

Divya Sitaraman, PhD Assistant Professor of Psychology
California State University-East Bay
25800 Carlos Bee Blvd, Hayward, CA-94542

EDUCATION

Yale University	Postdoctoral	08/2014	Neuroscience
Janelia Research Campus, HHMI	Postdoctoral	12/2012	Neuroscience
University of Missouri	PhD	05/2010	Biological Sciences
Indian Institute of Technology, India	MS	07/2003	Biotechnology
University of Delhi, India	BS	07/2001	Biochemistry

ACADEMIC POSITIONS

08/19- Present: Assistant Professor of Psychology, CSU-East Bay
09/14-07/19: Assistant Professor of Psychological Sc., University of San Diego
01/13-08/14: Associate Research Scientist, Yale University School of Medicine
05/13-08/14: Teaching Fellow, Center for Scientific Teaching, Yale University
07/11-12/12: Postdoctoral Research Associate, Janelia Research Campus, HHMI
04/10-06/11: Postdoctoral Research Associate, Yale University School of Medicine
08/04-03/10: Graduate Research and Teaching Fellow, University of Missouri
04/05-08/05: Health Science Researcher, School of Journalism, University of Missouri
07/03-06/04: Research Assistant, Dept of Biotechnology, Indian Institute of Technology, India
05/02-07/02: Summer Undergraduate Research Fellowship, JNU, India

AWARDS, FELLOWSHIPS & HONORS

2017, Outstanding Undergraduate Research Mentor Award, University of San Diego
2017, Changemaker Faculty Fellow, University of San Diego
2017, Chair, Equipment Loan Program, Faculty for Undergraduate Neuroscience
2016, Young Investigator Award, Sleep Research Society
2016, Featured Scientist, Genetics Society of America
2013- Present, Janelia Visiting Scientist Fellowship Program, Howard Hughes Medical Inst.
2011- Present, Associate Faculty Member, Faculty of 1000, Animal Genetics
2011, Outstanding Article of the year finalist, Journal of Experimental Biology
2010, Ion Channel Physiology Course, Roll of Honor, Cold Spring Harbor Laboratories
2007, W. Heilengenberg Award for Research, International congress of Neuroethology
2006, 2007 Best Poster Award Brain Awareness Week, Missouri SFN Chapter
2006, BGSA Travel Award- University of Missouri
2006, GSA Travel Award- University of Missouri 2008.
2004, Interdisciplinary Neuroscience Fellowship, University of Missouri
2001, Graduate Fellowship, Government of India
Sigma Xi, The Scientific Research Honor Society

RESEARCH & TEACHING GRANTS

Ongoing:

- 1) Principal investigator
1R15GM125073-01, National Institute of General Medical Sciences
National Institute of Health (Federal), 09/01/17-08/30/2020
Dopamine regulation of sleep and arousal (Grant transferred to CSU-East Bay)
Award Amount: \$366,409
- 2) Principal investigator
JVS930400, Howard Hughes Medical Institute, 09/15/14- Present (Foundation)

Neural circuits underlying sleep and arousal in *Drosophila*
Award Amount: \$50,000

3) Faculty Research Grant, University of San Diego

08/24/14-07/30/18 (Internal)

Dopamine regulation of sleep and feeding in *Drosophila*

Award Amount: 4 course reassignments (\$28,000) and \$4000 in supplies for 4 years

4) Principle investigator

Faculty for Undergraduate Neuroscience, Society for Neuroscience

Equipment Loan Program (Scientific Society)

11/15-04/17

5) Teaching and Learning Grant, University of San Diego

08/24/14-07/30/18

Development and implementation of course based research experiences in Neuroscience

Award Amount: \$1000/ year (4 awards 2014-2015, 2015-2016, 2016-2017 and 2018-2019)

Completed:

01/11-08/14: Peptide modulation of physiology and behavior. RO1 GM098931-04. Role: Post-doctoral Fellow.

