

## DR. MATTHEW D. DEAN

Molecular and Computational Biology  
University of Southern California  
304A Ray R. Irani Building  
1050 Childs Way  
Los Angeles, CA 90089  
Tel: (213) 740-5513  
E-mail: [matthew.dean@usc.edu](mailto:matthew.dean@usc.edu)  
Lab website: <https://dornsife.usc.edu/dean-lab/>

### PERSONAL STATEMENT

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Science rocks.

### PROFESSIONAL EXPERIENCE

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- 2015-present **Associate professor.** Molecular and Computational Biology, University of Southern California  
Research topic: Evolutionary and reproductive genetics
- 2009-2015 **Assistant professor.** Molecular and Computational Biology, University of Southern California  
Research topic: Evolutionary and reproductive genetics
- 2004-2009 **Postdoctoral fellow.** Ecology and Evolutionary Biology, University of Arizona  
Mentor: Dr. Michael W. Nachman ([ib.berkeley.edu/labs/nachman](http://ib.berkeley.edu/labs/nachman))  
Research topic: coevolution of male and female reproductive proteins
- 2003-2004 **Lecturer.** Roosevelt University, Chicago IL

### EDUCATION

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- 2003 **Ph.D.** in Biological Sciences, University of Iowa at Iowa City  
Advisor: Dr. J. William O. Ballard (<http://billb.babs.unsw.edu.au/>)  
Research topic: coevolution of *Wolbachia* and their hosts
- 1996 **B.S.** in Entomology, University of Wisconsin at Madison  
Advisors: Dr. Daniel K. Young and Dr. Kenneth F. Raffa  
Research topic: coevolution of bark beetles and their predators

### PUBLICATIONS (REVERSE CHRONOLOGICAL)

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- Mullis, M. N., C. Ghione, M. Lough-Stevens, I. Goldstein, T. Matsui, S. F. Levy, **M. D. Dean**, I. M. Ehrenreich. 2022. Complex genetics cause and constrain fungal persistence in different parts of the mammalian body. *Genetics* 222: iyac138.  
(Note: Caleb Ghione and Michael Lough-Stevens were graduate students in the Dean Lab).
- Keeble, S., R. C. Firman, B. A. J. Sarver, N. L. Clark, L. W. Simmons, and **M. D. Dean**. 2021. Evolutionary, proteomic, and experimental investigations suggest the extracellular matrix of cumulus cells mediates fertilization outcomes. *Biology of Reproduction* ioab082.  
(Note: Sara Keeble was a graduate student in the Dean Lab).

- Lough-Stevens, M. J., C. Ghione, M. Urness, A. Hobbs, C. Sweeney, **M. D. Dean**. 2021. Male-derived copulatory plugs enhance implantation success in *Mus musculus*. *Biology of Reproduction* 104: 684-694.
- Adams, N. E., **M. D. Dean**, and G. B. Pauly. 2018. Morphological divergence among populations of *Xantusia riversiana*, a Night Lizard endemic to the Channel Islands of California. *Copeia* 106: 550-562.  
(Note: this paper was a product of BISC499, a course where students participated in research at the Natural History Museum of Los Angeles)
- Larson, E. D. Vanderpool, B. Sarver, C. Callahan, S. Keeble, L. Provencio, M. Kessler, V. Stewart, E. Nordquist, **M. D. Dean**, J. Good. 2018. The evolution of polymorphic hybrid incompatibilities in house mice. *Genetics* 209: 845-859.  
(Note: Sara Keeble and Lorraine Provencio were graduate students, and Michael Kessler an undergraduate, in the Dean Lab).
- Qu, J., E. Hodges, A. Molaro, P. Gagneux, **M. D. Dean**, G. J. Hannon, A. D. Smith. 2018. Evolutionary expansion of DNA hypomethylation in the mammalian germline genome. *Genome Research* 28: 145-158.
- Lough-Stevens, M., N. G. Schultz, **M. D. Dean**. 2018. The baubellum is more developmentally and evolutionarily labile than the baculum. *Ecology and Evolution* 8:1073–1083.  
(Note: Michael Lough-Stevens and Nick Schultz were graduate students in the Dean Lab during this project)
- Chang, P. L., E. Kopania, S. Keeble, B. Sarver, E. Larson, A. Orth, K. Belkhir, P. Boursot, F. Bonhomme, J. M. Good, **M. D. Dean**. 2017. Whole exome sequencing of wild-derived inbred strains of mice improves power to link phenotype and genotype. *Mammalian Genome* 28: 416–425.  
(Note: This study was featured on the cover of Mammalian Genome)  
(Note: Sara Keeble and Emily Kopania were graduate students in the Dean Lab during this project)
- Decato, B., J. Tello, J. M. Good, A. Sferruzzi-Perri, A. D. Smith, and **M. D. Dean**. 2017. DNA methylation divergence and tissue specialization in the developing mouse placenta. *Molecular Biology and Evolution* 34: 1702-1712.
- Sarver, B., S. Keeble, T. Cosart, P. Tucker, **M. D. Dean**, and J. M. Good. 2017. Phylogenomic insights into genome evolution and speciation in mice. *Genome Biology and Evolution* 9: 726-739.  
(Note: Sara Keeble was a graduate student in the Dean Lab during this project)
- Schultz, N. G., E. Otárola-Castillo, and **M. D. Dean**. 2017. Dissection, microCT scanning, and morphometric analyses of the baculum. *Journal of Visualized Experiments* 55342.  
(Note: Nick Schultz was a graduate student in the Dean Lab during this project)
- Larson, E. L., S. Keeble, D. Vanderpool, **M. D. Dean**, J. M. Good. 2016. The composite regulatory basis of the large X-effect in mouse speciation. *Molecular Biology and Evolution* 34: 282-295.  
(Note: Sara Keeble was a graduate student in the Dean Lab during this project)

