

Kirk E. Lohmueller, Ph.D.

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CURRICULUM VITAE

EDUCATION:

- 2010** **Ph.D. in Genetics**
Cornell University, Ithaca, NY
Focus on population genetics with a Biometry (Biostatistics) minor
- 2005** **Bachelor of Science in Biology, (Magna Cum Laude)**
Georgetown University, Washington, DC

EMPLOYMENT:

- July 2022-Present** **Professor**, Department of Ecology and Evolutionary Biology & Department of Human Genetics, University of California, Los Angeles, CA
- July 2018-June 2022** **Associate Professor**, Department of Ecology and Evolutionary Biology & Department of Human Genetics, University of California, Los Angeles, CA
- July 2015-June 2018** **Assistant Professor**, Department of Human Genetics, University of California, Los Angeles, CA
- April 2013-June 2018** **Assistant Professor**, Department of Ecology and Evolutionary Biology, University of California, Los Angeles, CA
- 2010-April 2013** **Miller Research (Postdoctoral) Fellow**, Department of Integrative Biology, University of California, Berkeley, CA

OTHER AFFILIATIONS AT UCLA:

- 2021-2022** **Vice Chair**, Department of Ecology & Evolutionary Biology
- 2013-Present** **Member**, Interdepartmental PhD Program in Bioinformatics
- 2013-Present** **Member**, Genetics & Genomics PhD Home Area

PREVIOUS RESEARCH:

- 2010-2013** **Postdoctoral Researcher**, University of California, Berkeley, CA
Advisor: Dr. Rasmus Nielsen

Analysis of next-generation sequencing data to learn about demography and natural selection.

- 2005-2009** **Graduate Student Research Assistant**, Cornell University, Ithaca, NY
Advisors: Dr. Andy Clark & Dr. Carlos Bustamante
Research on human population genetics focusing on demographic history and natural selection.
- 2004-2005** **Undergraduate Research Assistant, Biology Department**, Georgetown University, Washington, DC
Advisor: Dr. John Braverman
Statistical analyses on large genetic variation datasets.
- 2002-2004** **Undergraduate Research Assistant**, Institute for Molecular and Human Genetics Georgetown University, Washington, DC
Advisor: Dr. Lee-Jun Wong
Single nucleotide polymorphism (SNP) genotyping on human DNA samples. Extensively used PCR and electrophoresis.
- 1998-2001** **High School Student Research Assistant**, Whitehead/MIT Center for Genome Research, Cambridge MA
Advisor: Dr. Joel Hirschhorn
Review and meta-analysis of genetic association studies.

AWARDS AND HONORS:

- 2023** **Elected co-chair of the 2027 Ecological and Evolutionary Genomics Gordon Research Conference**
- 2019** **Department of Ecology & Evolutionary Biology Faculty Teaching Award**
- 2015** **UCLA Hellman Fellowship**
- 2014** **Searle Scholar**
- 2014** **Alfred P. Sloan Research Fellowship in Computational and Evolutionary Molecular Biology**
- 2010-2013** **Miller Postdoctoral Research Fellowship, UC Berkeley**
- 2010** **NIH Ruth Kirschstein National Research Service Award**
(I used 6 months before switching to the Miller)
- 2010** **NSF Postdoctoral Research Fellowship in Biology**
(I was awarded, but I declined, this fellowship)
- 2010** **Selected as a Platform Session moderator for the American Society of Human Genetics annual meeting**
- 2010** **Trainee Research Semifinalist, American Society of Human Genetics**
Awarded to top abstracts submitted for presentations at the 2010 meeting.
- 2005-06; 2007-09** **NSF Graduate Research Fellowship**

- 2005** **Cornell Presidential Genomics Fellowship**
(I was awarded, but I declined, this fellowship)
- 2005** **Chapman medal**
Awarded to the best senior thesis presentation in the Biology Department at Georgetown University.
- 2004-2005** **Barry Goldwater Scholarship**
Competitively awarded to students wishing to pursue careers in math and science.
- 2001-2005** **Georgetown-Hughes Undergraduate Research Scholarship**
An award from the Howard Hughes Medical Institute (through Georgetown University) to sponsor students' research during the summer.

TEACHING:

University of California, Los Angeles, CA

- 2022** **EE BIOL 297: Predicting the fitness and functional consequences of mutations.** Graduate seminar class (2 credits, Fall quarter).
- 2021-2024** **EE BIOL 172/202: Advanced Statistics in Ecology & Evolution.** Upper-level undergraduate & graduate course. ~30 students. Co-taught with Nandita Garud (Winter quarter).
- 2020** **EE BIOL 297: An introduction to computational methods in population genetics.** Graduate seminar class (2 credits, Fall quarter).
- 2019** **EE BIOL 297: Population genomics of structural variants and transposable elements.** Graduate seminar class (2 credits, Winter quarter).
- 2018** **EE BIOL 297: Demystifying the Academic Job Talk.** Graduate seminar class (2 credits, Winter quarter).
- 2016** **EE BIOL 297: Coalescent Theory.** Graduate seminar class (2 credits, Winter quarter).
- 2014-2024 (annually)** **EE BIOL 135/235: Population Genetics.** Upper-level undergraduate & graduate course. >50 students. (Spring quarter).
- 2013-2018 (annually)** **EE BIOL M200A: Evolutionary Biology.** Graduate introductory evolution class. Co-taught with Bob Wayne and Mike Alfaro. I taught the evolutionary genetics portion (Fall quarter).
- 2013-2023 (annually)** **Quantitative skills bootcamp** for incoming EEB graduate students. Co-taught with Jamie Lloyd-Smith and Mike Alfaro. Currently EEB 201 (2 day-workshop; Fall quarter).
- 2013** **EE BIOL 297: The Neutral Theory of Molecular Evolution.** Graduate seminar class (2 credits, Spring quarter).
- 2012** **Gave two lectures on coalescent theory** to the CS229: Current Topics in Bioinformatics course

Workshops for the California Criminalistics Institute

2013-2017 (annually) **R103: Population Genetics in Forensic DNA Analysis.** Taught in LA. Designed and taught a 3-day course on basic population genetics and statistics in forensic DNA analysis for DNA analysts from government forensic science laboratories.

2013,2015,2019 **R103: Population genetics in Forensic DNA Analysis.** Taught in Richmond, CA. Designed and taught a 3-day course on basic population genetics and statistics in forensic DNA analysis for DNA analysts from government forensic science laboratories.

