## NANDITA R. GARUD

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#### **Curriculum Vitae**

November 2024

**Research Interests:** Evolutionary genomics in natural populations with a current emphasis on microbiomes; population genetics; bioinformatics.

#### **EDUCATION**

2015 Ph.D. in Genetics

Stanford University, Stanford, CA

Focus on adaptation in natural populations

2012 MS in Statistics

Stanford University, Stanford, CA

2008 BS in Biometry & Statistics and Biological Sciences, (Magna Cum Laude)

Cornell University, Ithaca, NY

## **EMPLOYMENT**

2024-current **Associate Professor** 

University of California, Los Angeles, CA

Department of Ecology and Evolutionary Biology

Department of Human Genetics

Member, Interdepartmental Program in Bioinformatics

Member, Genetics & Genomics Home Area

2019- 2024 Assistant Professor

University of California, Los Angeles, CA

Department of Ecology and Evolutionary Biology

Department of Human Genetics

Member, Interdepartmental Program in Bioinformatics

Member, Genetics & Genomics Home Area

2015-2019 **Bioinformatics Fellow** 

Postdoctoral Position

The Gladstone Institutes at the University of California, San Francisco, CA

Advisor: Katherine Pollard

2015 summer **Data Scientist Intern** 

## Intuit Inc., Mountain View, CA

## PREVIOUS RESEARCH

2010-2015 Ph.D. Candidate

Department of Genetics, Stanford University, Stanford, CA

Advisor: Dmitri Petrov

2008-2009 **Fulbright Scholar** 

The Bioinformatics Centre, University of Copenhagen, Denmark

Advisor: Jakob Pedersen

2006-2008 **Undergraduate Honors Researcher** 

Department of Molecular Biology and Genetics, Cornell University, Ithaca, NY

Advisor: Andrew Clark

2006 **Cold Spring Harbor Summer Undergraduate Research Intern** 

Cold Spring Harbor, NY Advisor: Doreen Ware

#### **HONORS**

2023	NSF CAREER recipient
2021-2023	Scialog! Microbiome Neurobiology and Disease fellow
2021	University of California Hellman fellow
2020- Present	Paul Allen Distinguished Investigator
2018	Genetics Society of America DeLill Nasser Award
2017	Gladstone Institutes Career Advancement Award
2014-2015	Stanford Center for Evolution and Human Genomics Fellow
2013	Walter Fitch Finalist, SMBE, Chicago
2010-2013	National Science Foundation Graduate Research Fellow
2008-2009	Fulbright Scholar, Copenhagen, Denmark

## Other Experience and Professional Memberships:

## **Grant Review Membership:**

2019, 2021	Ad hoc grant reviewer for the National Science Foundation
2021	Ad hoc grant reviewer for the French National Research Agency
2020	Grant panelist for the National Science Foundation
2020	Ad hoc grant reviewer for the Army Research Office
2022	Ad hoc member of Population-based Research in Infectious Disease review panel, NIH
2023	Ad hoc member of ZMH1 ERB-M (04) S, NIMH Pathway to Independence Awards
	(K99/R00)
2023	Ad hoc reviewer for the European Research Council
2024	Grant panelist for the NIH MIRA R35 MRAA section

<b>Editorial Activities:</b>			
2024-Present	Editor for the journal PLoS Genetics		
2020-Present	Editor for the journal mSystems		
2023-Present	Guest editor for the journal PLoS Genetics		

2013-Present

Referee for Nature, Science, eLife, Nature Biotechnology, Cell Host & Microbe, PLoS Genetics, PLoS Biology, Nature Ecology and Evolution, Nature Communications, Genetics, Molecular Biology and Evolution, Molecular Ecology, Genome Biology and Evolution, Journal of Molecular Evolution, Current Biology, PLoS One, F1000, GigaScience, Nature Hereditary, Nucleic Acid Research, Nature Genetics, ISME.

#### **PUBLICATIONS**

\* denotes equal contributors.

