

CONTACT
INFORMATION

Neuroscience Program
Wellesley College
106 Central St.
Wellesley, MA 02481
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APPOINTMENTS

Kresa Family Assistant Professor of Neuroscience
Wellesley College
July 2016 – present

Visiting Researcher
Brandeis University, October 2017-October 2018

Visiting Assistant Researcher
UCLA, May – July 2017

EDUCATION
AND TRAINING

HHMI Postdoctoral Associate, UCLA, October 2010 – May 2016
Department of Integrative Biology and Physiology
Laboratory of Dr. Mark Frye

Ph.D., Brandeis University, 2010
Program in Molecular and Cell Biology
Laboratory of Dr. Piali Sengupta
Dissertation title: The molecular and physiological basis of thermosensory behaviors in *C. elegans*. Thesis Committee: Dr. Piali Sengupta, Dr. Michael Rosbash, Dr. Paul Garrity, and Dr. Aravi Samuel

M.A., Pepperdine University, 2004
Program in Education

B.A., Wellesley College, 2002
Majors in Neuroscience and Theater Studies

PUBLICATIONS

Current or former undergraduate authors: underlined
Corresponding author(s): *
Equal contribution: ¶

Chuntao Dan[¶], **Sara Wasserman[¶]**, Jade Nguyen, Florian Engert, Vivek Jayaraman, Mark Frye, Sam Kunes*. Active odor-off detection in the early olfactory circuit modulates flight saccade and olfactory navigation in adult *Drosophila*. ***In preparation.***

Emily Park and **Sara Wasserman*** (2018) Diversity of Visuomotor Reflexes in Two *Drosophila* Species. ***Current Biology. In Press.***

Sara M Wasserman* and Mark A Frye* (2015) Group Behavior: Social Context Modulates Behavioral Responses to Sensory Stimuli. ***Current Biology.*** 25(11):R467-R469

Wasserman SM[¶], Aptekar JW[¶], Lu PM, Nguyen J, Wang AL, Keles MF, Grygoruk A, Krantz DE, Larsen C, Frye MA* (2015) Olfactory neuromodulation of motion vision circuitry in *Drosophila*. ***Current Biology.*** 25(4):467-472.

Sara Wasserman, Alexandra Salomon[#], and Mark A. Frye* (2013). *Drosophila* tracks Carbon Dioxide in Flight. ***Current Biology.*** 23(4):301-306. ([#] high school student)

Sara Wasserman, Patrick Lu, Jacob Aptekar, and Mark Frye* (2012). Flies dynamically track, rather than ballistically escape, aversive odor during flight. ***J. Exp. Biol.*** 215, 2833-2840.

Sara Wasserman, Matthew Beverly, Harry Bell, and Piali Sengupta* (2011). Regulation of Response Properties and Operating Range of the AFD Thermosensory Neurons by cGMP Signaling. *Current Biology*. 21(5):353-362.

Alexander M. van der Linden, Matthew Beverly, Sebastian Kadener, Joseph Rodriguez, **Sara Wasserman**, Michael Rosbash and Piali Sengupta* (2010). Genome-Wide Analysis of Light- and Temperature-Entrained Circadian Transcripts in *Caenorhabditis elegans*. *PLoS Biol*. 8(10): e1000503.

David Biron[¶], **Sara Wasserman**[¶], James H. Thomas, Aravinthan D.T. Samuel, and Piali Sengupta*. (2008) An olfactory neuron responds stochastically to temperature and modulates *Caenorhabditis elegans* thermotactic behavior. *PNAS*. 105(31):11002-11007.

David Biron, Mayumi Shibuya, Christopher Gabel, **Sara M Wasserman**, Damon A Clark, Adam Brown, Piali Sengupta*, and Aravinthan D T Samue*1. (2006) A diacylglycerol kinase modulates long-term thermotactic behavioral plasticity in *C. elegans*. *Nat. Neurosci*. 9(12):1499-505.