UNIVERSITY AND DEPARTMENTAL SERVICE:

2024-2025 **Chair, Conservation Genomics Faculty Search Committee,** Department of Ecology and Evolutionary Biology

2024-2024 **Member, Dickey Collection Curator Faculty Search Committee,** Department of Ecology and Evolutionary Biology

2024-2024 **Member, UCLA Society of Hellman Fellows Selection Committee,** UCLA

2023-2024 **Co-Chair, Graduate admissions committee,** Interdepartmental Program in Bioinformatics

2022-2025 **Member, Personnel Committee,** Department of Ecology and Evolutionary Biology

2022-2023 **Chair, Departmental Awards Committee,** Department of Ecology and Evolutionary Biology

2022-2023 **Chair, Population Biology Faculty Search Committee,** Department of Ecology and Evolutionary Biology

2021-2022 **Vice Chair, Department of Ecology and Evolutionary Biology,** Chair of the Personnel Committee

2020-2021 **Member, Personnel Committee,** Department of Ecology and Evolutionary Biology

2020-2021 **Member, Departmental Awards Committee,** Department of Ecology and Evolutionary Biology

2020-Present **Chair, Seminar Committee,** Genetics & Genomics Graduate Home Area

2018-2019 **Member, Quantitative Biologist Faculty Search Committee,** Department of Ecology and Evolutionary Biology

2018-2019 **Member, Departmental Awards Committee,** Department of Ecology and Evolutionary Biology

2018-2019 **Member, Personnel Committee,** Department of Ecology and Evolutionary Biology

2017-2022	Chair, Student Advising Committee , Interdepartmental Program in Bioinformatics
2017-2018	Member, Graduate Admissions Committee , Department of Ecology and Evolutionary Biology
2017-2018	Chair, Population Genetics Faculty Search Committee , Department of Ecology and Evolutionary Biology
2016-2017	Member, Department Chair Search Committee , Department of Ecology and Evolutionary Biology
2016	Member, Faculty Search Committee , Department of Human Genetics
2015-Present	Member, Executive Committee , Genetics & Genomics Graduate Home Area
2014-Present	Member, Seminar Committee , Interdepartmental Program in Bioinformatics
2014-2017	Member, Student Advising Committee , Interdepartmental Program in Bioinformatics
2014-2017	Member, Seminar Committee , Department of Ecology and Evolutionary Biology
2013-2019	UCLA Legislative Assembly representative , Department of Ecology and Evolutionary Biology
2013-2016	Member, Social Media Committee , Department of Ecology and Evolutionary Biology

EDITORIAL ACTIVITIES:

2024	Guest Editor, <i>Journal of Heredity</i> , Special issue to honor Bob Wayne (with Bridgett vonHoldt and Beth Shapiro as co-editors)
2024-Present	Associate Editor, <i>PLoS Genetics</i>
2024-Present	Associate Editor, <i>PLoS Computational Biology</i>
2019-Present	Associate Editor, <i>Genome Biology and Evolution</i>
2021-2023	Associate Editor, <i>Evolution</i>
2021; 2023	Guest Editor for <i>PLoS Computational Biology</i>
2017	Guest Editor for <i>PNAS</i>
2015-2024	Guest Editor for <i>PLoS Genetics</i>

OTHER PROFESSIONAL ACTIVITIES:

2024	Ad hoc grant reviewer, Canada Research Chairs Program.
2024	Ad hoc grant reviewer, Swiss National Science Foundation.

- 2024 Organized a symposium (with Melissa Wilson, ASU) entitled “Everything that is old becomes new: comparative genomics and museum specimens” at the annual Society of Molecular Biology and Evolution conference in Puerto Vallarta, Mexico.
- 2024 Platform Session moderator for the Population, Evolutionary, and Quantitative Genetics (PEQG) meeting.
- 2023 Ad hoc grant reviewer, Natural Sciences and Engineering Research Council of Canada (NSERC) Discovery Grant.
- 2023 Ad hoc grant reviewer, NSF, Division of Environment Biology.
- 2023-2025 Permanent study section member, NIH Maximizing Investigators’ Research Award F (MRAF)
- 2022 Faculty participant, Society for the Study of Evolution Student-faculty networking lunch at the Evolution meeting.
- 2022 Ad hoc grant reviewer, ATIP-Avenir Young Group Leader grant, France.
- 2022 NIH Special Emphasis Panel, National Institute of General Medical Sciences (NIGMS), Maximizing Investigators’ Research Award for Early Stage Investigators (R35) review
- 2021-2023 Permanent study section member, NIH Maximizing Investigators’ Research Award A (MRAA)
- 2021 NIH Maximizing Investigators’ Research Award A (MRAA) ad hoc study section member. Review of R35 applications from Established Investigators.
- 2021 NIH Special Emphasis Panel, ZRG1 GGG-X (02) Member Conflict: Genes, Genomes and Genetics ad hoc study section member
- 2021 NIH Special Emphasis Panel, National Institute of General Medical Sciences (NIGMS), Maximizing Investigators’ Research Award for Early Stage Investigators (R35) review
- 2021 Best Student Paper Award selection committee, *Genome Biology and Evolution*
- 2019 NIH F08 Fellowships: Genes, Genomes and Genetics ad hoc study section member
- 2019 Session chair, The Biology of Genomes, Cold Spring Harbor
- 2019 Walter Fitch Symposium Committee, Society of Molecular Biology and Evolution
- 2019 NIH Special Emphasis Panel, National Institute of General Medical Sciences (NIGMS), Maximizing Investigators’ Research Award for Early Stage Investigators (R35) review
- 2018 Co-organizer of Population Genomics & the Microbiome, Computational Genomics Summer Institute, UCLA