## Primary research preprints under review:

- 1. Wolff R and Garud NR. Pervasive selective sweeps across human gut microbiomes. bioRxiv (2023).
- 2. Mah JC, Lohmueller KE\*, and **Garud NR\***. Inference of the demographic histories and selective effects of human gut commensal microbiota over the course of human history. *bioRxiv* (2023).

## Peer reviewed primary research

- 1. Pandey D\*, Harris M\*, **Garud NR**\*\*, Narasimhan VM\*\* Understanding natural selection in Holocene Europe using multi-locus genotype identity scans. *Nature Communications* (2024).
- 2. Gutiérrez-García K., Aumiller K., Dodge R., Obadia B., Deng A., Agrawal S., Yuan X., Wolff R., **Garud NR**, Ludington W.B. A conserved genetic basis for commensal-host specificity through live imaging of colonization dynamics. *Science* (2024).
- 3. Harris M, Kim B, **Garud NR.** Enrichment of hard sweeps on the X chromosome compared to autosomes in six Drosophila species. *Genetics* (2024).
- 4. Radaic A., Shamir E.R., Jones K., Villa A, **Garud NR**, Tward AD, Kamarajan P, Kapila YL. Bacteroidetes Are Associated with Distinct Sites When Moving from Healthy Mucosa to Oral Dysplasia—A Microbiome and Gene Profiling Study and Focused Review. *Microorganisms* (2023).
- 5. Wolff R., Shoemaker W.R., and **Garud NR.** Ecological stability emerges at the level of strains in the human gut microbiome. *mBio* (2023).
- 6. Harris M. and **Garud NR** "Enrichment of hard sweeps on the X chromosome of Drosophila melanogaster." *Molecular Biology and Evolution* (2023).
- 7. Madi M, Chen D, Wolff R, Shapiro JB\*, **Garud NR\*.** "Community diversity is associated with intra-species genetic diversity and gene loss in the human gut microbiome." *eLife* (2023).
- 8. Briscoe L., Halperin E., and **Garud NR.** "Microbiome source tracking using single nucleotide variants." *Genome Biology* (2023).
- 9. Chen D.W. and **Garud NR.** "Rapid evolution and strain turnover in the infant gut microbiome." *Genome Research* (2022).
- 10. Briscoe L, Balliu B, Sankararaman S, Halperin E, **Garud NR**. "Evaluating supervised and unsupervised background noise correction in human gut microbiome data." *PLoS Comp. Bio* (2022).

- 11. Singh G., Haileselassie Y., Briscoe L., Bai L, Patel A, Sanjines E, Hendler S, Singh P, **Garud NR**, Limketkai BN, Habtezion A. "The effect of gastric acid suppression on probiotic colonization in a double blinded randomized clinical trial." *Clinical Nutrition ESPEN* (2021).
- 12. **Garud NR**, Messer P, Petrov D. "Detection of hard and soft sweeps from Drosophila melanogaster population genomic data." *PLoS Genetics* (2021).
- 13. Roodgar M\*, Good BH\*, **Garud NR**, Martis S, Avula S, Zhou W, Lancaster S, Hayan Lee, Babveyh A, Nesamoney S, Pollard KS, Snyder MP. "Longitudinal linked read sequencing reveals ecological and evolutionary responses of a human gut microbiome during antibiotic treatment." *Genome Research* (2021).
- 14. Harpak A, **Garud NR**, Rosenberg NA, Petrov DA, Combs M, Pennings PS, Munshi-South J. "Genetic adaptation in New York City rats." *GBE* (2020).
- 15. **Garud NR\***, Good BH\*, Hallatschek O, Pollard KS. "Evolutionary dynamics of bacteria in the gut microbiome within and across hosts." *PLoS Biology* (2019).
- 16. Harris, AM, **Garud NR**, DeGiorgio M. "Detection and classification of hard and soft sweeps from unphased genotypes by multilocus genotype identity." *Genetics* (2018).
- 17. Battlay, P, Leblanc P, Green L, **Garud NR**, Schmidt J, Fournier-Level A, Robin C, "Structural variants and selective sweep foci contribute to insecticide resistance in the *Drosophila melanogaster* genetic reference panel." *G3* (2018).
- 18. Nayfach S, Rodriguez-Mueller B, **Garud NR**, Pollard KS. "An integrated metagenomics pipeline for strain profiling reveals novel patterns of bacterial transmission and biogeography." *Genome Research* (2016).
- 19. **Garud NR** and Petrov DA. "Elevated linkage disequilibrium and signatures of soft sweeps are common in Drosophila melanogaster." *Genetics* (2016).
- 20. **Garud NR** and Rosenberg NA. "Enhancing the mathematical properties of haplotype homozygosity statistics for the detection of soft selective sweeps." *Theoretical Population Biology* (2015).
- 21. **Garud NR**, Messer P, Buzbas E, and Petrov D. "Recent selective sweeps in North American *Drosophila melanogaster* show signatures of soft sweeps." *PLoS Genetics* 11: e1005004 (2015).
- 22. McCoy RC, **Garud NR**, Kelley JL, Boggs CL, and Petrov DA. "Genomic inference accurately predicts the timing and severity of a recent bottleneck in a non-model insect population." *Molecular Ecology* (2013).
- 23. Molina J, Sikora M, **Garud NR**, Flowers J, Rubinstein S, Reynolds A, Huang P et al. "Molecular evidence for a single evolutionary origin of domesticated rice." *Proceedings of the National Academy of Sciences* 108, no. 20 (2011): 8351-8356.