- Schneider, M. R., R. Mangels, and **M. D. Dean**. 2016. The molecular basis and reproductive function(s) of copulatory plugs. *Molecular Reproduction and Development* 83: 755-767.  
(Note: Rachel Mangels was a graduate student in the Dean Lab)
- Mangels, R., K. Tsung, K. Kwan, and **M. D. Dean**. 2016. Copulatory plugs inhibit the reproductive success of rival males. *Journal of Evolutionary Biology* 29: 2289-2296  
(Note: Rachel Mangels and Kelly Kwan were graduate students, and Kathleen Tsung a lab technician, in the Dean Lab during this project)
- Larson, E. L., D. Vanderpool, S. Keeble, M. Zhou, B. A. J. Sarver, A. D. Smith, **M. D. Dean**, and J. M. Good. 2016. Contrasting levels of molecular evolution on the mouse X chromosome. *Genetics* 203: 1841-1857.  
(Note: Sara Keeble was a graduate student in the Dean Lab during this project)
- Crisci, J. L., **M. D. Dean**, P. Ralph. 2016. Adaptation in isolated populations: when does it happen and when can we detect it? *Molecular Ecology* 25: 3901-3911.  
(Note: Jessica Crisci was a postdoc with the Dean Lab and Ralph Lab)
- Schultz, N. G., M. Lough-Stevens, E. Abreu, T. Orr, **M. D. Dean**. 2016. The baculum was gained and lost multiple times during mammalian evolution. *Integrative and Comparative Biology* icw034.  
(Note: Nick Schultz and Michael Lough-Stevens are graduate students in the Dean Lab, Eric Abreu was a high school volunteer [now full ride at Harvard])
- Schultz, N. G., J. Ingels, A. Hillhouse, K. Wardwell, P. L. Chang, J. M. Cheverud, C. Lutz, L. Lu, R. W. Williams, **M. D. Dean**. 2016. The genetic basis of baculum size and shape variation in mice. *G3: Genes | Genomes | Genetics*. 6:1141-1151.  
(Note: Nick Schultz is a graduate student in the Dean Lab)
- Young, B. W. and **M. D. Dean**. 2015. To be, or not to be, related; how female guppies bias sperm usage. *Molecular Ecology* 24: 4039-4041  
(Note: Brent Young was our lab manager)
- Dines, J. P., S. L. Mesnick, K. Ralls, L. May Collado, I. Agnarsson, and **M. D. Dean**. 2015. A tradeoff between precopulatory and postcopulatory trait investment in male cetaceans. *Evolution* 69: 1560-1572.  
(Note: Jim Dines was a graduate student in the Dean Lab)
- Mangels, R., B. Young, S. Keeble, R. Ardekani, C. Meslin, Z. Ferreira, N. L. Clark, J. M. Good, and **M. D. Dean**. 2015. Genetic and phenotypic influences on copulatory plug survival in mice. *Heredity* 115: 496-502  
(Note: Rachel Mangels and Sara Keeble are graduate students in the lab; Brent Young was our lab manager. This study was featured on the Heredity podcast.)
- Dines, J. P., E. Otárola-Castillo, P. Ralph, J. Alas, T. Daley, A. Smith, **M. D. Dean**. 2014. Cetacean pelvic bones are targets of sexual selection, not vestigial structures. *Evolution* 68: 3296-3306.  
(Note: Jim Dines was a graduate student in the Dean Lab; Jesse Alas was a local high school student from West Adams working in the lab. This study was featured in the popular press: Science, National Geographic, Washington Post, Smithsonian Magazine, Discovery Magazine, Time, and more)