08/11-01/13: Postdoctoral Research Fellowship supported by HHMI visitor program in the lab of Dr. Gerald Rubin and Dr. Michael Nitabach. Neural control of sleep and wake in *Drosophila*.

05/02-05/04: CSIR/UGC Govt of India, Department of Biotechnology (Stipend) Undergraduate Research: Tau-tubulin interaction in Alzheimers disease.

TEACHING AND RESEARCH MENTORING

Courses taught

At University of San Diego

Behavioral Neuroscience (NEUR 310)

Cellular and Molecular Neuroscience (NEUR 305)

Advanced Research Methods/Capstone in Neuroscience (NEUR 410W/470)

Biopsychology (NEUR/PSYCH 342)

At CSU-East Bay

Experimental Psychology (Psych 300)

Physiological Psychology (Psych 320)

Research Mentoring

Mentored 32 undergraduate students in one or more semesters of Research Experience (NEUR/PSYCH 496, 499) since Fall 2014. Training activities included: Involving students in laboratory research, safety training, developing new experiments/protocols, organizing/analyzing complex data sets, graphically representing data sets, presenting data at conferences and preparing data for manuscripts. Students from the lab have gone onto research positions at UC Irvine, Univ of Washington, CSULB, Univ of Missouri, WVU, Creighton, Texas Tech Uni, UC Davis, Northwestern and UC Riverside.

Course based research experiences

Developed 3 modules using fruit flies to study courtship, learning and sensory preference in a classroom setting for upper-division neuroscience courses and outreach. These course modules were funded by Teaching and Learning grants for pilot testing and implementation. One of these modules have been published in Journal of Undergraduate Neuroscience Education.

INVITED TALKS

11/19: HHMI International conference, Sleep Regulation

07/19: Citizen Science Lecture, La Jolla Library, City of San Diego

05/19: Science and Humanities Illume Lecture, University of San Diego

03/18: Sleep Regulation, Gordon Research Conference, Galveston, TX
10/17: California State University, San Marcos, CA
04/17: Platform Talk, Annual Drosophila Meeting, San Diego, CA
11/16: Keynote Speaker, Society for Neuroscience Satellite meeting, University of San Diego, CA
10/16: Biology Department, University of San Diego, CA
10/16: Neuroscience seminar series, University of California San Diego, CA
06/16: Young Investigator Award Talk, Sleep Research Society Meeting, Denver, CO
10/15: Society for Neuroscience Annual Meeting, Chicago, IL
09/15: Seminar Series, University of California, Irvine, CA
02/15: Laboratory Management and Leadership Symposium, UCSD and Salk Institute, San Diego, CA
01/15: Cellular and Molecular Physiology Seminar Series, Yale University, New Haven, CT
09/14: Learning and Memory Symposium, Howard Hughes Medical Institute, Ashburn, VA
03/14: Annual Drosophila Meeting, San Diego, CA
04/13: Invited talk, Clocks and Sleep Meeting, University of Pennsylvania, Philadelphia, PA
10/10: Janelia Farm Research Campus, HHMI, Ashburn, VA
05/09: Picower Institute of Learning, MIT, Boston, MA
05/09: University of California, Berkeley, CA
03/08: Gateway to Behavioral Neuroscience, Washington University of St Louis, St Louis, MO

PUBLICATIONS

Peer-Reviewed Publications (* Undergraduate Student Co-authors)

