Kenton C. Hokanson, Ph.D.

Instructor and Research Associate ● Oregon State University
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Education

Ph.D., Neuroscience – UC San Francisco; Neuroscience Program Dec. 2017
Advisors: Graeme Davis and Erik Ullian

Master of Science, Neuroscience – UC San Francisco; Neuroscience Program June 2015
Advisors: Graeme Davis and Erik Ullian

Bachelor of Arts, Psychology (Honors) – Pomona College, CA May 2008
Advisor: Nicole Weekes
Graduated *cum laude*; thesis awarded distinction

Awards

National Institute of Health Training Grant (Program for the Visual Sciences) 2012 – 2016
National Science Foundation Grad. Research Fellowship (honorable mention) Mar. 2012
Phi Beta Kappa 2008
Sigma Xi; Psi Chi; National Society of Collegiate Scholars; Pomona Scholar 2006 – 2008
Summer Undergraduate Research Program Awardee, Pomona College 2005 – 2008
Scholarships: Robert C. Byrd; Pomona Alumni; Chevron-Texaco REACH 2005 – 2008

Teaching & Pedagogy

Instructor – Oregon State University, Corvallis, OR Jan. 2018 – Present
Led large in-person and online versions of an introductory course for non-majors
Delivered an Introductory Microbiology course to ~140 students per term. Restructured material to increase active learning and provide formative assessments, to increase accessibility of course material to the diverse audience, and to emphasize the intimate role of microbes in our daily lives.

Instructor – Oregon State University, Corvallis, OR Jan. 2018 – Present
Establishing pedagogy course for Graduate Teaching Assistants (GTAs)
Creating a term-long pedagogy course aimed at improving teaching skills of GTAs. Focuses on evidence-based teaching, promoting inclusion and increasing retention among diverse students, quantitative assessments of teaching, and building a teaching portfolio.

Teaching Assistant – Neuroscience Program, UCSF, San Francisco, CA 2010 – 2014
Presented lessons and moderated discussion of principles from textbook and articles (24 hours)
Planned and delivered classes and discussions comprising part of the School of Dentistry Pathophysiology course. Volunteered to teach extra sessions, totaling 24 hours over four years.

Participant – STEP-UP Pedagogy Course, UCSF, San Francisco, CA Apr. – May 2015
Completed pedagogical training course focused on evidence-based teaching (18 hours)
Applied evidence-based scientific teaching strategies, and practiced developing learning outcomes and teaching materials designed to improve learning and increase the accessibility of science.

Participant – BEST Pedagogy Course, UCSF, San Francisco, CA Sept. – Dec 2011
Completed pedagogical training course focused on access to education (Biochem. 212, 1.5 units)
Discussed and practiced techniques and principles to improve teaching at the undergraduate and graduate levels. Studied ways to combat stereotype threat and to promote active learning.

Mentorship

Mentored Undergraduate Researcher – Oregon State University, Corvallis, OR Mar. 2018 – Present
Served as primary mentor to undergraduate researcher
Provided training in theory and operation of electrophysiological equipment. Supported in writing funding applications, provided opportunities for and feedback on scientific writing, and encouraged independence and curiosity.

Supervised rotation student – UCSF, San Francisco, CA Apr. – Jul. 2015
Mentored a rotating graduate student for four months
Trained student in electrophysiology and in several methods of tissue preparation, as the sole mentor.

Summer Research Training Program – UCSF, San Francisco, CA May 2013 – Jul. 2013
Mentored an undergraduate student for 12 week summer program
Provided scientific training and professional mentorship to an undergraduate student.
Introduced a variety of techniques, supervised and assisted in data analysis and presentation.

Instructor – Science & Health Education Partnership, UCSF, San Francisco, CA 2011 –2012
Planned six classes including active experiments for elementary and middle school children (24 hours)
As a volunteer, taught classes complementing and expanding on science courses in local public elementary and middle schools. Planned and led lessons in concert with the regular teacher.

Research

Research Associate/Core Manager – Oregon State University, Corvallis, OR Jan. 2018 – Present
Research: Increasing Access to Cutting-Edge Neuronal Electrophysiology
Consulting with laboratories to design, pilot, troubleshoot, and carry out electrophysiological analyses of excitable cells, including primary and stem cell-derived neuronal cultures, mouse brain slices, and more. Additional responsibilities include securing funding to expand access and improve capabilities of the Core Facility, mentoring and training undergraduate researchers, training equipment operators, performing upgrades and maintenance, assisting with data analysis, and contributing to manuscripts.

Graduate Student – University of California, San Francisco, CA Sept. 2010 – Dec. 2017
Principal investigators: Dr. Graeme Davis and Dr. Erik Ullian (joint mentors)
Research: Competition Sets Synaptic Drive in the Central Nervous System
Conducted whole-cell recordings *in vitro* and in acute slices from mouse visual thalamic, cortical, and hippocampal neurons, using a variety of pharmacological and electrophysiological protocols. Carried out morphological characterization of neurons and astrocytes combining cell filling, tissue clearing, immunohistochemistry, and confocal microscopy.

Research Assistant – Yale University, CT Sept. 2009 – Aug. 2010
Principal investigator: Elizabeth Jonas and Len Kaczmarek
Research: Recorded from single mitochondrial ion channels; supported ongoing research projects
Conducted recordings from single ion channels; generated primary hippocampal neuron cultures.

Outreach & Peer Review

Contributor – Science in the Classroom – AAAS 2014 – 2015
Wrote plain-English high school and college-level analyses of recent scientific articles
Contributed summaries explaining techniques and data, as well as assessing scientific claims and providing activities and teaching guides, as a free resource supporting science teaching.