- Kessler, M. and **M. D. Dean**. 2014. Effective population size does not predict codon usage bias in mammals. *Ecology and Evolution* 4: 3887-3900.  
(Note: Michael Kessler was a USC undergraduate in the Dean Lab during this project)
- Young, B. Y., D. C. Conti, and **M. D. Dean**. 2013. Sneaker “jack” males outcompete dominant “hooknose” males under sperm competition in Chinook salmon (*Oncorhynchus tshawytscha*) *Ecology and Evolution* 3: 4987-4997.  
(Note: This study was featured on cover)  
(Note: Brent Young was our lab manager)
- Dean, M. D.** 2013. Genetic disruption of the copulatory plug in mice leads to severely reduced fertility. *PLoS Genetics* 9:e1003185
- Campbell, P., J. M. Good, **M. D. Dean**, P. K. Tucker, M. W. Nachman. 2012. The contribution of the Y chromosome to hybrid male sterility in house mice. *Genetics* 191:1271-1281.
- Fang, F., E. Hodges, A. Molaro, **M. D. Dean**, G. J. Hannon, A. Smith. 2012. The genomic landscape of human allele-specific DNA methylation. *Proceedings of the National Academy of Sciences* 109: 7332-7337.
- Dean, M. D.**, G. D. Findlay, M. R. Hoopmann, C. C. Wu, M. J. MacCoss, W. J. Swanson, M. W. Nachman. 2011. Identification of ejaculated proteins in the house mouse (*Mus domesticus*) via isotopic labeling. *BMC Genomics* 12: 306.
- Good, J. M., T. Giger, **M. D. Dean**, M. W. Nachman. 2010. Widespread over-expression of the X chromosome in sterile F1 hybrid mice. *PLoS Genetics* 6: e1001148.
- Dean, M. D.**, N. L. Clark, G. D. Findlay, R. C. Karn, W. J. Swanson, X. Yi, M. MacCoss, and M. W. Nachman. 2009. Proteomics and comparative genomic investigations reveal heterogeneity in evolutionary rate of male reproductive proteins in mice (*Mus domesticus*) *Molecular Biology and Evolution* 26: 1733-1743. (Also winner of the postdoctoral poster competition at SMBE 2008)
- Dean, M. D.** and M. W. Nachman. 2009. Faster fertilization rate in conspecific versus heterospecific matings in house mice. *Evolution* 63: 20-28.
- Good, J. M., **M. D. Dean**, and M. W. Nachman. 2008. A complex genetic basis to X-linked hybrid male sterility between two species of house mice. *Genetics* 179:2213-2228.
- Dean, M. D.**, J. M. Good, and M. W. Nachman. 2008. Adaptive evolution of proteins secreted during sperm maturation: an analysis of the mouse epididymal transcriptome. *Molecular Biology and Evolution* 25:383-392.
- Laurie, C.C, D.A. Nickerson, A. Anderson, B.S. Weir, R.J. Livingston, **M. D. Dean**, K.L. Smith, E.E. Schadt, and M.W. Nachman. 2007. Linkage disequilibrium in wild mice. *PLoS Genetics* 3: e144.
- Dean, M. D.**, K. G. Ardlie, and M. W. Nachman. 2006. The frequency of multiple paternity suggests that sperm competition is common in house mice (*Mus domesticus*). *Molecular Ecology* 15: 4141-4151.
- Dean, M. D.** 2006. A *Wolbachia*-associated fitness benefit depends on genetic background in *Drosophila simulans*. *Proceedings of the Royal Society of London series B-Biological Sciences* 273: 1415-1420.

