurodegenerative Disease Reveal Novel Aspects of Cytoplasmic Dynein Regulation, in: SM King (Ed.), *Dyneins*. Academic Press of Elsevier. London, pp. 440-53 (2011).

## **Oral Presentations**

- December 2015 Invited Talk at American Society for Cell Biology Annual Meeting Subgroup Session: ‘Neuronal Cytoskeleton: Cytoarchitecture and Dynamics’  
Title: “The Down syndrome critical kinase, Minibrain/Dyrk1a, controls dendrite morphogenesis through direct regulation of the microtubule cytoskeleton.”
- December 2013 Invited Talk at American Society for Cell Biology Annual Meeting Subgroup Session: ‘Positioning the microtubule organizing center: a matter of life or death?’  
Title: “Golgi outpost mediated microtubule nucleation contributes to branch outgrowth in Drosophila dendritic arborization neurons.”
- November 2012 UCSF Research in Progress Seminar.  
Title: “Golgi outpost mediated microtubule nucleation contributes to branch outgrowth in Drosophila dendritic arborization neurons.”
- November 2011 Invited Seminar at City College of San Francisco.  
Title: “How Cellular Motors Cause Traffic Jams and Disease.”
- December 2009 Minisymposium Talk at American Society for Cell Biology Annual Meeting.  
Title: “A Neurodegenerative Mutation in Cytoplasmic Dynein Reveals Novel Regulation of Motor Activity.”

## **Funding**

- Jan 2016-Present **NIH R00 Pathway to Independence Award: R00HD080981**  
PI: Cassandra Ori-McKenney
- July 2014-Dec 2015 NIH K99 Pathway to Independence Award: K99HD080981  
PI: Cassandra Ori-McKenney
- July 2011-June 2014 Jane Coffin Childs Postdoctoral Research Fellowship  
2011 Declined: NIH NRSA Postdoctoral Fellowship: F32NS077618
- May 2009-Dec 2010 NIH Predoctoral Research Training Fellowship: 2 T32 GM008798
- May 2006-May 2009 Columbia University Motor Neuron Center Research Fellowship

## **Teaching and Educational Experience**

### **Educational Contributor, iBiology Magazine**

2013-2014

- Devised teaching tools for iBiology seminars including: Lecture notes, discussion prompts, study guides with review questions and answers, and exam questions and answers.

### **Teaching Workshops**

2014

**Bay Area Postdoctoral Teaching Workshop**

2013

**San Francisco State University SEPAL Workshop**

### **Adjunct Faculty, University of San Francisco**

2012-2013

**Human Anatomy Laboratory (BIOL 114)**

- Composed lectures to introduce the material for each laboratory

- Designed entrance and exit quizzes as well as laboratory practical exams
- Graded quizzes and exams

**Lecturer, Columbia University Science Honors Program**

2008-2010    **The Cytoskeleton: Dynamic Scaffolding of the Cell**

- Designed a college-level course to teach high school students about the three major cytoskeletal networks and related diseases
- Developed course material based on historical and current research in the fields of molecular biology, biochemistry, and cell and developmental biology
- Taught these lectures in 2.5-hour sessions every Saturday (12 per semester)

**Teaching Assistant, Columbia University**

Spring 2007    **Developmental Biology** (BIOL W3022/4022)

- Led weekly discussion sections correlating to the lecture material of the instructor
- Graded quizzes and exams

Fall 2006    **Introduction to Biology** (BIOL C2005)

- Led weekly discussion sections correlating to the lecture material of the instructor
- Graded quizzes and exams

**Honors and Awards**

2013	American Society for Cell Biology Annual Meeting Childcare Award
2012	Best Poster Award at the Cell Biology of the Neuron Gordon Conference
2006	National Science Foundation Honorable Mention
2004-2005	Carol Miller Kautz Scholarship
2004	Burnam Fellowship for Research Abroad in Thailand
2003	Environmental Biochemistry Fellowship for Research Abroad in India

**Professional Societies and Advisory Committees**

2009-	Biophysical Society Member
2007-	American Society for Cell Biology Member
2007-2008	Columbia University Earth Institute Advisory Council Member
2006-2010	Columbia University Motor Neuron Center Member
2006-2010	NYAS Science Alliance Member