- 2018 Session chair, Probabilistic Modeling in Genomics, Cold Spring Harbor
- 2018 Ad hoc grant reviewer, Swiss National Science Foundation
- 2018 Ad hoc grant reviewer, Bioinformatics and Computational Biology Competition, Génome Québec
- 2017 NIH Special Emphasis Panel, National Institute on Aging, The Dog Aging Project (U19) review
- 2017; 2018; 2020 NIH Genetic Variation and Evolution (GVE) ad hoc study section member
- 2017 NIH Special Emphasis Panel, National Institute of General Medical Sciences (NIGMS), Pathway to Independence Award (K99/R00) review
- 2017 Panelist on the NSF Graduate Research Fellowship Program review panel
- 2016 & 2017 Program Committee member for the RECOMB 2016 Satellite Meeting on Computational Methods in Genetics.
- 2015 Platform Session moderator for the American Society of Human Genetics annual meeting
- 2015 Organized a symposium (with Emilia Huerta-Sanchez, UC Merced) entitled "Reframing the demography vs. selection debate using 21st century models and data" at the annual Society of Molecular Biology and Evolution conference in Vienna.
- 2015 External review of a final grant report, National Institute of Justice, Forensic DNA Research and Development program.
- 2015 Taught a lesson on human evolution to high school students at UCLA for The Society of Asian Scientists and Engineer's White House Initiative.
- 2014 **Organized the Southern CALifornia Evolutionary Genetics & Genomics (SCALE) conference at UCLA.** This day-long conference brought together 89 students, postdocs and faculty from across Southern California to discuss evolutionary and population genetics. The meeting featured talks (mostly from students and postdocs), a poster session, and much informal discussion.
- 2014-2015 Ad hoc grant reviewer, NSF, Behavioral and Cognitive Sciences, Program of Archeology.
- 2014 Ad hoc grant reviewer, NSF, Division of Environment Biology, Program of Evolutionary Ecology.
- 2013 Taught an interactive lesson on forensic DNA typing to high school freshmen at Berkeley High School

Invited reviewer for: *Nature*, *Science*, *Nature Genetics*, *Nature Communications*, *Cell*, *Molecular Biology and Evolution*, *eLife*, *Proceedings of the National Academy of Sciences*, *Genome Research*, *American Journal of Human Genetics*, *Current Biology*, *Proceedings of the Royal Society B*, *PLoS Biology*, *PLoS Computational Biology*, *PLoS Genetics*, *PLoS ONE*, *Genome Biology*, *Cell Genomics*, *Trends in Genetics*,

Genome Biology and Evolution, Genetic Epidemiology, Molecular Ecology, Evolution, Genetica, Genetics, Genes, G3, Human Molecular Genetics, Bioinformatics, BMC Medical Genetics, BMC Genomics, BMC Medical Genomics, European Journal of Human Genetics, Journal of Heredity, Trends in Molecular Medicine, Frontiers in Evolutionary and Population Genetics, Evolution Letters, Ecology & Evolution, Theoretical Population Biology (reviewed 13-16 manuscripts annually from 2013-2023; reviewed fewer starting in 2023 due to increasing editorial responsibilities & NIH grant reviewing).

Evaluator for promotion & tenure cases: National Human Genome Research Institute; Princeton University; San Diego State University; SUNY Stony Brook; University of California, Santa Cruz; University of California, Irvine; University of Chicago; University of Maryland; University of Michigan; University of Pennsylvania

STUDENT AND POSTDOC MENTORING:

2023-Present **Chenlu Di** (Postdoc)
 2023-Present **Diana Aguilar Gomez** (UC Chancellor's Postdoc)
 2024-Present **Sneha Chakraborty** (Postdoc)

2021-Present **Jonathan Mah** (PhD student, Bioinformatics; joint with Nandita Garud)
 2023-Present **Swetha Ramesh** (PhD student, Bioinformatics)
 2023-Present **Aina Martinez Zurita** (PhD student, Genetics & Genomics; joint with Nandita Garud)

2013-2016 **Diego Ortega Del Vecchy** (PhD student, Bioinformatics; joint with John Novembre); currently an Associate Professor at the National Autonomous University of Mexico
 2015-2018 **Tanya Phung** (PhD student, Bioinformatics); currently a Bioinformatics Scientist at Ambry Genetics
 2013-2018 **Bernard Kim** (PhD student, Ecology and Evolutionary Biology); incoming Assistant Professor at Princeton University.
 2015-2020 **Annabel Beichman** (PhD student, Ecology and Evolutionary Biology; joint with Bob Wayne); currently a postdoc with Kelley Harris at the University of Washington
 2016-2020 **Jazlyn Mooney** (PhD student, Genetics & Genomics); Assistant Professor at USC
 2017-2021 **Arun Durvasula** (PhD student, Genetics & Genomics; joint with Sriram Sankararaman); Assistant Professor at USC
 2021-2022 **Meixi Lin** (PhD student, Ecology and Evolutionary Biology; joint with Bob Wayne); currently a postdoc with Moisés (Moi) Expósito-Alonso at UC Berkeley
 2018-2022 **Chris Kyriazis** (PhD student, Ecology and Evolutionary Biology; joint with Bob Wayne); currently a Postdoctoral Research Associate at the San Diego Zoo Wildlife Alliance
 2017-2023 **Jesse Garcia** (MS student, Bioinformatics); currently a Bioinformatics Software Developer at Fulgent Genetics
 2020-2023 **Christina Del Carpio** (PhD student, Ecology and Evolutionary Biology); currently a Research Data Analyst at the California Interagency Council on Homelessness
 2021-2023 **Stella Yuan** (Ecology and Evolutionary Biology; joint with Bob Wayne)

2013-2015 **Charleston Chiang** (Postdoc, NIH NRSA Postdoctoral Fellowship; joint with John Novembre); currently Assistant Professor at USC.
 2013-2018 **Clare Marsden** (Postdoc & then Assistant Project Scientist, UCLA Computational Biology Initiative Postdoctoral Fellowship); currently a forensic DNA analyst at LAPD Crime Lab.
 2014-2018 **Christian Huber** (Postdoc); a Discovery Early Career Award (DECRA) recipient at the Australian Centre of Ancient DNA at the University of Adelaide; Assistant Professor at Penn State since 2021
 2014-2018 **Ying Zhen** (Postdoc; joint with Tom Smith & then Assistant Project Scientist, UCLA Computational Biology Initiative Postdoctoral Fellowship); currently an Assistant Professor, Westlake University, Hangzhou, China