- Dean, M. D.** and J. W. O. Ballard. 2005. High divergence among *Drosophila simulans* mitochondrial haplogroups arose in midst of long term purifying selection. *Molecular Phylogenetics and Evolution* 36: 328-337.
- Dean, M. D.** and J. W. O. Ballard. 2004. Linking phylogenetics with population genetics to reconstruct the geographic origin of a species. *Molecular Phylogenetics and Evolution* 32: 998-1009.
- Dean, M. D.**, K. J. Ballard, A. Glass, and J. W. O. Ballard. 2003. Influence of two *Wolbachia* strains on population structure of east African *Drosophila simulans*. *Genetics* 165: 1959-1969.
- James, A. C., **M. D. Dean**, M. E. McMahon, and J. W. O. Ballard. 2002. Dynamics of double and single *Wolbachia* infections in *Drosophila simulans* from New Caledonia. *Heredity* 88: 182-189.
- Ballard, J. W. O. and **M. D. Dean**. 2001. The mitochondrial genome: mutation, selection and recombination. *Current Opinion in Genetics and Development* 11: 667-672.
- Dean, M. D.** and J. W. O. Ballard. 2000. Factors affecting mitochondrial DNA quality from museum preserved *Drosophila simulans*. *Entomologia Experimentalis et Applicata* 98: 279-283.

#### INVITED RESEARCH SEMINARS

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- 2023 Life Sciences, Arizona State University
- 2023 Biology of Sperm Meetings, Sweden
- 2023 Centro de Investigação em Biodiversidade e Recursos Genéticos (Portugal)
- 2019 Claremont Colleges
- 2018 Integrative Genetics and Genomics, UC Davis
- 2018 Genetics Institute, University of Florida
- 2018 Florida Museum of Natural History
- 2018 Population Biology, University of Florida
- 2017 American Association of Anatomists, invited symposium speaker
- 2017 Chicago Field Museum
- 2017 Biology of Sperm Meetings, Sheffield England
- 2016 Society Integrative Biology, Portland Oregon  
(featured in <http://science.sciencemag.org/content/351/6270/214.full>)
- 2015 Biology of Sperm Meetings, Sheffield England
- 2015 École Polytechnique Fédérale de Lausanne
- 2014 AAAS, Molecular Reproduction and Development
- 2014 Department of Anatomy and Neurobiology, University of Tennessee
- 2013 Department of Biology, University of California at Riverside
- 2013 Darwin Day, University of Wisconsin at Madison
- 2013 Biological Sciences, University of Montana
- 2012 Los Angeles Natural History Museum
- 2012 Minority Action Plan
- 2012 Ecology and Evolutionary Biology, UC Irvine
- 2011 Programs in Biomedical and Biological Sciences, USC Keck School of Medicine
- 2011 Reproductive Endocrinology and Infertility, USC Keck School of Medicine
- 2011 Molecular, Cell, and Developmental Biology. University of California at Los Angeles
- 2011 Genetics, University of Wisconsin at Madison
- 2010 Ecology, Evolution, and Marine Biology. University of California at Santa Barbara
- 2009 Ecology and Evolutionary Biology, University of California at Los Angeles
- 2009 Programs in Biomedical and Biological Sciences, USC Keck School of Medicine
- 2009 Reproductive Endocrinology and Infertility, USC Keck School of Medicine