AWARDS

2017, Gordon Research Conferences PUI Award to attend the 2017 GRC Neuroethology meeting
2016, The International Society for Neuroethology Young Investigator Awardee
2015, The Journal of Experimental Biology Travelling Fellowship
2013, UCLA Department of Neurobiology Sawyer Travel Award
2012, Society for Neuroscience Postdoctoral Scholar Travel Award Finalist
2012, UCLA Society for Neuroscience Postdoctoral Scholar Travel Award Nominee
2007-2010, Individual Predoctoral Ruth L. Kirschstein National Research Service Award (NINDS);
Title: The molecular and physiological basis of thermosensory behavior in *C. elegans*
2004-2007, NIH Institutional Training Grant for Genetics, Brandeis University
2001, National Science Foundation (REU) Grant Recipient for summer research, Wellesley College

PUBLISHED ABSTRACTS

Current or former undergraduate authors: underlined
Presenter(s): **bold**
Equal contribution: ¶

Isabel D'Alessandro[¶], **Emily J Park**[¶], Sara Wasserman. Visuomotor Reflexes Differ Across *Drosophila* Species. Society for Neuroscience annual meeting, San Diego, CA, 2018.

Emily Park and **Sara Wasserman**. Diversity of Visuomotor Reflexes Seen in Two *Drosophila* Species. International Congress of Neuroethology. Brisbane, Australia, 2018.

Rachel Mernoff[¶], **Gace Turner**[¶], Nadya Zolotova, Patrick Lu, Austin L. Wang, Mark Frye, and Sara M. Wasserman. Internal state modulates perception of visual and olfactory stimuli by *Drosophila melanogaster*, Society for Neuroscience annual meeting, Washington, DC, 2017.

Rachel Mernoff, Patrick Lu, Austin Wang, Mark Frye, and **Sara Wasserman**. Internal physiological state modulates saliency of visual and olfactory behaviors in *Drosophila melanogaster*, Neuroethology: Behavior, Evolution, and Neurobiology Gordon Research Conference, Les Diablerets, Switzerland, 2017.

Sara Wasserman. Aminergic modulation of sensory perception in the flying fly. *Drosophila* Research Conference, San Diego, CA, 2017.

Sara Wasserman, Chair of Mini Symposium, *Neuronal Circuits Driving Behavior: Invertebrates to Vertebrates*. Society for Neuroscience annual meeting, San Diego, CA, 2016.
List of participants: <http://www.abstractsonline.com/pp8/index.html#!/4071/session/28>

Sara Wasserman. Multimodal sensory integration underlying decision-making in flying *Drosophila*. International Congress of Neuroethology, Montevideo, Uruguay, 2016.

Sara Wasserman, Nadya Zolotova, Austin Wang, Patrick Lu, and Mark Frye. Internal physiological state Modulates visual and olfactory behaviors in *Drosophila*. Gordon Research Conference – Neuroethology: Behavior, Evolution & Neurobiology, Luca, Italy. 2015.

Sara Wasserman, Jacob W. Aptekar, Patrick Lu, Austin L. Wang, Jade Nguyen, David E. Krantz, Camilla Larsen, and Mark Frye, A novel class of visual motion detecting neurons in *Drosophila* integrates olfactory information. International Congress of Neuroethology, Sapporo, Japan, 2014.

Sara Wasserman, Alexandra Salomon[#], Patrick Lu, and Mark Frye, In-flight olfactory feature detection.

Cell Press Symposia: Genes, Circuits, and Behavior, Toronto, Canada, 2013. (# High School Student)

Sara Wasserman, Daniel Malkin, and Mark Frye. *Drosophila* avoid CO₂ while walking and seek it out in flight. Society for Neuroscience, New Orleans, LA, USA, 2012.

Sara Wasserman, Alexandra Salomon[#], Daniel Malkin, and Mark Frye. *Drosophila* track CO₂ in flight. Tenth International Congress of Neuroethology, College Park, MD, USA 2012. (# High school student)

Sara Wasserman, Patrick Lu, and Mark Frye. *Drosophila* anti-track an aversive odorant in flight. Gordon Research Conference - Neuroethology: Behavior, Evolution & Neurobiology, Easton, MA, USA, 2011.

Sara Wasserman, David Biron, Matthew Beverly, ADT Samuel, and Piali Sengupta. Communication among neurons in a thermosensory circuit in *C. elegans*. Society for Neuroscience Annual Meeting, Washington, DC, USA 2008.

Sara Wasserman and David Biron, A.D.T Samuel, Piali Sengupta. A Novel GPCR in the AFD and AWC Neurons Contributes to Isothermal Tracking Behavior in *C. elegans*. 16th International *C. elegans* Meeting, Los Angeles, CA, USA, 2007.

Sara Wasserman, D. Biron, M. Shibuya, D.A. Clark, C. Gabel, A.D.T. Samuel, P. Sengupta. Modulation of Thermotactic Behavioral Plasticity in *C. elegans*. *C. elegans* Neurobiology Topic Meeting, Madison, WI, USA, 2006.