2017-2018	Eduardo Amorim (Postdoc); Assistant Professor at Cal State Northridge
2019-2022	Gustavo Barroso (Postdoc); currently a postdoc with Aaron Ragsdale at U Wisconsin
2020-2022	Maria Izabel Cavassim Alves (Postdoc); currently a Bioinformatics Scientist at Illumina
2019-2023	Xinjun Zhang (Postdoc); currently Assistant Professor in the Department of Human Genetics at the University of Michigan
2022-2023	Chris Kyriazis (Postdoc); currently a Postdoctoral Research Associate at the San Diego Zoo Wildlife Alliance
2014-2015	Amy Chow (Undergraduate student); currently a mechanical engineering MS student at San Diego State University
Fall 2014	Tanya Phung (Bioinformatics rotation student)
Spring 2014	Megan Roytman (Bioinformatics rotation student)
Fall 2015	Jazlyn Mooney (Genetics & Genomics rotation student)
Fall 2016	Arun Durvasula (Genetics & Genomics rotation student)
2016-2017	Jesse Garcia (Undergraduate student in the Bruins-in-Genomics Summer program)
Spring 2017	James Perez (Bioinformatics rotation student)
2017-2018	Norris Khoo (Undergraduate student in the Bruins-in-Genomics Summer program); currently in MS program in Computer Science at USC
Summer 2019	Miguel Guardado (Undergraduate student in the Bruins-in-Genomics Summer program); currently PhD student at UCSF
Summer 2019	Jonathan Mah (Undergraduate student in the Bruins-in-Genomics Summer program); currently Bioinformatics PhD student at UCLA
Summer 2020	Nina Sachdev (Undergraduate student in the Bruins-in-Genomics Summer program)
2018-2020	Pooneh Kalhori (Undergraduate student); currently MS student at SF State
Fall 2020	Jonathan Mah (Bioinformatics rotation student)
2019-2020	Abigail Yohannes (Undergraduate student)
2019-2021	Armann Singh (Undergraduate student)
2021-2022	Emma Wade (Undergraduate student in the Bruins-in-Genomics Summer program)
2021-2022	Brian Chen (Undergraduate student in the Bruins-in-Genomics Summer program)
Fall 2021	Maria Flores (Bioinformatics rotation student)
2021-2023	Pedro Perez (Undergraduate student)
Spring 2022	Michael Wasney (Genetics & Genomics rotation student)
Summer 2022	Saige Daines (Undergraduate student in the Bruins-in-Genomics Summer program)
Spring 2022	Aina Martinez Zurita (Genetics & Genomics rotation student)
Spring 2023	Swetha Ramesh (Bioinformatics rotation student)
Summer 2023	Sally Ha (Undergraduate student in the Bruins-in-Genomics Summer program)
Summer 2023	Aidta Iyer (Undergraduate student in the Bruins-in-Genomics Summer program)
2012-2013	Mingze He (Visiting student from BGI, Shenzhen, China; joint with Rasmus Nielsen and Emilia-Huerta Sanchez); currently a graduate student at Iowa State University
Summer 2010	Alison Feder (Summer undergraduate student); currently an Assistant Professor at the University of Washington

GRADUATE COMMITTEES:

PhD Committee member for:

Mira Abrecht, 2021-Present (Ecology and Evolutionary Biology)
 Monique Ambrose, 2013-2018 (Ecology and Evolutionary Biology)
 Kelly Barr, 2017-2023 (Ecology and Evolutionary Biology)
 Cliff Boldridge, 2017-2021 (Biochemistry, Molecular and Structural Biology)
 Rob Brown, 2014-2017 (Bioinformatics)
 Daniel Chavez, 2018-2021 (Ecology and Evolutionary Biology)
 Joey Curti, 2021-Present (Ecology and Evolutionary Biology)
 Tina DelCarpio, 2018-2020 (Ecology and Evolutionary Biology)

Madza Farias-Virgens, 2018-2023 (Integrative Biology & Physiology)
Mariana Harris, 2022-Present (Biomathematics)
Serina Huang, 2021-Present (Genetics & Genomics)
Todd Islam, 2022-Present (Department of Anthropology, University of Utah)
Christiane Jacquemetton, 2023-Present (Ecology and Evolutionary Biology)
Meixi Lin, 2019-2021 (Ecology and Evolutionary Biology)
Aina Martinez Zurita, 2023 (Genetics & Genomics)
Evan McCartney-Melstad, 2013-2016 (Ecology and Evolutionary Biology)
Alayna Mead, 2019-2023 (Ecology and Evolutionary Biology)
Sergio Morales, 2015-2016 (Ecology and Evolutionary Biology)
Kevin Neal, 2014-2019 (Ecology and Evolutionary Biology)
Scott O'Donnell, 2016-2023 (Ecology and Evolutionary Biology)
Allison Fritts-Penniman, 2013-2016 (Ecology and Evolutionary Biology)
Gabriela Pinho, 2015-2022 (Ecology and Evolutionary Biology)
Jingyou Rao, 2023-Present (Computer Science)
Jacqueline Robinson, 2013-2017 (Ecology and Evolutionary Biology)
Kevin Rodriguez, 2022-Present (Ecology and Evolutionary Biology)
Megan Roytman, 2016-2018 (Bioinformatics)
Jaleal Sanjak, 2015-2017 (Ecology and Evolution at UC Irvine)
Rena Schweizer, 2013-2015 (Ecology and Evolutionary Biology)
Sarah Spendlove, 2019-2023 (Bioinformatics)
Adriana Sperlea, 2016-2020 (Bioinformatics)
Stephanie Steele, 2015-2017 (Ecology and Evolutionary Biology)
Erin Toffelmier, 2013-2019 (Ecology and Evolutionary Biology)
Rachel Turba, 2017-2022 (Ecology and Evolutionary Biology)
Harold Wang, 2022-Present (Bioinformatics)
Michael Wasney, 2023-Present (Genetics & Genomics)
Richard Wolff, 2023-Present (Ecology and Evolutionary Biology)
Camille Yabut, 2013-2014 (Ecology and Evolutionary Biology)

PhD Guidance Committee member for:

Mira Abrecht, 2020-2021 (Ecology and Evolutionary Biology)
Kelly Barr, 2016-2017 (Ecology and Evolutionary Biology)
Annabel Beichman, 2013-2014 (Ecology and Evolutionary Biology)
Joey Curti, 2019-2020 (Ecology and Evolutionary Biology)
Tina DelCarpio, 2017-2018 (Ecology and Evolutionary Biology)
Emma Fox, 2017-2018 (Ecology and Evolutionary Biology)
Camille Gaynus, 2014-2015 (Ecology and Evolutionary Biology)
Jacqueline Holmes, 2023-Present (Ecology and Evolutionary Biology)
Audra Huffmeyer, 2015-2016 (Ecology and Evolutionary Biology)
Chris Kyriazis, 2017-2018 (Ecology and Evolutionary Biology)
Peter Laurin, 2022-Present (Ecology and Evolutionary Biology)
Natalie Lozano, 2017-2018 (Ecology and Evolutionary Biology)
Alayna Mead, 2018-2019 (Ecology and Evolutionary Biology)
Kevin Neal, 2013-2014 (Ecology and Evolutionary Biology)
Scott O'Donnell, 2015-2016 (Ecology and Evolutionary Biology)
Gabriela Pinho, 2014-2015 (Ecology and Evolutionary Biology)
Kevin Rodriguez, 2021-2022 (Ecology and Evolutionary Biology)
Celine Snedden, 2018-2019 (Ecology and Evolutionary Biology)
Heidi Yang, 2022-Present (Ecology and Evolutionary Biology)
Stella Yuan, 2021-2022 (Ecology and Evolutionary Biology)

MS Committee member for:

Jessica Arriens, 2016-2018 (Ecology and Evolutionary Biology)

Megan Edic, 2020-2022 (Ecology and Evolutionary Biology)
 Clive L. F. Lau, 2016-2017 (Ecology and Evolutionary Biology)
 Sara Makanani, 2018-2021 (Ecology and Evolutionary Biology)
 Alayna Mead, 2015-2017 (Ecology and Evolutionary Biology)

RESEARCH FUNDING:**Ongoing:**

Source: NIH/NIGMS R35GM119856-06 (PI: K. Lohmueller)
Title: Population genomics of the selective effects of new mutations
Period: 6/01/21-5/31/26
Direct costs to KL: \$1,250,000

Source: NIH/NHGRI U01HG011715 (PIs: Pasaniuc, Lange, Kenny)
Title: PRS Center for Admixed Populations and health Equity (CAPE)
Period: 06/08/21 – 03/31/26
Role: co-Investigator
Direct costs to KL: \$65,400

Completed:

Source: NIH/NIEHS R21ES031000 (PIs: K. Lamia, Scripps; K. Lohmueller)
Title: Quantifying the impact of circadian disruption on genome stability
Period: 8/15/19-7/31/21 (NCE until 7/31/22)
Total direct costs: \$275,000 (\$102,596 direct to KL)

Source: NIH/NHGRI R01HG009120-01A1 (PI: B. Pasaniuc, UCLA)
Title: Integrative approaches for mapping the genetic risk of complex traits
Period: 3/01/17-3/1/22
Role: co-Investigator
Direct costs to KL: \$72,230

Source: NIH/NIGMS R35GM119856 (PI: K. Lohmueller)
Title: Population genomics of the selective effects of new mutations
Period: 9/01/16-5/31/21
Direct costs to KL: \$1,013,625

Source: NSF DEB 1556705 (PI: R. Wayne, UCLA)
Title: SG: Selection in bottlenecked populations
Period: 04/01/16-03/31/19 (in NCE till 3/31/20)
Role: co-PI
Direct costs to UCLA: \$97,308

Source: Alfred P. Sloan Foundation (PI: K. Lohmueller)
Title: Research Fellowship in Computational & Evolutionary Molecular Biology
Period: 9/15/14-9/14/16 (NCE till 9/14/18)
Total Direct costs: \$50,000

Source: Searle Scholars Program (PI: K. Lohmueller)
Title: Why does natural selection vary across species?
Period: 7/01/14-6/30/17 (NCE till 6/30/18)
Total Direct costs: \$300,000

Source: NIJ 2013-DN-BX-K029 (PI: K. Lohmueller; co-PI: K. Inman, CalState East Bay)
Title: Advancing probabilistic approaches to interpreting low-template DNA profiles and mixtures: Developing theory, implementing practice
Period: 1/01/14-3/31/17
Direct costs to KL: \$162,782

Source: UCLA Hellman Fellowship (PI: K. Lohmueller)
Title: Population genomic signatures of mutagenic recombination
Period: 7/01/15-6/30/16
Total Direct costs: \$21,608

Source: NIH/NHGRI R01HG007089 (PI: J. Novembre, University of Chicago)
Title: Haplotype-based analysis methods for population genomics
Period: 3/01/13-6/30/16
Role: co-Investigator
Direct costs to UCLA: \$182,542

Source: Miller Research Institute, UC Berkeley (PI: K. Lohmueller)
Title: Understanding our evolutionary past through the study of human genetic variation
Period: 7/01/10-3/31/13
Total Direct costs: \$201,000

Source: NIH/NHGRI 1F32HG005308 (PI: K. Lohmueller)
Title: Population genetics of deleterious polymorphism in human populations
Period: 1/01/10-6/30/10
Total Direct costs: \$18,684

PUBLICATIONS:

Google Scholar: https://scholar.google.com/citations?user=c_hM9mAAAAAJ&hl=en
Total citations (as of September 2024): 14394; **h-index:** 49

Edited book:

Lohmueller KE and Nielsen R, eds. 2021. *Human Population Genomics: An Introduction to Essential Concepts and Applications*. Springer Nature.

Peer reviewed papers:

1. Martinez i Zurita A, Kyriazis CC, **Lohmueller KE**. The impact of non-neutral synonymous mutations when inferring selection on non-synonymous mutations, bioRxiv, doi: <https://doi.org/10.1101/2024.02.07.579314>
2. Huang B, Durvasula A, Mousavi N, Ziaei-Jam H, Maksimov M, **Lohmueller KE***, Melissa Gymrek.* Genome-wide selection inference at short tandem repeats, bioRxiv, doi: <https://doi.org/10.1101/2022.05.12.491726> (*Contributed equally)
3. Mah JC, **Lohmueller KE***, Garud N*. Inference of the demographic histories and selective effects of human gut commensal microbiota over the course of human history, bioRxiv, doi: <https://doi.org/10.1101/2023.11.09.566454> (*Co-corresponding authors)