**CONTRIBUTED PAPERS (SELECTED ORAL/POSTER PRESENTATIONS)**

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- Friesen, C. R., C. Whittington, M. S. Plakke, R. T. Mason, D. O'Meally, R. Krohmer, N. L. Clark, **M. D. Dean**. Biology of Sperm. 2019. How do garter snakes make copulatory plugs? Convergent evolution of a trait involved in sexual conflict
- Schultz, N. G., M. Lough-Stevens, E. Abreu, T. Orr, **M. D. Dean**. 2016. Society for Integrative and Comparative Biology.
- Mangels, R. and **M. D. Dean**. 2013. Male and female genotype affects copulatory plug survival. Biology of Sperm, Bakewell, England.
- Dean, M. D.** 2012. Positively selected codons are enriched on alternative exons. Society for Molecular Biology and Evolution, Dublin, Ireland.
- Dean, M. D.** 2012. Genetic disruption of the copulatory plug leads to severely reduced fertility in mice. Evolution, Ottawa, Canada.
- Dean, M. D.** 2011. *Transglutaminase IV* is necessary for copulatory plug formation and normal male fertility in house mice. Mouse Genetics, Washington D. C.
- Dean, M. D.**, Good, J. M. and Nachman, M. W. 2007. Adaptive evolution of proteins secreted during sperm maturation: an analysis of the mouse epididymal transcriptome. Society for Molecular Biology and Evolution, Halifax, Nova Scotia.
- Dean, M. D.** and Nachman, M. W. 2006. Sexual selection in house mice. Ecology and Evolutionary Biology seminar, Tucson, AZ.
- Dean, M. D.** and Nachman, M. W. 2006. The evolution of male reproductive genes in house mice (genus *Mus*). Society for Molecular Biology and Evolution, Tempe, Arizona.
- Dean, M. D.**, Ardlie, K. G., and Nachman, M. W. 2005. Multiple mating in house mice. Society for the Study of Evolution, Fairbanks, Alaska.
- Dean, M. D.** 2004. Voice entry databasing. International Society for Biological and Environmental Repositories, New York, New York (invited speaker).

**FUNDING HISTORY**

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- 2023-2024 Genetics of fungal persistence and pathogenicity in mammalian hosts. National Institutes of Health #1R56AI171091-01A1, \$623,986 (\$179,674 indirects)  
Role: co-PI (Dr. Ian Ehrenreich PI)
- 2020-2024 Understanding the evolutionary forces that influence baculum divergence across three timescales. National Science Foundation #2027373, \$640,000 (\$252,121 indirects)  
Role: PI
- 2012-2018 CAREER: Understanding the function of the copulatory plug. National Science Foundation #1150259, \$990,675 (\$387,929 indirects)  
Role: PI
- 2012-2018 Evolutionary and functional genetics of male reproduction using wild mice as a model system. National Institutes of Health #1R01GM098536-01A1, \$1,856,969 (\$465,598 indirects).  
Role: PI
- 2012-2015 The influence of effective population size on the strength of selection imposed by mate choice. National Science Foundation #1146525, \$325,000 (\$126,876 indirects).  
Role: PI
- 2004-2007 Evolutionary genetics of male reproductive traits in *Mus*. National Institutes of Health, NRSA postdoctoral fellowship #F32GM070246-02  
Role: PI

**TEACHING (AMOUNT TAUGHT)**

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2024 S	BISC499L	Advanced Techniques in Field Mammalogy (100%) (Maymester)
2023 F	BISC444	Practical Analysis of Biological Data in R (100% of 2 classes)
2023 S	BISC363	Mammalogy (50%)
2022 F	BISC444	Practical Analysis of Biological Data in R (100%)
2022 S	BISC363	Mammalogy (50%)
2021 S	BISC363	Mammalogy (50%)
2021 F	BISC444	Practical Analysis of Biological Data in R (100%)
2020 S	BISC499	Mammalogy (50%)
2020 S	BISC502B	Molecular Genetics and Biochemistry (~10 hours of lectures)
2019 F	BISC444	Practical Analysis of Biological Data in R (100%)
2019 S	BISC499	Mammalogy (50%) ( <u>new course</u> )
2018 F	BISC444	Practical Analysis of Biological Data in R (100%)
2018 S	(sabbatical)	
2017 F	BISC444	Practical Analysis of Biological Data in R (100%)
2017 F	BISC325	Genetics (50%)
2017 F	BISC542	Seminar in Molecular Biology (50%)
2017 S	BISC313	Evolution and Population Genetics (50%)
2016 F	BISC325	Genetics (33%)
2016 S	BISC542	Seminar in Molecular Biology (50%)
2016 S	BISC544	Advanced Reading in Molecular Biology (100%)
2016 S	BISC313	Evolution and Population Genetics (50%)
2015 F	BISC325	Genetics (33%)
2014 S	BISC313	Evolution and Population Genetics (50%)
2013 F	BISC499	Hands-on Research at the Natural History Museum (50%) ( <u>new course</u> )
2013 F	BISC325	Genetics (33%)
2013 S	BISC313	Evolution and Population Genetics (50%)
2013 S	BISC542	Seminar in Molecular Biology (100%)
2013 S	BISC544	Advanced Reading in Molecular Biology (100%)
2012 F	BISC542	Seminar in Molecular Biology (100%)
2012 S	BISC544	Advanced Reading in Molecular Biology (100%)
2012 S	BISC313	Evolution and Population Genetics (50%)
2012 S	BISC502B	Molecular Genetics and Biochemistry (~10 hours of lectures)
2012 S	BISC542	Seminar in Molecular Biology (100%)
2011 F	BISC325	Genetics (33%)
2011 F	BISC499	Introductory Bioinformatics (100%) ( <u>new course</u> )
2011 S	BISC544	Advanced Reading in Molecular Biology
2011 S	BISC313	Evolution and Population Genetics (50%) ( <u>new course</u> )
2011 S	BISC 502B	Molecular Genetics and Biochemistry (~10 hours of lectures)
2010 F	BISC325	Genetics (33%)

