

Kimberly Mulligan, PhD

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Education

PhD **Stanford University**, Stanford, CA
Sept 2008 Developmental Biology

BS **University of California at San Diego**, La Jolla, CA
June 1999 Biochemistry and Cell Biology

Positions & Training

Jan 2015- current **Assistant Professor of Biological Sciences:** California State University, Sacramento
Courses: BIO227 Developmental Biology & Regenerative Medicine, BIO121 Molecular Cell Biology, BIO2 (Laboratory) Introduction to Cells, Molecules, and Genes

July 2011-July 2012 **Postdoctoral Research:** Department of Psychiatry, Center for Molecular Neurodevelopment, University of California at San Francisco
Project: Functional analysis of Dixdc1, a candidate risk gene for neuropsychiatric illness, in mammalian embryonic neurodevelopment
Advisor: Benjamin Cheyette, M.D., PhD

Sept 2008-June 2011 **Postdoctoral Research:** Department of Developmental Biology, Stanford University
Project: CIRM-funded initiative to optimize the expression and purification of Wnt proteins to mediate analysis of liposome-based stem cell studies
Advisor: Roel Nusse, PhD

Sept 2001-Aug 2008 **Doctoral Research:** Department of Developmental Biology, Stanford University
Dissertation: Molecular characterization of Swim, a novel Wnt binding protein that promotes long-range signaling by maintaining Wingless solubility during *Drosophila* development
Advisor: Roel Nusse, PhD

Peer-Reviewed Publications

- Jan 2017* **Mulligan K** and Cheyette B (2017) “Neurodevelopmental Perspectives on Wnt Signaling in Psychiatry” Review. *Mol Neuropsych*, Jan 13. (2) 219-246
- Oct 2016* Martin PM, Stanley RE, Ross AP, Freitas AE, Moyer CE, Brumback AC, Iafrati J, Stapornwongkul KS, Dominguez S, Kivimae S, **Mulligan K**, Pirooznia M, McCombie WR, Potash JB, Zandi PP, Purcell SM, Sanders SJ, Zuo Y, Sohal VS, Cheyette BNR. “*DIXDC1* contributes to psychiatric susceptibility by regulating dendritic spine and glutamatergic synapse density via GSK3 and Wnt/ β -catenin signaling” *Mol Psych*, Oct 18. doi: 10.1038
- June 2016* **Mulligan K** and Cheyette B (2016) “Introduction to Wnt signaling” *Inborn Errors of Development*, 3rd Edition, Oxford University Press
- Dec 2012* **Mulligan K** and Cheyette B (2012) “Wnt signaling in vertebrate neural development and function” Review. *J NeuroImmune Pharmacol*. Dec; 7(4) 774-87
- Jan 2012* **Mulligan K**, Fuerer C, Ching W, Willert K, Fish M, Nusse R (2012) “Secreted-Wingless interacting molecule (Swim) promotes long-range signaling by maintaining Wingless solubility” *Proc Natl Acad Sci USA*. Jan10;109 (2):370-7
- Nov. 2008* Nusse R, Fuerer C, Ching W, **Harnish K***, Logan C, Zeng A, ten Berge D, Kalani Y. (2008) “Wnt signaling and stem cell control” *Cold Spring Harb Symp Quant Biol*. Nov (73) 59-66. Review
- June 2007* **Harnish K***, Willert K, Nusse R (2007) “Analysis of *Drosophila* Lipocalin, a putative Wnt carrier protein” Wnt Meeting
Presentation type: Platform
- Nov. 2004* Johnson ML, **Harnish K***, Nusse R, Van Hul W (2004) “LRP5 and Wnt signaling: a union made for bone.” *J Bone Mineral Research*. Nov;19(11):1749-57. Review

* Kimberly Harnish is my maiden name

Posters by Undergraduate Research Students

- Jan 2017* Murphy L, Nguyen K, Trafton B, Sidhu H and **Mulligan K.** “Developing *Drosophila melanogaster* as a Model for the Identification of Environmental Chemicals that Confer Risk to Autism” CSUPERB Annual Biotechnology Symposium
- Oct 2016* Ghenta K, Hindi Z, Lucich A, Doan TH, and **Mulligan K** “A Research Proposal: Analysis of Dendritic Morphology to Identify Chemicals that Converge with Fmr1 Mutations to Confer Risk of Autism.” CSUS NSM Research Symposium
- Oct 2016* Corona R, Ghuman K, Lopez A, Ghenta K, Hindi Z, Lucich A, Murphy L, Nguyen K, Sidhu H, Trafton B, and **Mulligan K.** “Establishing *Drosophila melanogaster* as a Tool to Screen Chemicals that Confer Risk of Autism in Genetically Susceptible Individuals using the Courtship Assay.” CSUS NSM Research Symposium
- Feb 2016* Sidhu H, Ghenta K, Dobson L and **Mulligan K.** “Investigating Cellular and Molecular Mechanisms of Gene-Environment Interactions Associated with Autism Spectrum Disorder.” CSUS Student Research Symposium.
- Feb 2016* Mahmood Z, Lucich A, Torres C and **Mulligan K.** “Behavioral Analysis of *Drosophila melanogaster* as a Method for Screening Environmental Chemicals that Confer Risk to Autism Spectrum Disorder.” CSUS Student Research Symposium.
- Oct 2015* Ghenta K, Mahmood Z, Harjinder H, **Mulligan K.** “A Research Proposal: Establishing *Drosophila melanogaster* as a Model Organism to Identify Environmental Chemicals that Confer Risk to Autism in Genetically Susceptible Individuals.” NSM Undergraduate Research Reception and Poster Session at CSUS

Grants and Fellowships

- 2016 – 2017 CSUPERB New Investigator Grant Program (CSU research award)
- 2016 – 2017 Pedagogy Enhancement Award (CSUS pedagogy award)
- 2015 – 2016 Provost’s Research Incentive Funds Award (CSUS research award)
- 2015 – 2016 Promising Practices Course Redesign Award (CSU pedagogy award)
- 2011 – 2012 Judith M. Ford T32 NIH Fellowship (UCSF postdoctoral training grant)
- 2002 – 2005 Stanford Graduate Fellowship (Stanford doctoral training grant)