#### Peer reviewed reviews and opinion pieces:

- 24. **Garud NR**. "Understanding soft sweeps: a signature of rapid adaptation" *Nature Review Genetics* (2023)
- 25. **Garud NR**. "Microbial Evolution: An overlooked biomarker of host diet." *Cell Host and Microbe* (2022).
- 26. **Garud NR**. "The Tempo and Mode of Adaptation in a Complex Natural Population: the Microbiome." *mSystems* (2021).
- 27. Shoemaker W, Chen D, **Garud NR**. "Comparative population genetics in the human gut microbiome." *GBE* (2021).
- 28. Garud NR and Pollard KS. "Population genetics in the microbiome." Trends in Genetics (2019).
- 29. Wilson BA\*, **Garud NR**\*, Feder AF\*, Assaf ZJ\*, and Pennings PS. "The population genetics of drug resistance evolution in natural populations of viral, bacterial and eukaryotic pathogens." *Molecular Ecology* (2015). \*equal contributors.

#### ONGOING RESEARCH SUPPORT

NIH R35 MIRA \$1.78M total, 08/01/2023-07/31/2028

\$1.25M direct

Evolutionary Dynamics of the Human Gut Microbiome During Colonization

NSF CAREER \$916K total, \$ 1/17/2023-12/31/2027

656K direct

Parallel evolution in the microbiome: novel methods for detecting repeated, rapid adaptations in metagenomic data

Paul G. Allen Frontiers Group \$1.5M total, \$300K to 11/01/2020-12/31/2023

my group direct

Distinct immune-metabolic niches in inflammatory bowel disease

#### COMPLETED RESEARCH SUPPORT

In kind UCLA support for microbiome \$10K 07/01/2023-01/15/2024

sequencing

Understanding the evolutionary dynamics of gut microbiota in Alzheimer's Disease.

Scialog: Microbiome, Neurobiology and \$50K 07/01/2021-06/30/2023

Disease

Do aging microbiomes evolve pathogenicity via gene shedding? Using evolutionary theory to deconstruct microbiome-based neurodegeneration

