Rhea R. Kimpo, PhD

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Education

2000	University of California, San Francisco **Ph.D. in Neuroscience**
1993	University of California, Berkeley **B.A. in Molecular and Cell Biology, emphasis in Biophysics, with Honors**

Grants, Fellowships and Awards

2010-present	NINDS, Career Development Award to Promote Diversity in Neuroscience Research (K01, as Principal Investigator)
2013	Best Poster Award, Annual Molecular and Cellular Cognition Society Meeting, San Diego CA
2008-2010	NINDS, Research Supplement to Promote Diversity in Health-Related Research Program
2007	Stanford University, School of Medicine Dean's Fellowship
2003, 2005-2007	National Science Foundation, Minority Postdoctoral Fellowship
2001	Stanford University, School of Medicine Dean's Fellowship
1998-2001	Society for Neuroscience, Neuroscience Scholars Program
1998	UC San Francisco, Chancellor's Award (Honorary)
1998	UC San Francisco/National Institute for General Medical Sciences, Biomedical Science Research Career Enhancement Fellowship
1995-1997	UC San Francisco, Mentorship Fellowship
1994	UC San Francisco, Cota-Robles Fellowship
1993	UC Berkeley, Honors in Molecular and Cell Biology
1993	UC Berkeley, High Distinction in General Scholarship

Research

2008-present. *Basic Life Science Research Associate*, Laboratory of Dr. Jennifer Raymond, Dept. of Neurobiology, Stanford University. Optogenetic dissection of the contribution of an error signal in the cerebellar circuit to oculomotor learning.

2001-2003, 2005-2008. *Postdoctoral Fellow*, Laboratory of Dr. Jennifer Raymond, Dept. of Neurobiology, Stanford University. Performed top-down analyses of neural

mechanisms involved in cerebellum-dependent oculomotor learning in wild-type and transgenic mice.

1993-2000. *Graduate Student*, Laboratory of Dr. Allison Doupe, Dept. of Physiology, UC San Francisco. Analyzed the development of functional connectivity within a basal ganglia-like circuit for song learning in songbirds.

1992. *Research Assistant*, Summer Research Training Program for Minority Undergraduates, Laboratory of Dr. David Morgan, Dept. of Physiology, UC San Francisco. Analyzed the biochemical role of a novel protein in the cell cycle.

1992-1993. *Research Assistant (Honors Thesis)*, Laboratory of Dr. Howard Mel, Dept. of Molecular and Cell Biology, UC Berkeley. Thermodynamically described increasingly complex models of biochemical reactions.

Journal Publications

Kimpo RR*, Rinaldi JM*, Kim CK*, and Payne HL*, Raymond JL (2014). Gating of neural error signals for motor learning. *eLife* (In press). **equal contribution*

Nguyen-Vu TDB*, Kimpo RR*, Rinaldi JM, Kohli A, Zeng H, Deisseroth KD, Raymond JL (2013). Cerebellar Purkinje cell activity drives motor learning. **equal contribution* *Nature Neuroscience* 2013 Oct 27. doi: 10.1038/nn.3576. PMID: 24162651

Kimpo RR and Raymond JL (2007). Impaired motor learning in the vestibulo-ocular reflex in mice with multiple climbing fiber input to cerebellar Purkinje cells. *Journal of Neuroscience* 27(21):5672-82. PMID 17522312.

Kimpo RR*, Boyden ES*, Katoh A, Ke MC, and Raymond JL (2005). Distinct patterns of stimulus generalization of increases and decreases in VOR gain. *Journal of Neurophysiology* 94(5):3092-100. Epub 2005 Jul 20. PMID 16033945. **equal contribution*

Doupe AJ, Solis MM, Kimpo R, Boettiger CA (2004). Cellular, circuit, and synaptic mechanisms in song learning. *Annals of the New York Academy of Sciences* 1016:495-523. Review. PMID 15313792.

Kimpo RR, Theunissen FE, and Doupe AJ (2003). Propagation of correlated activity through multiple stages of a neural circuit. *Journal of Neuroscience* 23(13):5750-61. PMID 12843279.

Kimpo RR and Doupe AJ (1997). Fos is induced by singing in distinct neuronal populations in a motor network. *Neuron* (18): 315-325. PMID 9052801.

Work in Preparation

Katoh A, Shin S-L, Kimpo RR, Rinaldi JM, and Raymond JL. Purkinje cell responses during visually- and vestibularly-driven smooth eye movements in mice. *Submitted.*

Kimpo RR, Theunissen FE, and Doupe AJ. Developmental changes in timing and strength of correlated activity between the anterior forebrain and motor pathway of the song system. *In preparation*.