- 1) Sitaraman D and Laferriere H. Finding a place and leaving a mark in memory formation. *J Neurogenetics* 2019 Dec 27:1-7. doi: 10.1080/01677063.2019.1706094. **Corresponding author with CSU affiliation**
- 2) Driscoll M*, Hyland C and Divya Sitaraman#. Measurement of Sleep and Arousal in Drosophila. *Bioprotocols* (Vol 9, Iss 12, June 20, 2019) **Corresponding author**
- 3) Pavin A*, Fain K*, DeHart Allison* and Sitaraman D#. Aversive and Appetitive learning in Drosophila larvae: A simple and powerful suite of laboratory modules for classroom or open-ended research projects. *Journal of Undergraduate Neuroscience Education* 2018 (June 2018). **Corresponding author**
- 4) **Sitaraman D**, Kramer E*, Kahsai L, Ostrowski D and Zars T. Discrete Serotonin Systems Mediate Memory Enhancement and Escape Latencies after Unpredicted Aversive Experience in Drosophila Place Memory. *Frontiers of Systems Neuroscience* 2017 (in press)
- 5) Chen D*, **Sitaraman D**, Chen N, Jin X, Han C, Sun M, Baker B, Nitabach M and Pan Y. Genetic and neuronal mechanisms governing the sex-specific interaction between sleep and sexual behaviors in Drosophila. *Nature Communications* 2017. **Corresponding author.**
- 6) King A, Barber A*, Smith A, Dreyer A, **Sitaraman D**, Nitabach M, Cavanaugh D, and Sehgal A Peptidergic Circuit Links the Circadian Clock to Locomotor Activity. *Current Biology* 2017
- 7) **Sitaraman D**, Aso Y, Rubin G, Nitabach M. Control of sleep by dopaminergic inputs to the Drosophila mushroom body. *Frontiers of Neural Circuits* 2015
- 8) **Sitaraman D**, Aso Y, Chen N, Felix M*, Rubin G, Nitabach M. Propagation of homeostatic sleep signals from synaptic microcircuits of the Mushroom Body. *Current Biology* 2015. Featured in a Dispatch Article
- 9) Aso Y, **Sitaraman D**, Ichinose T, Kaun K, Vogt K, Belliart-Guérin G, Plaçais P, Robie A, Yamagata N, Schnaitmann C, Rowell W, Johnston R, Ngo T, Chen N, Korff W, Nitabach MN, Heberlein U, Preat T, Branson K, Tanimoto H, Rubin GM. Mushroom body output neurons encode valence and guide memory-based action selection in Drosophila. *Elife* 2014 Dec; 23(4)
- 10) **Sitaraman D**, LaFerriere H, Birman S, Zars T. Serotonin is critical for rewarded olfactory short-term memory in Drosophila. *J Neurogenetics*. 2012 Jun; 26(2): 238-44.

10) **Sitaraman D**, Zars T. Lack of prediction for high-temperature exposures enhances *Drosophila* place learning. **J Exp Biol**. 2010 Dec 1; 213(23): 4018-22.

Article featured in a news and view article in *Inside JEB*. Nominated for Outstanding Paper of the Year Award

12) **Sitaraman D**, Zars M, Zars T. Place memory formation in *Drosophila* is independent of proper octopamine signaling. **J Comparative Physiology A**. 2010 Apr; 196(4):299-305

13) LaFerriere H, Guarnieri DJ, **Sitaraman D**, Diegelmann S, Heberlein U, Zars T. Genetic dissociation of ethanol sensitivity and memory formation in *Drosophila melanogaster*. **Genetics**. 2008 Apr; 178(4):1895-902.

14) **Sitaraman D**, Zars M, Laferriere H, Chen YC, Sable-Smith A, Kitamoto T, Rottinghaus GE, Zars T. Serotonin is necessary for place memory in *Drosophila*. **Proc Natl Acad Sci U S A**. 2008 Apr 8; 105(14):5579-84.

15) **Sitaraman D**, Zars M, Zars T. Reinforcement pre-exposure enhances spatial memory formation in *Drosophila*. **J Comparative Physiology A**. 2007 Aug; 193(8): 903-8.

MANUSCRIPTS UNDER REVIEW/ IN PREPARATION

13) Divya Sitaraman, Russ V Gelder and Michael Nitabach (2020) Cryptochrome tagged ion channels- novel method for circuit manipulation. (In preparation).

14) Amanda Nguyen*, Bridget Fitzgerald*, Ellena Bauer*, Veronica Ramirez* and Divya Sitaraman (2018-19) Octopamine regulation of sleep and arousal in *Drosophila*. (In preparation).