UCLA Faculty Research grant \$6.8K 07/01/2020-06/30/2022

Tracking the genetic content of microbiota in a stream

# University of California Hellman award \$25K 07/01/2021-06/30/2022

Uncovering the landscape of mutations in the human gut microbiome

## **UCLA Faculty Career Development award** \$15K

07/01/2021-09/14/2022

The evolutionary dynamics of gut microbiota in infants

## **TEACHING**

Spring 2024	EEB 172/c202: Advanced Statistics
Fall 2023	Pediatric R25 Lecturer: "Analysis of the Microbiome in Health and Disease"
Fall 2023	Guest lecturer for EEB 200
Fall 2023	EEB 201: R bootcamp
Winter 2023	EEB 172/c202: Advanced Statistics
Fall 2022	EEB 297: Microbiome Evolutionary Genomics
Winter 2022	EEB 172/c202: Advanced Statistics
Fall 2021	EEB 297: Microbiome Evolutionary Genomics
Spring 2021	EEB 149: Evolutionary Genomics
Winter 2021	EEB 172/c202: Advanced Statistics
Fall 2020	EEB 297: Population Genomics Simulations with SLiM
Spring 2020	C234: Ethics and Accountability in Biomedical Research
Spring 2020	CM222: Algorithms in Bioinformatics
Winter 2020	EEB 172/c202: Advanced Statistics
Fall 2019	EEB 297: Recombination in Bacteria Graduate Seminar
Feb. 2020	Guest lecturer for EEB 250: Tools for First Year Graduate students
Nov 2019	Guest lecturer for EEB course on 'How to Obtain a Job'
Oct. 2019	Guest lecturer for CS 184: Bioinformatics and Systems Biology Undergrad seminar.
May 2019	Guest lecturer for Population Genetics undergraduate course at UCLA
Jan. 2019	Guest lecturer for Introduction to Microbiology undergraduate course at UCLA
Fall 2016	Guest lecturer for Computing in Biology, San Francisco State University
2012-2014	Splash! (Stanford Educational Studies Program) course on introductory population
	genetics to high school students.
Fall 2013	Teaching assistant for Bio-explorations course at Stanford for freshmen undergrads
Spring 2012	Teaching assistant for the PhD level Genomics course at Stanford

## **UNIVERSITY AND DEPARTMENTAL SERVICE:**

2024	Member of search committee for the UCLA QCBIO director position
2024	Member of search committee for Conservation Biology Assistant Professor position,
	Department of Ecology and Evolutionary Biology
2024	Academic Personnel Committee, Department of Ecology and Evolutionary Biology
2023	Member of organizing committee for the Ecology and Evolutionary Biology annual
	research symposium
2023	Ecology and Evolutionary Biology Department Awards Committee member
2022-2024	Undergraduate course adviser, Department of Ecology and Evolutionary Biology
2020-2023	Undergraduate Curriculum committee member, Department of Ecology and Evolutionary
	Biology
2021-2022	Search committee member for the Department of Ecology and Evolutionary Biology
	CAO position

2021	Reviewer for UCLA's Cota Robles fellowship applications
2021	Ad Hoc faculty search committee member
2020-2021	Mentor Professor Faculty Search committee member
2020	Graduate student award committee member: Department of Ecology and Evolutionary
	Biology at UCLA
2019	PhD admissions committee member: Department of Ecology and Evolutionary Biology at
	UCLA
2019-Present	PhD admissions committee member: Bioinformatics graduate program at UCLA
2019-Present	PhD admissions committee member: Department of Human Genetics at UCLA
2019-2022	Computational and Systems Biology committee member at UCLA

# OTHER PROFESSIONAL ACTIVITIES:

2023	Guest speaker for the Gladstone Institutes "Trainee to Tenure Track" career panel.
2022	External examiner for Australian National University MS thesis
2021	Moderator for the 27 <sup>th</sup> annual Boston Bacterial Meeting
2021	Organizer of the "Evolutionary Genetics in Natural Microbial Populations" symposium at
	the Society for Molecular Biology and Evolution annual meeting.
2020	University of Southern California guest visitor for Women in Science group
2019-current	Mentor for Bruins in Genomics at UCLA undergraduate research students
2019	Encountering the Unseen: collaboration with break dancers to depict my paper on the
	evolutionary dynamics of bacteria in the microbiome at UCLA
2017	Organizer of Society for Molecular Biology and Evolution symposium on 'Probing
	microbiome dynamics'
2016	Organizer of the UCSF OUT in Science panel discussion
2014	Poster presentation judge at the Society for Molecular Biology and Evolution
2014	Seminar Organizer for the Stanford Center for Evolution and Human Genomics
2012	Created a \$30,000 per year fund with the Stanford School of Medicine for travel grants
	for conferences for all Bioscience PhD students.
2011	Organizer of the Biomedical Computation at Stanford (BCATS) Conference
2011	Consultant for the Stanford Statistical Consulting group