INVITED SYMPOSIA

2018 Wellesley College Club of New Jersey
2018 Society of Integrative and Comparative Biology, Emily Park (~17) Presenting, San Francisco, CA
2017 University of Cincinnati, Biology Department Seminar Speaker
2017 Association for Chemoreception Sciences, Bonita Springs, FL
2017 The Drosophila Meeting, San Diego, CA
2016 Society for Neuroscience, Minisymposium Chair, San Diego, CA
2016 International Congress of Neuroethology, Montevideo, Uruguay
2015 Harvey Mudd College, Department of Biology Colloquium
2013 Syracuse University, Department of Biology (SU Advance)
2012 Claremont Colleges, Intercollegiate Neuroscience Program speaker series

TEACHING EXPERIENCE

NEUR 100: Capstone Seminar, Wellesley College, Spring 2017
NEUR 300: Capstone Seminar, Wellesley College, Fall 2016
NEUR 310: Neuroethology of Decision Making, Wellesley College, Fall 2016
Guest lecturer, UCLA, Comparative Animal Physiology, 2011
Invited lecture for NEURO 300 Seminar, Wellesley College, 2011 and 2009
Invited lecture on invertebrate thermotaxis behavior for UCLA, PhySci 270, 2010
Graduate teaching assistant for Introductory Cell Biology, 2005 (Instructor: Neil Simister)
Graduate teaching assistant for Introductory Biology laboratory, 2006 (Instructor: Judith Tsipis)
Elementary teacher - Developed and taught science curriculum for grades 1 to 3 and assistant taught grades 5 and 6 science and history. The John Thomas Dye School, Los Angeles, CA 2002-2004.

WELLESLEY STUDENTS MENTORED

Class of 2017: **Rafa Tasneem**, Neuroscience major and Korean minor, **Emily Park**, Neuroscience major
Class of 2018: **Isabel D'Alessandro**, Neuroscience major and Computer Science minor
Class of 2019: **Crystal Zhu**, **Emma Thibalt**, **June Kim** (Neuroscience majors)
Class of 2020: **Grace Turner** and **Annie Ball**, Neuroscience majors anticipated

PRESS

Covered in Outside JEB: Sara Wasserman, Alexandra Salomon[#], and Mark A. Frye (2013). *Drosophila* tracks Carbon Dioxide in Flight. *Current Biology*. 23(4):301-306. (# High school student)

Covered in Inside JEB: Sara Wasserman, Patrick Lu, Jacob Aptekar, and Mark Frye (2012). Flies dynamically track, rather than ballistically escape, aversive odor during flight. *J. Exp. Biol.* 215, 2833-2840

PROFESSIONAL
ACTIVITIES

2018 - present Invited Early Career Representative for International Congress of Neuroethology Nominations Committee
2017 - present Faculty for Undergraduate Neuroscience
2017 - present Society for Integrative and Comparative Biology
2017 - present Sigma Xi Nominated to Full Membership by Wellesley College Chapter
2017 Elected Young Investigator Representative to International Congress of Neuroethology
2016 Improving Undergraduate STEM Education (IUSE) program of the NSF Panel Reviewer
2016 Scientific Expert in Live Podcast for *Placester* in Boston, MA
2016 – present International Society for Neuroethology, Executive Committee Early Career Representative
2016 – present National Research Mentoring Network
2010 – present International Society for Neuroethology
2002 – present Society for Neuroscience
2004-2010, 2017 Genetics Society of America

OUTREACH

2018 Presented on Neuroscience of Decision-Making in the classroom to high school teachers in Australia as part of the Brain Bee/International Congress of Neuroethology Meeting
2018 Co-organized collaboration with Brain Bee at the International Congress of Neuroethology Meeting
2018 Organized Boston Prep Outreach Afternoon
2018 Presented at Weston High Career Day
2017 Sheep Brain Dissections at Wellesley Middle School
2016 Completed the UCLA "Entering Mentoring Training Course"
2015 UCLA Brain Awareness Week Lab Tours
2014 Summer Enrichment Pilot Program (SEEP) at Campbell Hall School
2014 Intel International Science and Engineering Fair Judge
2012-2013 STAR Education, neuroscience curriculum development and presentation for elementary school teachers
2012 Academy for Enriched Sciences, led professional development for elementary school teachers on neuroscience behind memory and study skills
2012 Calabasas High School, Calabasas, CA, seminar to AP Calculus BC Class
2012 UCLA, Judge for Science Poster Day Dean's Prize

FUNDING

2016 Wellesley College Startup Funds