**SOCIETY MEMBERSHIPS**

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Associate Editor for journal *Evolution*, 2019-2022

Society for Molecular Biology and Evolution

Society for the Study of Evolution

Genetics Society of America

*Ad hoc* reviewer for approximately 30 papers/grant proposals per year

**SERVICE**

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2023-now Member of Institute for Animal Care and Use Committee (IACUC)

2023 Faculty Search Committee for MCB, Chair  
 2022 Faculty Search Committee for MCB, Chair  
 2022-now [USC's Center for Ecological and Evolutionary Dynamics](#), co-director  
 2020-now [Ecology, Evolution, and Environment Emphasis for USC undergraduates](#), leader  
 2021-now [Master's Degree in Developmental Origins of Health & Disease](#), co-director  
 2021 Member of four-person committee to revamp USC BISC majors  
 2021 Merit Review Committee for Molecular and Computational Biology  
 2021 Director of Graduate Studies for Molecular Biology PhD program  
 2020 Director of Graduate Studies for Molecular Biology PhD program  
 2019 Evaluator for promotion to Associate Professor of Teaching  
 2019 Executive Committee for Molecular and Computational Biology  
 2019 Director of Graduate Studies for Molecular Biology PhD program  
 2019 Faculty Search Committee for MCB administrative position  
 2019 Faculty Search Committee for MCB assistant professor  
 2019 Faculty Search Committee for RTPC teaching position  
 2019 Faculty Search Committee for Assistant Professor in Systems Biology  
 2019 Advisor, CA Academy of Sciences World of Life gallery  
 2019 Interviewer for USC Trustee Scholarships  
 2019 [Natural History Museum of Los Angeles, Visions and Voices](#)  
 2018 Director of Graduate Studies for Molecular Biology PhD program  
 2018 Faculty Search Committee for Assistant Professor in Systems Biology  
 2015 Graduate Admissions Committee, Chair  
 2015 Molecular and Computational Biology, Chair of the outside speakers seminar committee  
 2015 Interviewer for USC Trustee Scholarships  
 2014 MCB representative for Society for Advancement of Hispanics/Chicanos and Native Americans in Science  
  
 2014 Graduate Admissions Committee, Chair  
 2014 Molecular and Computational Biology, Chair of the outside speakers seminar committee  
 2014 Interviewer for USC Trustee Scholarships  
 2013 Graduate Admissions Committee, Chair  
 2013 Molecular and Computational Biology, Chair of the outside speakers seminar committee  
 2012 Merit Review Committee, Molecular and Computational Biology  
 2012 Molecular and Computational Biology, Chair of the outside speakers seminar committee  
 2011 Faculty Search Committee for Assistant Professor in Computational Biology  
 2011 Molecular and Computational Biology, Graduate Admissions Committee  
 2011 Merit Review Committee, Molecular and Computational Biology  
 2011 Molecular and Computational Biology, Chair of the outside speakers seminar committee  
 2010 Molecular and Computational Biology, Graduate Admissions Committee  
 2010 Faculty Search Committee for Assistant Professor in Evolutionary Genomics  
 2009 Faculty Search Committee for Assistant Professor in Molecular or Evolutionary Genomics