## **MENTORING**

# **Graduate students and postdocs:**

Graduate students and postdocs:			
2022-current	Peter Laurin (PhD student in Ecology and Evolutionary Biology)		
	Michael Wasney (PhD student in Human Genetics)		
	Aina Martinez i Zurita (PhD student in Human Genetics)		
2021-current	Jonathan Mah (PhD student, Bioinformatics, co-advised with Prof. Kirk Lohmueller and		
	supported by an SIB NIH training grant)		
2020-current	William Shoemaker (NSF Postdoctoral Fellow). Currently a postdoc at the Abdus Salam		
	International Centre for Theoretical Physics		
	Mariana Harris (PhD student, Math Bio program, supported by SIB and GATP NIH		
	training grants)		
2019-current	Richard Wolff (PhD student, Ecology and Evolutionary Biology)		
2019-2023	Leah Briscoe (PhD student, Bioinformatics; Joint with Eran Halperin, supported by an		
	NSF graduate research fellowship), defended. Currently employed at Bayer.		

# **Graduate rotation students**

2021	Alejandro Espinoza (PhD rotation student, Genetics and Genomics. Cota Robles fellow).
2020	Albert Xue (PhD rotation student, Bioinformatics)
	Nicole Zeltser (PhD rotation student, Genetics)
	Helen Huang (PhD rotation student, Bioinformatics)

## **Undergraduate students:**

2023-current	Alexandria Hunt (BS student, Computational and Systems Biology)
2023	Radha Ganesh (Bruins in Genomics summer student)
	Jooeun Jeon (Bruins in Genomics summer student)
2022	Julianna Perez (Bruins in Genomics summer student)
	Kaysa Pfannmuller (Bruins in Genomics summer student)
2022-current	Brian Roysar (BS student, Computer Science and Math)
2021-2022	Brock Karas (BS student, Ecology and Evolutionary Biology)
	Sarah Bald (BS student, Bruins in Genomics summer student) (currently a PhD student at
	Boston University)
2020-current	Rahul Natrajan (BS student, Computer Science) (Currently an MS student at Columbia
	University)
	Nada AbouHaiba (BS student) (currently a medical student at the Mayo Clinic)
	Henry Krasner (BS student) (currently a medical student at University of Nevada)
2021	Melody Zhang (BS student)
	Maggie Yu (BS student)
	Samantha Chung (BS student)
	Anna McDonald (BS student, Bruins in Genomics summer student)
	Ashwin Deena (BS student, CASB)
	Alejandro Espinoza (PhD rotation student, Genetics and Genomics. Cota Robles fellow).
2020	Shavonna Jackson (BS student, Bruins in Genomics)
	Etan Dieppa (BS student, Bruins in Genomics)
	Kevin Delao (BS student, Bruins in Genomics)
	Maya Singh (BS student, Bruins in Genomics)
	Anshuman Mahalley (BS student, Computer Science)
2019	Daisy Chen (BS student, Computer Science) (currently a PhD student at UCSD)
	Sara Thornburgh (BS student, Ecology and Evolutionary Biology)
	Sara Makanani (MS student, Ecology and Evolutionary Biology)
2017-2019	Annamarie Bustion (PhD student, UCSF, under Katherine Pollard's supervision)
2017-2019	Katherine Zhang (HS student). Project won semi finalist position at the National Siemens
	Westinghouse Competition. (Currently an undergraduate student at Harvard)
2016	Haleigh Miller (Summer Undergraduate, Foothill College).