4. Kyriazis CC and **Lohmueller KE**. Constraining models of dominance for nonsynonymous mutations in the human genome, *PLoS Genetics*, 2024; 20(9): e1011198.
5. Di C and **Lohmueller KE**. Revisiting dominance in population genetics, *Genome Biol Evol.* 2024; 16(8):evae147.
6. Kyriazis CC, Serieys LEK, Bishop JM, Drouilly M, Viljoen S, Wayne RK, **Lohmueller KE**. The influence of gene flow on population viability in an isolated urban caracal population, *Mol Ecol.* 2024; 33(9):e17346.
7. Nigenda-Morales SF*, Lin M*, Nunez-Valencia PG, Kyriazis CC, Beichman AC, Robinson JA, Ragsdale AP, Urban J, Archer FI, Vilorio-Gomora L, Perez-Alvarez MJ, Poulin E, **Lohmueller KE***, Moreno-Estrada A*, Wayne RK. The genomic footprint of whaling and isolation in fin whale populations. *Nat Commun.* 2023; 14:5465. (*Co-corresponding authors)
8. Kyriazis CC, Robinson JA, & **Lohmueller KE**. Using computational simulations to model deleterious variation and genetic load in natural populations. *American Naturalist.* 2023; 202(6):737-752.
9. Wade EE, Kyriazis CC, Cavassim MIA, & **Lohmueller KE**. Quantifying the fraction of new mutations that are recessive lethal. *Evolution.* 2023; 77:1539–1549.
10. Barroso GV & **Lohmueller KE**. Inferring the mode and strength of ongoing selection. *Genome Research.* 2023; 33:632-643.
11. Kyriazis CC*, Robinson JA*, Nigenda-Morales SF, Beichman AC, Rojas-Bracho L, Robertson KM, Fontaine MC, Wayne RK, Taylor BL, **Lohmueller KE***, Morin PA*. Models based on best-available information support a low inbreeding load and potential for recovery in the vaquita. *Heredity (Edinb).* 2023; 130:183-187. (*Co-corresponding authors)
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Non-peer reviewed publications:

91. Leonard J, von Holdt B, Smith TB, Sork VL, Shapiro B, Ostrander EA, Rieseberg LH, Van Valkenburgh B, **Lohmueller KE**. Remembering distinguished professor Robert K. Wayne. *Mol Ecol* 2023; 32:2364-2368.
92. Huber CD, **Lohmueller KE**. Population genetic tests of neutral evolution. In: Kliman, R.M. (ed.), *Encyclopedia of Evolutionary Biology*. vol. 3, pp. 112–118. Oxford: Academic Press.
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INVITED PRESENTATIONS AND SEMINARS:

2024

- Lecture on Population genetics for the International Molecular Genomic Medicine and Biostatistics Course, Harvard Medical School & Brigham & Women's Hospital, May 2024 (Online).
- Seminar for the Focus on Evolution group, University of California, Irvine, CA, May 2024.
- Seminar for the Human and Evolutionary Biology Section, University of Southern California, Los Angeles, CA, February 2024.

2023

- Seminar for the Department of Computational Biology, Cornell University, Ithaca, NY, October 2023.
- Seminar for the Department of Systems Biology, University of Massachusetts Chan Medical School, Worcester, MA, August 2023.
- Invited platform talk at the Ecological and Evolutionary Genomics Gordon Research Conference, Smithfield, RI, August 2023.
- Lecture on Population genetics for the International Molecular Genomic Medicine and Biostatistics Course, Harvard Medical School & Brigham & Women's Hospital, June 2023 (Online).
- Seminar for the Department of Molecular, Cellular, and Developmental Biology, UC Santa Barbara, Santa Barbara, CA, June 2023.

2021 & 2022

- Seminar for the Ecology & Evolution Seminar Series, UC Davis, Davis, CA, November 2022.
- Platform talk at the "Species conservation at the population level: genomic techniques and analytical approaches" conference hosted by the Wellcome Connecting Science program, Hinxton, UK, November 2022.
- Seminar for the Department of Biology at the University of Memphis, Memphis, TN, March 2021 (Online due to COVID19).

2020

- Seminar for the Quantitative & Computational Biology group at the Lewis-Sigler Institute at Princeton University, Princeton, NJ, November 2020 (Online due to COVID19).
- Seminar for the Department of Ecology & Evolutionary Biology at Brown University, Providence, RI, March 2020.
- Seminar for the Center for Computational, Evolutionary and Human Genomics (CEHG) at Stanford University, Palo Alto, CA, January 2020.
- Seminar for the Genetics, Genomics, and Bioinformatics graduate program at UC Riverside, Riverside, CA, January 2020.

2019

- Seminar for the Medical and Population Genetics group, UCSD, San Diego, CA, October 2019.
- Invited presentation at the Discovery Research Investigating Founder Population Traits (DRIFT) Consortium (sponsored by Regeneron), Houston, TX, October 2019.
- Seminar for the Vienna Graduate School of Population Genetics, Vienna, Austria, June 2019.
- Seminar for the International Laboratory for Human Genome Research, National Autonomous University of Mexico, Queretaro, Mexico, May 2019.

- Invited presentation at the Biology of Genomes meeting, Cold Spring Harbor, NY, May 2019.
- Seminar for the Institute of Ecology & Evolution at the University of Oregon, Eugene, OR, April 2019.
- Seminar for the Medical and Population Genetics (MPG) group at the Broad Institute, Cambridge, MA, March 2019.
- Presentation and workshop leader at the UCLA La Kretz Workshop in Conservation Genomics, March 2019.
- Invited presentation at the “The Role of Genomics and Metagenomics in Human Health: Recent Developments in Statistical and Computational Methods”, Banff International Research Station for Mathematical Innovation and Discovery (BIRS), Banff, Alberta, Canada, February 2019.

2018

- Invited presentation at the Probabilistic Modeling in Genomics meeting, Cold Spring Harbor, NY, November 2018. (T. Phung from my lab presented instead)
- Invited presentation at the PopSim meeting, Cold Spring Harbor, NY, November 2018.
- Seminar for the Department of Ecology and Evolutionary Biology at Princeton University, Princeton, NJ, September 2018.
- Invited presentation for the UCLA Computational Genomics Summer Institute, University of California, Los Angeles, CA, July 2018.
- Invited presentation at the SMBE Satellite Meeting on Modern Methods for the Study of Ancient DNA, Providence, RI, April 2018.
- Presentation and workshop leader at the UCLA La Kretz Workshop in Conservation Genomics, March 2018.
- Seminar at the Ecology, Evolution, and Behavioral Seminar Series at the University of Minnesota, St. Paul, MN, March 2018.