Teaching

2014. *Lecturer.* Neurobiology 206. Introductory course to the structure and function of the nervous system. Dept. of Neurobiology, Stanford School of Medicine, Stanford University.

2013. *Laboratory discussion leader**. Stanford Biocore Explorations Program, Dept. of Biology. Stanford University.

2012. *Laboratory discussion leader**. Stanford Biocore Explorations Program, Dept. of Biology. Stanford University.

1996. *Training Assistant*, Summer Research Training Program for Minority Undergraduates. Graduate Division, UC San Francisco.

1995. *Teaching and Laboratory Assistant,* Mammalian Physiology II (PHYS 122). School of Pharmacy, UC San Francisco.

1994. *Training Assistant*, Summer Research Training Program for Minority Undergraduates. Graduate Division, UC San Francisco.

*Teaching evaluations available

Seminars

Gating of neural error signals for motor learning. Invited seminar speaker. Graduate School of Medicine, University of Tokyo; Tokyo, Japan; September 2, 2013.

Gating of neural error signals for motor learning. Invited seminar speaker. Tokai University, Tokai Medical Association. Tokyo, Japan; September 3, 2013.

Gating of neural error signals for motor learning. Invited seminar speaker. Section of Neurology, Makati Medical Center; Manila, Philippines; September 10, 2013.

Gating of error signals for motor learning. Neuroscience Journal Club, University of California at Santa Cruz; Santa Cruz, California; January 10, 2013.

How does the brain learn and store motor memories? Stimulus generalization of learned movements. Invited seminar at Dept. of Psychology, University of New South Wales, Sydney, Australia. August 3, 2005.

Conference Presentations

Kimpo RR, Rinaldi JM, Kim CK, Payne HL, and Raymond JL (2013). Gating of error signals in the cerebellum. Program No. 164.12. Annual Meeting of the Society for Neuroscience. San Diego, CA. Nov. 9-13, 2013.

Kimpo RR, Rinaldi JM, Kim CK, Deisseroth KD, and Raymond JL (2012). Dynamic gating of error signals during cerebellum-dependent learning. Translational and Computational Motor Control. New Orleans, LA. Oct. 12, 2012.

Kimpo RR, Rinaldi JM, Kim CK, Deisseroth KD, and Raymond JL (2012). Dynamic gating of error signals during cerebellum-dependent learning. Molecular and Cellular Cognition Society. New Orleans, LA. Oct. 11-12, 2012.

Kimpo RR, Rinaldi JM, Deisseroth K, and Raymond JL (2011). Climbing fiber activity as an error signal for VOR motor learning. Program No. 183.14. 2011 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2011. Online.

Kimpo RR, Rinaldi JM, Deisseroth K, and Raymond JL (2011). Climbing fiber activity as an error signal for VOR motor learning. 2011 Gordon Research Conference on Eye Movements. University of New England, Biddeford, ME. July 31-Aug. 5, 2011.

Katoh A, Kimpo RR, Raymond JL (2008). Changes in Purkinje cell output during learned changes in dynamics of the vestibulo-ocular reflex. Program No. 169.18. 2008 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2008. Online.

Kimpo RR, Katoh A, Boyden ES, Raymond JL (2004). Patterns of generalization constrain the encoding of learned increases and decreases in gain of the VOR. Program No. 411.5.

2004 Abstract Viewer/Itinerary Planner. Washington, DC: Society for Neuroscience, 2004. Online.

Kimpo, RR and Raymond, JL (2002). Adaptation of the VOR in wild type and PKCγ knockout mice. Program No. 766.7. *2002 Abstract Viewer/Itinerary Planner.* Washington, DC: Society for Neuroscience, 2002. Online.

Kimpo, RR, Theunissen, FE, and Doupe, AJ (2002). Propagation of correlated activity through multiple steps of the song system. Behavioral Neurobiology of Bird Song, 16th Annual Symposium, The Center for Study of Gene Structure & Function, Hunter College CUNY; Dec. 12-14, 2002.

Kimpo, RR, Theunissen, FE, and Doupe, AJ (1998). Developmental changes in the correlation of firing between auditory neurons of song nuclei LMAN and RA. Soc. Neurosci. Abstr. Vol.24, part 1, p.191, 1998.

Kimpo, RR and Doupe, AJ (1996). Expression of c-fos protein in adult zebra finch HVc and RA is induced by the motor act of singing. Soc. Neurosci. Abstr. Vol. 22, Part 1, p.691, 1996.

Memberships

Society for Neuroscience

Molecular Cellular Cognition Society

References (3)

Jennifer Raymond, Ph.D.
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