## **TRAINEES**

### **POSTDOCTORAL FELLOWS SUPERVISED**

2013-2015 Jessica Crisci (co-supervised with Peter Ralph)  
 2020-present Ben Pomidor

### **GRADUATE STUDENTS SUPERVISED**

2024- Quinn Fagersten (PhD)  
 2022- Maeve Secor (PhD)



2022- Charles Toney (PhD)  
 2017- Caleb Ghione (PhD)  
 2016-2022 Michael Lough-Stevens (PhD)  
 2014-2019 Sara Keeble (PhD)  
 2014-2019 Nicholas Schultz (PhD)  
 2014-2016 Emily Kopania (Masters)  
 2014-2015 Christine Stafford (Masters)  
 2014-2016 Yiding Jia (Masters)  
 2011-2014 Jim Dines (PhD)  
 2011-2013 Kelly Kwan  
 2010-2016 Rachel Mangels (PhD)  
 2010-2016 Lorraine Provencio\* (PhD)

### **ROTATION STUDENTS SUPERVISED**

2020 Tram Dang  
 2019 Kelly Deweese  
 2017 Caleb Ghione  
 2016 Calista Allen  
 2015 Michael Lough-Stevens  
 2014 Nick Schultz  
 2013 Nathan Churches  
 2013 Yiding Jia  
 2013 Anh Nguyet Vu  
 2012 Percy Genyk  
 2012 Kelly Kwan  
 2011 Jacqueline Lo  
 2010 Rachel Mangels  
 2010 Lorraine Provencio\*  
 2009 Amanda Jensen

### **GRADUATE STUDENT QUALIFYING EXAM & DISSERTATION COMMITTEE (PRIMARY ADVISOR)**

2024 Maxim Kovalev (Nuzhdin)  
 2024 Sunghyun Kim (McMahon)  
 2023 Chris De Neville (Ehrenreich)  
 2022 Gary Molano (Nuzhdin)  
 2021 Martin Mullis (Ehrenreich)  
 2021 Rachel Schell (Ehrenreich)  
 2021 Shanni Yamaki (McKemy)  
 2020 Amanda Meyer (McMahon)  
 2019 Peter Luu (Fraser)  
 2019 Nathan Churches (Nuzhdin)  
 2019 Ben Flanagan (Edmands)  
 2019 Taekyu Kang (Rachel Brem, Buck Institute)  
 2019 Gary Molano (Nuzhdin)  
 2019 Shanni Yamaki (McKemy)  
 2018 Calista Allen (Nuzhdin)  
 2018 Jonathan Lee (Ehrenreich)  
 2018 Xiaojing Ji (Smith)  
 2018 Takeshi Matsui (Ehrenreich)  
 2017 Chia-An Yen (Curran)

2017	Sam Ali (Nuzhdin)
2017	Erik Lundgren (Ralph)
2016	Ben Decato (Smith)
2016	Sara Keeble (Dean)
2016	Martin Mullis (Ehrenreich)
2016	Nick Schultz (Dean)
2016	Asif Zubair (Nuzhdin)
2015	Hossein Asgharian (Nuzhdin)
2015	Nicole Ratib (Finkel)
2015	Matt Taylor (Ehrenreich)
2015	Xiaoshen Yin (Hedgecock)
2015	Junsong Zhao (Marjoram)
2014	Rob Linder (Ehrenreich)
2013	Dana Lynn (Curran)
2013	Emad Bahrami Samani (Smith)
2011	Jordan Eboreime* (Arnheim)
2011	Joshua Purves (Hedgecock)
2011	Wendy Vu (Nuzhdin)
2011	Barrett Phillips (Edmands)
2009	Peter Chang (Nuzhdin)
2009	Reza Dehestaniardekani (Tavaré)
2009	James P. Dines (McNitt-Gray)
2009	Fang Fang (Smith)
2009	Bradley Jay Main (Nuzhdin)
2009	Austin Michael Paul (Hedgecock)
2009	Qiang Song (Smith)