Instructor – Science & Health Education Partnership, UCSF, San Francisco, CA 2011 – 2012
Planned six classes including active experiments for elementary and middle school children (24 hours)
As a volunteer, taught classes complementing and expanding on science courses in local public elementary and middle schools. Planned and led lessons in concert with the regular teacher.

Reviewer – UCSF, San Francisco, CA 2010 – 2017
Reviewed fifteen manuscript submissions with Dr. Erik Ullian
Read scientific literature, wrote and revised reviews of manuscript submissions for journals including E-Life, Neuron, J. Neuroscience, and Science.

Publications

Kenton C. Hokanson, Graeme W. Davis, and Erik M. Ullian (in review). Interplay of synaptic competition and homeostatic plasticity in the developing mouse visual system.

Aditi Deshpande, Smita Yadav, Dang Q. Dao, Zhi-Yong Wu, **Kenton C. Hokanson**, Yuh-Nung Jan, Erik M. Ullian, and Lauren A. Weiss (2017). Cellular phenotypes in human iPSC-derived neurons from a genetic model of autism spectrum disorder. *Cell Reports, 21(10),* 2678-2687. PMID: 29212016

Ainhoa Exteberria, **Kenton C. Hokanson**, Dang Q. Dao, Sonia R. Mayoral, Feng Mei, Stephanie A. Redmond, Erik M. Ullian, and Jonah R. Chan (2016). Dynamic modulation of myelination in response to visuall stimuli alters optic nerve conduction velocity. *Journal of Neuroscience, 36(26),* 6937-6948. PMID: 27358452

Robert Krencik, **Kenton C. Hokanson**, Aditi R. Narayan, Jill Dvornik, Gemma E. Rooney, Katherine A. Rauen, Lauren A. Weiss, David H. Rowitch, and Erik M. Ullian (2015). Dysregulation of astrocyte extracellular signaling in Costello syndrome. *Science Translational Medicine, 7(286)*. PMID: 25947161

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Posters

Kenton C. Hokanson, Erik Ullian, Graeme Davis. Competition, not Maturation, Sets Synaptic Drive in the Central Nervous System. UCSF Ophthalmology Poster Fair, San Francisco, CA, 2016.

Kenton C. Hokanson, Erik Ullian, Graeme Davis. Presynaptically-specified circuit wiring in the central nervous system. UCSF Neuroscience Program Symposium, Asilomar, CA, 2015.

Robert Krencik, **Kenton C. Hokanson**, Aditi R. Narayan, Jill Dvornik, Gemma E. Rooney, Katherine A. Rauen, Lauren A. Weiss, David H. Rowitch, and Erik Ullian. Dysregulation of Astrocyte Extracellular Signaling in Costello Syndrome. Gordon Research Conference: Glial Biology: Functional Interactions among Glia & Neurons, Ventura, CA, 2015 and UCSF Autism Symposium, San Francisco, CA, 2015.

Kenton C. Hokanson, Erik Ullian, Graeme Davis. Structural Synaptic Stability in the Developing dLGN. UCSF Vision Seminar, San Francisco, CA, 2014.

Kenton C. Hokanson, Erik Ullian, Graeme Davis. A Tale of Two Inputs: Eye-Specific Synaptic Development in the Mouse Visual System. UCSF Ophthalmology Poster Fair, San Francisco, CA, 2014.

Robert Krencik, **Kenton C. Hokanson**, Aditi R. Narayan, Jill Dvornik, Gemma E. Rooney, Lauren A. Weiss, Katherine A. Rauen, and Erik Ullian. Accelerated Astrogliogenesis and Modulated Extracellular Signaling of RASopathic Human Astrocytes. UCSF Development and Stem Cell Biology Retreat, Tomales Bay, CA, 2014 and Cell Symposia, Cedars-Sinai, Los Angeles, CA, 2014.

Yvonne Ou, Karen Chu, **Kenton C. Hokanson**, and Erik Ullian. Generation and Characterization of Retinal Ganglion Cells from Glaucoma Patient iPSCs. Association for Research in Vision and Ophthalmology, Orlando, FL, 2014.

Kenton C. Hokanson, Erik Ullian, Graeme Davis. Synaptic Homeostasis (and a lack thereof) in the developing Mouse Visual Cortex. UCSF Neuroscience Program Symposium, Asilomar, CA, 2013.

Robert Krencik, **Kenton C. Hokanson**, Aditi R. Narayan, Jill Dvornik, Gemma E. Rooney, Lauren A. Weiss, Katherine A. Rauen, and Erik Ullian. Accelerated Astrogliogenesis and Modulated Extracellular Signaling of RASopathic Human Astrocytes. Society for Neuroscience Meeting, San Diego, CA, 2013.

Kenton C. Hokanson, Dimitri Ofengeim, Kambiz Alavian, F. Pontarelli, J. Hickman, J. Hardwick, R. Zukin, Elizabeth Jonas. Bcl-xL Inhibitor ABT-737 Rescues Ischemic Neurons from Death by preventing Bcl-xL cleavage and may interact directly with the pro-apoptotic cleavage fragment of Bcl-xL. Society for Neuroscience Meeting, San Diego, CA, 2010.

Kenton C. Hokanson, Roxanna Salim, Nicole Weekes. Preliminary Evidence for the Sympathetic-Adrenal-Medullary Modulation of Salivary Immunoglobulin-A. American Psychological Society, San Francisco, CA, 2009.