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	**Selected as a Platform Session moderator for the American Society of Human Genetics annual meeting**
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).
2021-2023	**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).
2014-2023 (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:

2022-2024	**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:

2021-Present	Associate Editor, *Evolution*
2019-Present	Associate Editor, *Genome Biology and Evolution*
2021; 2023	Guest Editor for *PLoS Computational Biology*
2017	Guest Editor for *PNAS*
2015-Present	Guest Editor for *PLoS Genetics*

OTHER PROFESSIONAL ACTIVITIES:

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	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 in 2023 due to increasing editorial responsibilities & NIH grant reviewing).**

Evaluator for promotion & tenure cases: Princeton University; San Diego State University; SUNY Stony Brook; University of Maryland; University of California, Santa Cruz

STUDENT AND POSTDOC MENTORING:

2023-Present	**Chenlu Di** (Postdoc)
2022-Present	**Chris Kyriazis** (Postdoc)
2023-Present	**Diana Augilar Gomez** (UC Chancellor’s Postdoc)

2020-Present	**Christina Del Carpio** (PhD student, Ecology and Evolutionary Biology)
2021-Present	**Jonathan Mah** (PhD student, Bioinformatics; joint with Nandita Garud)
2021-Present	**Stella Yuan** (PhD student, Ecology and Evolutionary Biology; joint with Bob Wayne)
2023-Present	**Swetha Ramesh** (PhD student, Bioinformatics)
2023-Present	**Aina Martinez Zurita** (PhD student, Genetics & Genomics; joint with Nandita Garud)

2021-Present	**Pedro Perez** (Undergraduate student)

2013-2016	**Diego Ortega Del Vecchyo** (PhD student, Bioinformatics; joint with John Novembre); currently an Assistant 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); currently a postdoc with Dmitri Petrov at Stanford 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 Stanford University
2018-2022	**Chris Kyriazis** (PhD student, Ecology and Evolutionary Biology; joint with Bob Wayne); currently a postdoc with K. Lohmueller at UCLA.
2017-2023	**Jesse Garcia** (MS student, Bioinformatics); currently a Bioinformatics Software Developer at Fulgent Genetics

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

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)
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:

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)
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-Present (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)
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 Sept 2023): 13016; **h-index:** 46

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. 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)

2. 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, bioRxiv doi: https://doi.org/10.1101/2023.07.20.549918

3. Nigenda-Morales SF*, Lin M*, Nunez-Valencia PG, Kyriazis CC, Beichman AC, Robinson JA, Ragsdale AP, Urban J, Archer FI, Viloria-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)

4. Kyriazis CC, Robinson JA, & **Lohmueller KE**. Using computational simulations to quantify genetic load and predict extinction risk. *American Naturalist*, in press. bioRxiv doi: https://doi.org/10.1101/2022.08.12.503792

5. Wade EE, Kyriazis CC, Cavassim MIA, & **Lohmueller KE**. Quantifying the fraction of new mutations that are recessive lethal. *Evolution.* 2023; 77:1539–1549.

6. Barroso GV & **Lohmueller KE**. Inferring the mode and strength of ongoing selection. *Genome Research.* 2023; 33:632-643.

7. 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)

8. Zhang X, Kim B, Singh A, Sankararaman S, Durvasula A*, **Lohmueller KE***. MaLAdapt reveals novel targets of adaptive introgression from Neanderthals and Denisovans in worldwide human populations, *Mol Biol Evol*. 2023;40(1):msad001 (*Contributed equally)

9. Mooney JA, Marsden CD, Yohannes A, Wayne RK, **Lohmueller KE**. Long-term small population size, deleterious variation, and altitude adaptation in the Ethiopian Wolf, a severely endangered canid. *Mol Biol Evol*. 2023;40(1):msac277.

10. Kyriazis CC, Beichman AC, Brzeski KE, Hoy SR, Peterson RO, Vucetich JA, Vucetich LM, **Lohmueller KE***, Wayne RK*. Genomic underpinnings of population persistence in Isle Royale moose, *Mol Biol Evol.* 2023;40(2):msad021. (*Contributed equally)

11. Robinson J, Kyriazis CC, Yuan SC, **Lohmueller KE**. Deleterious variation in natural populations and implications for conservation genetics, *Annu Rev Anim Biosci.* 2023;11:93-114.

12. Johri P, Eyre-Walker A, Gutenkunst RN, **Lohmueller KE**, Jensen JD, On the prospect of achieving accurate joint estimation of selection with population history, *Genome Biol Evol*, 2022; 14:evac088.

13. Ortega-Del Vecchyo D, **Lohmueller KE**, Novembre J. Haplotype-based inference of the distribution of fitness effects. *Genetics.* 2022; 220:iyac002.

14. Sork VL, Cokus SJ, Fitz-Gibbon ST, Zimin AV, Puiu D, Garcia JA, Gugger PF, Henriquez CL, Zhen Y, **Lohmueller KE**, Pellegrini M, Salzberg SL. High-quality genome and methylomes illustrate features underlying evolutionary success of oaks. *Nat Commun,* 2022 Apr 19;13(1):2047.

15. Robinson JA*, Kyriazis CC*, Nigenda-Morales SF, Beichman AC, Rojas-Bracho L*, Robertson KM, Fontaine MC, Wayne RK, **Lohmueller KE***, Taylor BL*, Morin PA*. The critically endangered vaquita is not doomed to extinction by inbreeding depression. *Science,* 2022 May 6;376(6593):635-639. (*Co-corresponding authors)

16. Beichman AC, Kalhori P, Kyriazis CC, DeVries AA, Nigenda-Morales S, Heckel G, Schramm Y, Moreno-Estrada A, Kennett DJ, Hylkema M, Bodkin J, Koepfli KP, **Lohmueller KE***, Wayne RK*. Genomic analyses reveal range-wide devastation of sea otter populations. *Mol Ecol,* 2023; 32:281-298. (*Contributed equally)

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Non-peer reviewed publications:

87. 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.

88. 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.

89. **Lohmueller KE.** On the origin of Peter Rabbit, *Science* 2014; 345: 1000-10001.

INVITED PRESENTATIONS AND SEMINARS:

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:

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.

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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/

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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/

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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/*

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