15) Margaret Driscoll*, Victorial Coleman*, Austin Pavin*, and Divya Sitaraman (2020) Dopamine regulation of sleep is independent of feeding reward. (In preparation).

16) Austin Pavin*, Kevin Fain*, Allison De Hart* and Divya Sitaraman (In review) Learning and memory in *Drosophila* larvae.

SELECTED CONFERENCE PRESENTATIONS (22 out of 35, * Undergraduate student)

1) Margaret Driscoll*, Victoria Coleman*, Austin Pavin*, Jade Bove* and Divya Sitaraman (Nov 2019) Dopamine modulation of sleep is independent of feeding. Society for Neuroscience Annual Meeting, Washington DC.

2) Amanda Nguyen*, Bridget Fitzgerald, Elena Bauer, Veronica Ramirez* and Divya Sitaraman (April 2018) Octopamine regulation of sleep and arousal. *Drosophila* Meeting, San Diego

3) Bridget Fitzgerald, Elena Bauer, Veronica Ramirez* and Divya Sitaraman (Nov 2016) Octopamine regulation of sleep and arousal. Society for Neuroscience Annual Meeting, San Diego

4) Bridget Fitzgerald, Elena Bauer, Veronica Ramirez and Divya Sitaraman (April 2017) Octopamine regulation of sleep and arousal. Creative Collaborations

5) Margaret Driscoll*, Austin Pavin*, Jade Bove* and Divya Sitaraman (April 2017) Dopamine modulation of sleep and feeding. Creative Collaborations

6) Shalin Shah* and Divya Sitaraman (April 2017) Sleep deprivation influences egg-laying decision making in *Drosophila*. Creative Collaborations

- 7) Luke Muskett*, Shalin Shah* and Divya Sitaraman (April 2017) Dopamine modulation of egg laying in *Drosophila*. Creative collaborations.
- 8) Veronica Ramirez* and Divya Sitaraman (Nov 2016) Octopamine regulation of sleep and arousal. SACNAS Annual meeting, Long Beach. Veronica was also awarded a travel grant by SACNAS to attend the conference and present her findings.
- 9) Luke Muskett*, Shalin Shah* and Divya Sitaraman (Nov 2016) Dopamine modulation of egg laying in *Drosophila*. Society for Neuroscience Annual Meeting, San Diego
- 10) Margaret Driscoll*, Austin Pavin*, Jade Bove* and Divya Sitaraman (Nov 2016) Dopamine modulation of sleep and feeding. Society for Neuroscience Annual Meeting, San Diego.
- 11) Austin Pavin* and Divya Sitaraman (October 2015) Dopamine modulation of sleep and feeding in *Drosophila*. Society for Neuroscience Annual Meeting, Chicago.
- 12) Ally Eash* and Divya Sitaraman (April 2015) Dopamine modulation of Decision making in *Drosophila*. Creative Collaborations, University of San Diego
- 13) Kevin Fain* and Divya Sitaraman (April 2015) Synaptic mechanisms underlying learned behaviors in *Drosophila* larvae. Creative Collaborations, University of San Diego
- 14) Divya Sitaraman, Gerald M Rubin, Nan Chen*, Yoshinoro Aso, and Michael Nitabach (June 2015) Neural circuit of sleep and arousal in *Drosophila*. Annual Sleep Meeting, Seattle, WA
- 15) Mario Felix*, Nan Chen*, Yoshinoro Aso, and Michael Nitabach (June 2015) Neural circuit of sleep and arousal in *Drosophila*. Annual Sleep Meeting, Seattle, WA
- 16) Divya Sitaraman, Gerald M Rubin, Yoshinoro Aso, and Michael Nitabach (June 2015) Neural circuit of sleep and arousal in *Drosophila*. Annual Sleep Meeting
- 17) Divya Sitaraman, Gerald M Rubin, Yoshinoro Aso, and Michael Nitabach (April 2014) Neural circuit of sleep and arousal in *Drosophila*, Janelia Research Campus.
- 18) Divya Sitaraman and Michael Nitabach (February 2012) Neuropeptidergic regulation of sleep/wake in *Drosophila*, Janelia Research Campus.
- 19) Divya Sitaraman, Melissa Zars and Troy Zars (2008) Reinforcement signaling in *Drosophila* Society for Neuroscience Annual Meeting Washington DC, USA (Poster Presentation).
- 20) Divya Sitaraman, Melissa Zars and Troy Zars (2008) Reinforcement signaling in *Drosophila* Neurofly Meeting Wuerzburg, Germany (Poster Presentation).
- 21) Divya Sitaraman, Alex Sable-Smith and Troy Zars (2007) Serotonin is necessary for place memory in *Drosophila*. International Congress of Neuroethology, Vancouver BC, Canada (Poster Presentation).
- 22) Divya Sitaraman, Melissa Zars and Troy Zars (2006). ABC's of place learning in *Drosophila* Neurofly Leuven, Belgium