2017

- Invited presentation for the UCLA Computational Genomics Summer Institute, University of California, Los Angeles, CA, July 2017.
- Invited presentation at the Society of Molecular Biology and Evolution, Austin, TX, July 2017.
- Invited presentation at the Searle Scholars Annual Meeting, Chicago, IL, April 2017.
- Presentation and workshop leader at the UCLA La Kretz Workshop in Conservation Genomics, March 2017.
- Seminar at Cold Spring Harbor Laboratory, Cold Spring Harbor, NY, February 2017.
- Seminar for the Department of Genome Sciences, University of Washington, Seattle, WA, February 2017.
- Seminar for the Department of Biology, Washington University, St. Louis, MO, January 2017.
- Seminar for the Department of Ecology and Evolution, University of Chicago, Chicago, IL, January 2017.
- Seminar for the Duke Center for Genomic and Computational Biology, Duke University, Durham, NC, January 2017.

2016

- Invited presentation for the UCLA Computational Genomics Summer Institute, University of California, Los Angeles, CA, August 2016.
- Invited presentation for the UCLA Computational Genomics Summer Institute, University of California, Los Angeles, CA, July 2016.
- Seminar at the College of Life Sciences, Sichuan University, Chengdu, China, June 2016.
- Seminar at the Institute of Zoology, Chinese Academy of Sciences, Beijing, China, June 2016.

- Invited presentation at the Dog10k Genomes Consortium meeting, Beijing, China, June 2016.
- Presentation and workshop leader at the UCLA La Kretz Workshop in Conservation Genomics, March 2016.
- Seminar at the Max Plank Institute for Evolutionary Anthropology, Leipzig, Germany, March 2016.
- Seminar for the Bioinformatics and Genomics graduate program, Penn State University, State College, PA, February 2016.
- Seminar for the Department of Preventative Medicine, University of Southern California, Los Angeles, CA, January 2016.

2015

- Seminar at the University of Bristol. Bristol, UK, October 2015.
- Invited presentation at the “Hidden Complexities in Complex Traits and Genome-wide Association” workshop, Royal Statistical Society, London, UK, October 2015.
- Seminar for the Department of Statistics, University of California, Los Angeles, CA, June 2015.
- Presentation and workshop leader at the UCLA La Kretz Workshop in Conservation Genomics, March 2015.

2014

- Workshop presenter at the 25th International Symposium on Human Identification, Phoenix, AZ, September 2014.
- Invited talk for Principals in Population Genetics: A coalescence of community to celebrate Andy Clark, Cornell University, Ithaca, NY, July 2014.
- Presentation and workshop leader at the UCLA La Kretz Workshop in Conservation Genomics, March 2014.
- Seminar for the Center for Behavior, Evolution, and Culture, University of California, Los Angeles, CA, February 2014.
- Invited talk at the Collaborative Fund in Biodiversity and Environment Workshop on Population / Genomics Data Analysis, University of Southern California, Los Angeles, CA, January 2014.

2013

- Seminar for the Molecular and Computational Biology Program, University of Southern California, Los Angeles, CA, November 2013.
- Seminar for the Department of Biomathematics Seminar Series, University of California, Los Angeles, CA, October 2013.
- Invited talk at the Southern California Evolutionary Genetics & Genomics meeting, University of California, Irvine, CA, September 2013.
- Seminar for the Bioinformatics Interdepartmental Ph.D. Program Seminar Series, University of California, Los Angeles, CA, April 2013.
- Presentation and workshop leader at the UCLA La Kretz Workshop in Conservation Genomics, March 2013.

Before 2013

- Seminar for the Department of Molecular and Cellular Biology, University of California, Berkeley, CA, March 2012.
- Seminar for the Bioinformatics Interdepartmental Ph.D. Program Seminar Series, University of California, Los Angeles, CA, February 2012.
- Seminar for the Department of Biology, Dartmouth College, Hanover, NH, February 2012.

- Seminar for the Department of Human Evolutionary Biology, Harvard University, February 2012.
- Seminar for the Department of Biology, University of Maryland, February 2012.
- Seminar for the Department of Biological Statistics and Computational Biology, Cornell University, Ithaca, NY, January 2012.
- Seminar for the Center for Complex Biological Systems, University of California, Irvine, CA, January 2012.
- Seminar for the Department of Genetics, Stanford University, Palo Alto, CA, January 2012.
- Seminar for the Department of Medicine & Lung Biology Center, University of California, San Francisco, CA, November 2011.
- Seminar for the Department of Biological Sciences, University of Southern California, Los Angeles, CA, November 2011.
- Seminar for the Bioinformatics Interdepartmental Ph.D. Program Seminar Series, University of California, Los Angeles, CA, May 2011.
- Seminar for the Mathematical and Computational Biology Seminar Series, University of California, Berkeley, CA, April 2011.
- Seminar for the Department of Genetics, Harvard Medical School, Boston, MA, January 2011.
- Seminar for the Ecology and Evolution Colloquium at San Francisco State University, San Francisco, CA, November 2010.

SELECT CONFERENCE PRESENTATIONS AND OTHER SEMINARS:

2024

- Platform presentation, Society of Molecular Biology and Evolution, Puerto Vallarta, Mexico, July 2024.

2022

- Platform presentation, Genetics & Genomics—Stuck on Repeat, Stowers Institute for Medical Research, Kansas City, MO, October 2022.
- Platform presentation, Evolution, Cleveland, OH, June 2022.

2021

- Platform presentation, Society of Molecular Biology and Evolution, online, July 2021.

2019

- Platform presentation, Society of Molecular Biology and Evolution, Manchester, UK, July 2019.

2018

- Platform presentation, Evolution, Montpellier, France, August, 2018. (C. Huber from my lab presented instead)
- Platform presentation, Society of Molecular Biology and Evolution, Yokohama, Japan, July 2018.
- Lightning talk, Population, Evolutionary, and Quantitative Genetics Conference, Madison, WI, May 2018.

2017

- Platform presentation, Evolution, Portland, OR, June 2017.

2015

- Platform presentation, Society of Molecular Biology and Evolution, Vienna, Austria, July 2015.

- Platform presentation, Plant & Animal Genome XXIII conference, San Diego, CA, January 2015.

2013

- Workshop at the 24th International Symposium on Human Identification, Atlanta, GA, October 2013.
- Platform presentation, Society of Molecular Biology and Evolution conference, Chicago, IL, July 2013.
- Workshop, AAFS, Washington D.C., February 2013.
- Platform presentation at the Bay Area Population Genomics conference, Palo Alto, CA, February 2013.