## **GRADUATE COMMITEES**

## **PhD** Committee member for:

Kevin Rodriguez, 2023- Present (Ecology and Evolutionary Biology) Celine Snedden, 2022-Present (Ecology and Evolutionary Biology) Alejandra Gamboa 2021-Present (Ecology and Evolutionary Biology)

Liat Shenov, 2019-2020 (Computer Science)

Rosa McGuire 2020-Present (Ecology and Evolutionary Biology) Chris Kyriazis, 2020-2022 (Ecology and Evolutionary Biology) Natalie Lozano, 2020-2022 (Ecology and Evolutionary Biology) Jesse Garcia, 2020-2022 (Ecology and Evolutionary Biology) Riley Mummah 2020-2022 (Ecology and Evolutionary Biology) Tina Del Carpio 2020-Present (Ecology and Evolutionary Biology) Serena Huang 2020-Present (Genetics and Genomics)

Eva Horna Lowell 2020-2022 (Ecology and Evolutionary Biology)

## PhD Guidance Committee member for:

Austin Betancourt (Ecology and Evolutionary Biology)

Heidi Yang (Ecology and Evolutionary Biology)

Eva Horna Lowell (Ecology and Evolutionary Biology)

Albert Chung (Ecology and Evolutionary Biology)

Daniel Littman (Bioinformatics)

## **MS** Committee member for:

Evelyn Malmut (Ecology and Evolutionary Biology)

Philip Lee (Bioinformatics)

Davis Mai (Ecology and Evolutionary Biology)

April Zhou (Ecology and Evolutionary Biology)

Shaili Mathur (Computational and Systems Biology)

Emoni Cook (Ecology and Evolutionary Biology)

#### **INVITED PRESENTATIONS**

1.	Oct. 2024	Session convenor and invited speaker for the Ecology and Evolution session at
		the Microbiome meeting, Cold Spring Harbor Laboratory, NY
2.	Oct. 2024	McGill Quantitative Life Sciences Speaker
3.	Sept. 2024	Lake Arrowhead Microbial Genomics meeting, Lake Arrowhead, CA
4.	July 2024	Kavli Institute for Theoretical Physics, Horizontal Gene Transfer meeting, Santa Barbara, CA
5.	July 2024	Society for Molecular Biology and Evolution, Microbiome session invited speaker, Puerto Vallerta, Mexico
6.	June 2024	American Society for Microbiology, EEB hub track speaker
7.	May 2024	Session convenor and invited speaker for the Population Genetics session at the
	·	Biology of Genomes meeting, Cold Spring Harbor Laboratories, NY
8.	Oct. 2023	Ecology and Evolutionary Biology Seminar Series, UCLA
9.	Sept. 2023	Computational Medicine Seminar Series, UCLA
10.	July 2023	Computational Genomics Summer Institute, UCLA
11.	July 2023	San Francisco State University EEB BIPOC seminar series
12.	June 2023	McGill University: Adaptation in Structured Populations Symposium
13.	May 2023	QCBio Career Development Seminar, UCLA
14.	May 2023	Cedars Sinai Computational Biomedicine Grand Rounds Seminar
15.	April 2023	Paul Allen Annual Meeting – presentation on diversity along the gut
16.	March 2023	Cornell Institute of Host-Microbe Interactions and Disease Seminar
17.	Dec. 2022	Keystone Conference: The Human Microbiome: Ecology and Evolution. Banff, Canada
18.	Nov. 2022	Stanford Center for Human Genetics Seminar
19.	Oct. 2022	NHLBI: Role of the Microbiome in Heart, Lung, Blood and Sleep Disorders workshop
20.	Oct. 2022	University of Georgia Departmental Seminar
21.	July 2022	University of California, Los Angeles, QCBIO seminar series
22.	May 2022	Keynote speaker at two RECOMB satellite meetings
23.	May 2022	Cedars Sinai Seminar
24.	May 2022	University of Arizona Department Seminar