SERVICE ACTIVITIES

Department service

At CSU-East Bay

Member, Committee on resources

At University of San Diego

Faculty Advisor, Psychology Student Club Fall 2017-Spring 2019

Chair, Course Scheduling Committee, College of Arts and Sciences, Fall 2016- Spring 2019

Adjunct Faculty Review and Support Committee, Neuroscience Program, Spring 2016, Fall 2017
Member, Diversity Postdoc Search Committee, Department of Psychological Sciences, Fall 2016
Member, Faculty Search Committee, Neuroscience Program, Fall 2014-Spring 2015
Department Representative, Torero Day, Majors fair Fall 2015, 2017
Department Retreat Planning Committee Member, Fall 2016
Department Representative, Pre-Health Advising Committee, Spring 2015,2016
Department Representative, AS grants committee, Spring 2016
Member, ARRT Document Review Committee, Spring 2015
Member, AFFIRM Grant Evaluator Meeting, Spring 2015-2017

University service

At CSU-East Bay

Senator-at-large

At University of San Diego

Faculty Director, PURE Program, Office of Undergraduate Research 2016, 2017
Member, Search Committee for OSP's Grant and Budget Office 2016, 2017
Changemaker Faculty Fellow, Fall 2017
Center for Educational Excellence Presentation, Fabulous First Friday: Should I repeat this? The importance of repetition for long and lasting memory. Oct 2016
Center for Educational Excellence, New Faculty Reflections, Spring 2016
Center for Educational Excellence Newsletter interview on innovative pedagogy 2016
NSF-REU Selection Committee, Spring 2015
Member, Interdisciplinary Cell and Molecular Affinity Group, Spring 2016-present
Member, Biweekly Department meeting
Member, Behavioral Neuroscience Meetings
Member, Academic Assembly Meeting
Member, Women in Science and Math meeting

Other affiliations at CSU-East Bay since

August 2019

Quality matters Online teaching workshops
Supplmental Instructor Workhop
Faculty Learning Community
Thursday Afternoon Writing Group co-organized with junior faculty in Biology

PROFESSIONAL ORGANIZATION

Peer review

2015- Present, Review Editor, Frontiers of Neural Circuits and Frontiers of Cellular Neuroscience
2012- Present, Peer Review Coordinator, Yale Journal of Biology and Medicine
2010 -Present, Ad-Hoc Reviewer, Nature, Neuron, Current Biology, Journal of Neuroscience, PLOS One, Neuroscience, JOVE, Frontiers of Neural Circuits, Yale Journal of Biology and Medicine and Bioprotocols

Membership

Member, Society for Neuroscience (2009- present)
Member, Sleep Research Society (2014-present)
Member, Genetics Society for America (2013-present)
Mentor, Women in Science at Yale (2013- present)
Member, International Congress of Neuroethology (2012-present)
Southern California Fly Club (2014- present)
Member, Faculty for Undergraduate Neuroscience (2012- present)
Member, Yale Science Outreach Club, Yale Healthcare & Life Sciences Club (2010-2014)

