

Kyle S. Honegger

CONTACT INFORMATION	Harvard University Center for Brain Science Dept. Organismic and Evolutionary Biology Northwest Lab Building, de Bivort Lab 52 Oxford Street Cambridge, MA 02138 <i>E-mail:</i> honegger@fas.harvard.edu	
RESEARCH INTERESTS	Neural coding, sensory systems, evolution, neuroethology, comparative physiology, computational methods in neuroscience, functional imaging, electrophysiology, population genetics	
EDUCATION	Watson School of Biological Sciences , Cold Spring Harbor, NY USA Ph.D., Biological Sciences • Dissertation Title: “Neural coding in the <i>Drosophila</i> Mushroom Body” • Advisor: Glenn Turner Northwestern University , Evanston, IL USA B.A., Cognitive Science • Concentration: Cognitive Neuroscience • Research Advisor: Aryeh Routtenberg	April 2012 June 2007
RESEARCH EXPERIENCE	Harvard University , Cambridge, MA USA <i>Post-Doctoral Fellow</i> , de Bivort Laboratory Cold Spring Harbor Laboratory , Cold Spring Harbor, NY USA <i>Post-Graduate Researcher</i> , Turner Laboratory Cold Spring Harbor Laboratory , Cold Spring Harbor, NY USA <i>Graduate Student</i> , Turner Laboratory Northwestern University , Evanston, IL USA <i>Undergraduate Research Assistant</i> , Routtenberg Laboratory	2013 – present 2012 – 2013 2007 – 2012 2003 – 2007
PROFESSIONAL EXPERIENCE	Conference Co-organizer Evolution of Neural Circuits and Behavior <i>Banbury Center</i> , Cold Spring Harbor, NY USA	December 7 – 9, 2011
AWARDS AND FELLOWSHIPS	Crick-Clay Graduate Fellowship Northwestern University Undergraduate Research Grant	2007 – 2012 2006

TEACHING
EXPERIENCE

Instructor

Humanity and the Biological Universe (NYIT BIO-101)
New York Institute of Technology, Old Westbury, NY USA

Spring 2013

Instructor

Genetics Project Lab (Adelphi BIO-224)
Adelphi University, Garden City, NY USA

August 2011 – May 2012

Teaching Assistant

Specialized Disciplines: Systems Neuroscience
Watson School of Biological Sciences, Cold Spring Harbor, NY USA

Fall 2012/2013

Graduate Student Tutor

Molecular, cellular, and systems neuroscience
Watson School of Biological Sciences, Cold Spring Harbor, NY USA

Summer 2012

Teaching Intern

Molecular biology labs for middle and high school students
Dolan DNA Learning Center, Cold Spring Harbor, NY USA

Spring 2008

MANUSCRIPTS IN
PREPARATION

Cressy, M., Valente, D., Altick, A., Kockenmeister, E., **Honegger, K.**, Qin, H., Mitra, P., and J. Dubnau. Experimental evolution of adenylyl cyclase-independent learning in *Drosophila* implicates numerous multi-locus genetic solutions.

REFEREED
PUBLICATIONS

Campbell, R.A.A.,* **Honegger, K.S.**,* Demir, E., Qin, H., Li, W., and G.C. Turner. (2013). Imaging a population code for odor identity in the *Drosophila* mushroom body. *J Neurosci.* 33(25):10568-81. (* shared first-authorship)

Honegger, K.S.,* Campbell, R.A.A.,* and G.C. Turner. (2011). Cellular-resolution population imaging reveals robust sparse coding in the *Drosophila* mushroom body. *J Neurosci.* 31(33):11772-85. (* shared first-authorship)

Holahan, M.R., **Honegger, K.S.**, and A. Routtenberg. (2010). Ectopic growth of hippocampal mossy fibers in a mutated GAP-43 transgenic mouse with impaired spatial memory retention, *Hippocampus* 20(1):58-64.

Holahan, M.R., **Honegger, K.S.**, Tabatadze, N., and A. Routtenberg. (2007). GAP-43 gene expression regulates information storage, *Learning and Memory* 14(6):407-15.

Holahan, M.R., **Honegger, K.S.**, and A. Routtenberg. (2007). Expansion and retraction of hippocampal mossy fibers during postweaning development: strain-specific effects of NMDA receptor blockade, *Hippocampus* 17(1):58-67.

BOOK CHAPTERS

Campbell, R.A.A., **Honegger, K.S.**, Gruntman, E., and G.C. Turner. Two-photon imaging of population activity with genetically encoded calcium indicators in living flies, chapter to appear in *Neuromethods: Genetically Encoded Functional Indicators*.

CONFERENCE
ABSTRACTS

Honegger, K.S., Campbell, R.A., and G.C. Turner. (2011). Functional imaging of population coding in olfaction: neural activity to perception. Conference Abstract: *Synapses: From Molecules to Circuits and Behavior 2011*.

Campbell, R.A., **Honegger, K.**, and G.C. Turner. (2011). Functional imaging of complete population odor codes relates neural to perceptual discriminability. Conference Abstract: *Neurobiology of Drosophila 2011*.

Campbell, R., Turner, G.C., and **K. Honegger** (2010). Odour identity is represented by the pattern of activated neurons in the *Drosophila* mushroom body. Front. Neurosci. Conference Abstract: *Computational and Systems Neuroscience 2010*.