25.	Apr. 2022	SoCal Systems Biology Meeting
26.	Apr. 2022	University of Manchester Department Seminar
27.	Oct. 2021	Institute for Systems Biology, Seattle WA, Virtual Microbiome Series
28.	Oct. 2021	Cornell University Department Seminar
29.	Oct. 2021	Columbia University Department Seminar
30.	Sept. 2021	Universidad Nacional Autónoma de México Departmental Seminar
31.	June 2021	American Society for Microbiology talk
32.	May 2021	University of British Columbia Department Seminar
33.	May 2021	UC Berkeley CTEG seminar
34.	April 2021	UC Irvine Department Seminar
35.	April 2021	McGill Department Seminar
36.	Mar. 2021	Paul Allen Institute
37.	Feb. 2021	Gulbenkian Institute in Portugal, Seminar
38.	Jan. 2021	UCSF Microbiome Center Symposium
39.	Nov. 2020	University of Vienna Departmental Seminar
40.	Oct. 2020	UC Davis EEB Departmental Seminar
41.	Oct. 2020	Penn State University Departmental Seminar
42.	Aug. 2020	Emory University Microbiome Seminar
43.	June 2020	World Microbiome Day Seminar, Vanderbilt University
44.	Jan. 2020	Microbiome Population Genetics, Chan Zuckerberg Institute
45.	Jan. 2020	Emerging Opportunities for Mathematics in the Microbiome, Institute for Pure
		and Applied Mathematics at UCLA
46.	Dec. 2019	Deciphering Microbiomes at the National Science Foundation, DC
47.	Sept. 2019	Keynote speaker for the Institute for Quantitative and Computational Biosciences
48.	Sept. 2019	Department of Human Genetics at UCLA Seminar
49.	Sept. 2019	University of Southern California Departmental Seminar
50.	Sept. 2019	UCLA Anesthesiology Grand Rounds
51.	Aug. 2019	University of Minnesota Microbial and Plant Genomics Institute Symposium
52.	July 2019	UCLA Computational Genomics Summer Institute
53.	June 2019	American Society for Microbiology: Plenary Session
54.	Jan. 2019	UCLA Behavior, Evolution, and Culture speaker series
55.	March 2018	University of Pennsylvania Biology Departmental Seminar
56.	Feb. 2018	New York Genome Center Departmental Seminar
57.	Feb. 2018	Temple University iGEM Departmental Seminar
58.	Jan. 2018	UCLA Ecology and Evolutionary Biology Departmental Seminar
59.	Dec. 2013	Penn State University, Department of Biology

# SELECT CONFERENCE PRESENTATIONS AND OTHER SEMINARS:

1.	Oct. 2019	Southern CALifornia Evolutionary Genetics & Genomics (SCALE) meeting, University
		of California, Irvine
2.	Oct. 2018	Microbial Ecology and Evolution meeting in Lisbon, Portugal
3.	Sept. 2018	Lake Arrowhead Microbial Genetics
4.	Jan. 2018	New York Area Population Genetics meeting
5.	Nov. 2017	Bay Area Population Genetics meeting
6.	April 2017	California Academy of Sciences
7.	July 2015	Society for Molecular Biology and Evolution
8.	Nov. 2014	Stanford Genetics Department
9.	June 2014	Society for Molecular Biology and Evolution
10.	Jan. 2014	Biomedical Computation at Stanford

11.	July 2013	Walter Fitch Symposium, Society for Molecular Biology and Evolution
12.	April 2013	Drosophila Research Conference
13.	April 2013	Stanford Genome Training Program retreat
14.	Jan. 2013	Bay Area Population Genetics meeting

# **Conference travel awards**

2018	Eco-Evo travel award to the Gulbenkian, Portugal
2018	Genetics Society of America DeLill Nasser Award
2017	Gladstone Institutes Career Advancement Award
2015	SMBE in Vienna Young Investigator Travel Award
2014	Stanford BioX travel grant to the SMBE conference in Puerto Rico
2013	SMBE travel grant to the SMBE conference in Chicago
2013	Stanford BioX travel grant to the Drosophila conference in Washington DC
2013	Stanford School of Medicine travel grant to the Drosophila conference in Washington DC
2012	Stanford Department of Biology travel grant to the SMBE conference in Ireland
2011	National Science Foundation travel award to the SMBE conference in Kyoto, Japan