#### **UNDERGRADUATE STUDENTS SUPERVISED (SCHOLARSHIPS AWARDED)**

2023-	Abe Luedtke
2022-	Kate Manges-Douglas
2022-	Leah Perkins
2022-	Marissa Andrade*
2021-2023	Quinn Fagersten
2020-	Declan Bulwa
2020-	Clara Mccarthy
2020-	George Phillips
2020-	Declan Bulwa
2019-	Shelby Chickman
2018-2019	Juanna Xie
2018-2020	Colleen Sweeney
2017-2020	Nikhil Vettikattu
2017-2019	Adie Hobbs
2017-2019	Matt Urness
2016-2019	Nathalye Lopez*
2016-2018	Naina Chipalkatti
2016-2018	Jamie Clarke
2015-2016	Celine Kiner
2014-2015	Anna Burger
2014-2015	Max Cabaj
2014-2015	Christine Stafford

2013-2014 Emily Kopania (Rose Hills Foundation)  
 2013-2014 Nick Schultz  
 2013-2017 Kathleen Tsung (Rose Hills Foundation)  
 2012-2014 Dominick Anderson-Parham\* (USC Center for Genomic Excellence)  
 2012-2013 Karen Lu  
 2012-2013 Chelsea Milne  
 2012-2013 Zena Salim  
 2012-2013 Varun Sambhariya  
 2012-2013 Eric Wu  
 2012-2013 Francine Lang  
 2011-2013 Ryan McGee (USC Provost)  
 2010-2012 Michael Kessler  
 2010-2012 Veronica Winget  
 2011-2012 Lita Mallet\* (USC Center for Genomic Excellence)  
 2011-2012 Joseph Jin  
 2010-2012 Armando Martinez\*  
 2010-2012 Jeanney Kang (Rose Hills Foundation)  
 2009-2012 Amanda Johnston (Rose Hills Foundation, USC SOAR, USC SURF)  
 2009-2010 Traci Aoki (USC SURF)  
 2009-2010 Courtney Clayton\* (USC Center for Genomic Excellence)  
 2009-2010 Robert Fragoza\* (USC Center for Genomic Excellence)

#### **HIGH SCHOOL STUDENTS SUPERVISED**

2023 Developed 6 hours of hands-on laboratory experience for 19 high school juniors enrolled in USC's Neighborhood Academic Initiative summer course  
 2019 Joanna Albalouh (San Dimas High)  
 2019 Mia Le (San Dimas High)  
 2019 Mohamed Haidar (San Dimas High)  
 2019 Ella Ray\* (San Dimas High)  
 2019 Chloe Jones (San Dimas High)  
 2018-2020 Raymond Fedrick (Zoo Magnet)  
 2018-2020 Miya Khoo (Marlborough)  
 2018-2020 Declan Bulwa (Zoo Magnet)  
 2018 Raquel Frohlich  
 2017 Stephanie Duran  
 2016 Justin Chang (Troy Tech)  
 2016 Ebony Francisco\* (Zoo Magnet)  
 2016 Emila Peters (Zoo Magnet)  
 2016 Tiger Schenkman (Zoo Magnet)  
 2016 Jennifer Yi (Troy Tech)  
 2014 Trevor Jackson\* (San Dimas High)  
 2014 Anthony Martinez\* (San Dimas High)  
 2014 Summer Smith\* (Oaks Christian High)  
 2014 Winnie Umanzor\* (San Dimas High)  
 2014-2016 Alanna Wolf (Marlborough)  
 2013-2014 Eric Abreu\* (West Adams High)  
 2013-2014 Natalie Watson (Marlborough)  
 2013-2014 Martha Henriquez\* (West Adams High)  
 2013-2014 Maria Munoz\* (West Adams High)  
 2013-2014 Jhavet Wences\* (West Adams High)

2009-2012 Jesse Alas\* (West Adams High)  
2012-2013 Kevin Li (San Ramon)  
2011-2013 Charlie Sanchez\* (West Adams High)  
2011-2013 Neal Shah (Troy Tech High)  
2011-2013 Jose Jaime\* (West Adams High)  
2011-2012 Jander Cruz\* (West Adams High)  
2011-2012 Vincent Hsu  
2009-2011 Iris Salamanca\* (West Adams High)

\*Minority students