Before 2013

- Platform presentation at the California Association of Criminalists Northern Study Group meeting, Hayward, CA, May 2012.
- Platform presentation at the California Association of Criminalists meeting, Bakersfield, CA, May 2012.
- Platform presentation at the DNA workshop during the California Association of Criminalists meeting, Sacramento, CA, October 2011.
- Platform presentation, The 12th International Meeting on Human Genome Variation and Complex Genome Analysis (HGV2011), Berkeley, CA, September 2011.
- Platform presentation, Abstract A143, American Academy of Forensic Sciences, Chicago, February 2011.
- Platform presentation, Abstract 21, American Society of Human Genetics, Washington, DC, November 2010.
- Platform presentation at the DNA workshop during the California Association of Criminalists meeting, Oakland, CA, October 2010.
- Seminar at Georgetown University, Washington, DC, October 2009.
- Seminar at Oxford University, Oxford, UK, February 2009.
- Seminar at Harvard University, Boston, MA, February 2009.
- Seminar at the University of California, San Francisco, CA, January 2009.
- Seminar at the University of California, Berkeley, CA, January 2009.
- Platform presentation, Abstract 127, American Society of Human Genetics, Philadelphia, PA, 2008.
- Platform presentation, Abstract 270, The Biology of Genomes, Cold Spring Harbor, 2007.
- Platform presentation, Abstract 150, American Society of Human Genetics, Toronto, 2004.

MEDIA COVERAGE:

1. Our May 2022 *Science* paper on the genomics of the critically endangered vaquita porpoise received national and international news coverage in more than 50 media outlets, including CNN, The Washington Post, NPR, The Guardian, Reuters, The New York Times, National Geographic, CBC Radio: Quirks and Quarks (Canada), National Geographic UK, Gizmodo, Daily Mail (UK), BBC News, USA Today, Smithsonian Magazine, Georgia Public Broadcasting, KPBS San Diego, Iowa Public Radio, South Carolina Public Radio, Northwest Indiana Public Radio, New Scientist, France 24, Agence France-Presse/Barron's, MSN, Yahoo News, UN Biodiversity Twitter, UC Newsroom, Arizona Public Media, WSAU (Wausau, Wisconsin), Borneo Bulletin/AFP, News 9 (India), EuroNews, Business Insider (Africa), Business Insider (India), Daily Sabah (Turkey), International Business Times, ScienceDaily, EurekAlert (American Association for the Advancement of Science), Phys.org and Natural History Museum (London). A few stories are highlighted below.

2. Wolpert, Stuart. May 5, 2022. "Only 10 vaquita porpoises survive, but species may not be doomed." *UCLA Newsroom* <https://www.college.ucla.edu/2022/05/10/endangered-vaquita-porpoise-is-not-doomed/>
3. Dunham, Will. May 14, 2022. "Genome study offers hope for vaquita, an endangered porpoise in Mexico's waters." *The Washington Post* https://www.washingtonpost.com/health/genome-study-offers-hope-for-vaquita-an-endangered-porpoise-in-mexicos-waters/2022/05/13/4ac2c0e0-d16e-11ec-a931-588a93d6cc31_story.html
4. Vernimmen, Tim. May 12, 2022. "Vaquita porpoises could still recover—if illegal fishing ends now." *National Geographic* <https://www.nationalgeographic.co.uk/animals/2022/05/vaquita-porpoises-could-still-recover-if-illegal-fishing-ends-now>
5. Wheeler, K. May 4, 2021. "Scientists untangle how inbreeding has led to disease in dogs." *The Academic Times* <https://academictimes.com/scientists-untangle-how-inbreeding-has-led-to-disease-in-dogs/>
6. Pennisi, E. July 19, 2019. "Genomics guides help for dwindling species." *Science* <https://science.sciencemag.org/content/365/6450/210>
7. Zhang, S. July 1, 2019. "A surprising idea about the risks of extinction." *The Atlantic* <https://www.theatlantic.com/science/archive/2019/07/isle-royale-wolves-and-risks-extinction/593020/>
8. Bhanoo, S.N. December 21, 2015. "Domesticated dogs lag in reproduction." *The New York Times* http://www.nytimes.com/2015/12/22/science/domesticated-dogs-lag-in-reproduction.html?_r=1
9. Taylor, A.P. December 21, 2015. "Domestication's downsides for dogs." *The Scientist* <http://www.the-scientist.com/?articles.view/articleNo/44889/title/Domestication-s-Downsides-for-Dogs/>
10. Griffiths, S. December 21, 2015. "Domestication and NOT inbreeding may be to blame for canine diseases: Humans caused genetic changes in the animals as they became our pets." *The Daily Mail* <http://www.dailymail.co.uk/sciencetech/article-3369151/Domestication-NOT-inbreeding-blame-canine-diseases-Humans-caused-genetic-changes-animals-pets.html>
11. Kaplan, K. December 22, 2015. "Dog domestication saddled man's best friend with defective genes, study says." *Los Angeles Times* <http://touch.latimes.com/#section/-/1/article/p2p-85380285/>
12. Zimmer, C. February 19, 2015. "A new theory on how Neanderthal DNA spread in Asia." *The New York Times* http://www.nytimes.com/2015/02/20/science/a-new-theory-on-how-neanderthal-dna-spread-in-asia.html?_r=0
13. Winsor, M. February 19, 2015. "Neanderthal DNA by race: Asians have closer link from multiple breeding events, Sstudies say." *International Business Times* <http://www.ibtimes.com/neanderthal-dna-race-asians-have-closer-link-multiple-breeding-events-studies-say-1822230>
14. Gray, R. February 13, 2015. "Neanderthals interbred for longer with East Asian humans, DNA reveals." *The Daily Mail* <http://www.dailymail.co.uk/sciencetech/article-2952418/Neanderthals-interbred-longer-modern-humans-east-Asia-DNA-reveals.html>
15. Anderson, A. February 12, 2015. "Papers support possibility of second wave of Neanderthal admixture with East Asian ancestors." *GenomeWeb* <https://www.genomeweb.com/genetic-research/papers-support-possibility-second-wave-neanderthal-admixture-east-asian-ancestors>

16. Perlman, D. September 23, 2011. "Hair DNA reveals 2 migration waves out of Africa." *The San Francisco Chronicle* <http://www.sfgate.com/science/article/Hair-DNA-reveals-2-migration-waves-out-of-Africa-2309028.php>