**Katya L. Mack**

Department of Integrative Biology & Museum of Vertebrate Zoology

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**EDUCATION**

University of California, Berkeley, CA 2013-Present

 Ph.D. Candidate in Integrative Biology, GPA: 4.0/4.0

 Advisor: Michael Nachman

 Committee: Craig Miller, Rasmus Nielsen

University of Michigan, Ann Arbor, MI 2008-2012

Anthropology B.S., Ecology and Evolutionary Biology Minor, Highest Honors and Distinction, GPA: 3.8/4.0

**APPOINTMENTS/POSITIONS**

2017 Jerry O. Wolff Fellow, Museum of Vertebrate Zoology, University of California, Berkeley, CA

2013-2017 Graduate Student Instructor, University of California, Berkeley, CA

2011, 2012 Research assistant, Wittkopp Lab, University of Michigan, Ann Arbor, MI

2009, 2010 Undergraduate Intern, Human Origins Department, Field Museum, Chicago IL

**PUBLICATIONS**

**Mack KL** and Nachman MW. 2017. Gene regulation and speciation. *Trends in Genetics* 33: 68–80.

**Mack KL**, Campbell P, Nachman MW. 2016. Gene regulation and speciation in house mice. *Genome research 26: 451-461.*

Holmes MW, Hammond TT, Wogan GO, Walsh RE, LaBarbera K, Wommack EA, Martins FM, Crawford JC, **Mack KL**, Bloch LM, Nachman MW. 2016. Natural history collections as windows on evolutionary processes. *Molecular ecology 25: 864-881.*

Duveau F, Metzger BP, Gruber JD, **Mack K**, Sood N, Brooks TE, Wittkopp PJ. 2014. Mapping small effect mutations in *Saccharomyces cerevisiae*: impacts of experimental design and mutational properties. *G3: Genes | Genomes | Genetics*, g3-114.

*Manuscripts in review and in preparation*

**Mack KL**, Ballinger MA, Phifer-Rixey M, Nachman MW. Gene regulation underlies environmental adaptation in house mice. *In review at PNAS* (manuscript available upon request).

Phifer-Rixey M, Bi K, Ferris KG, Sheehan MJ, Lin D, **Mack KL**, Keeble SM, Suzuki TA, Good JM, and Nachman MW.The genomic basis of environmental adaptation in house mice.*In review at Nature Communications.*

**Mack KL**, Ballinger MA, Phifer-Rixey M, Nachman MW. Divergent patterns of copy number variation in natural populations of house mice (*Mus musculus domesticus*) along an environmental gradient. *In prep.*

**PRESENTATIONS**

**Mack KL**,Ballinger MA, Phifer-Rixey M, Nachman MW. Adaptive variation in gene regulation in mice. Society for Integrative and Comparative Biology, San Francisco, CA (Talk).

**Mack KL**,Ballinger MA, Phifer-Rixey M, Nachman MW. Environmental adaptation in house mice: the role of gene regulation along a latitudinal cline. Society for the Study of Evolution 2016, Portland, OR (Talk).

**Mack KL**, Campbell P, Bomhoff M, Nachman MW.A role for disrupted gene regulation in speciation in house mice.Society for the Study of Evolution 2016, Austin, TX (Talk).

**Mack KL**. Divergence in gene regulation associated with reproductive isolation in house mice. Genetics, Development & Evolution Symposium 2015, Berkeley CA (Talk).

**Mack K**, Campbell P, Bomhoff M, Nachman MW.Divergence in gene regulation associated with reproductive isolation in house mice.Society for the Study of Evolution 2014, Raleigh, NC (Talk).

**Mack K** and Gibbs B. Does the faster X effect influence the fate of duplicated genes in *Drosophila*? Genomics of Gene Expression Symposium 2013, University of Arizona, Tucson AZ. (Poster).

**Mack K**, Goldberg A, Bigham A. Rates of Neandertal introgression in genic versus intergenic regions of the human genome. American Association of Physical Anthropologists 2012, Portland OR (Poster).

Goldberg A, **Mack K**, Bigham A. A genetic perspective on the evolution of longevity at the Middle Paleolithic to Upper Paleolithic transition. American Association of Physical Anthropologists 2012, Portland OR. (Poser).

**INVITED TALKS**

**Mack KL**. 2017. Environmental adaptation in house mice: the role of gene regulation along a latitudinal cline. UC Berkeley, Berkeley, CA.

**Mack KL**. 2017. A role for regulatory evolution in House mouse adaptation and speciation. Center for Population Biology Seminar Series. UC Davis, Davis, CA.

**Mack KL**. 2015. Gene regulation and speciation in house mice. Integrative Biology Seminar Series. UC Berkeley, Berkeley, CA.

**FELLOWSHIPS AND AWARDS**

2017 Jerry O. Wolff Fellowship ($11,000), Museum of Vertebrate Zoology, UC Berkeley

2016 Doctorate Dissertation Improvement Grants ($20,357), National Science Foundation

2015 Reshetko Family Scholarship grant, UC Berkeley ($2,061)

2015 Integrative Biology Research Grant ($1,929)

2015 Museum of Vertebrate Zoology David and Marvalee Wake Fund grant ($2,000)

2014 Museum of Vertebrate Zoology Berkeley Louise Kellogg Fund grant ($2,000)

2014 Museum of Vertebrate Zoology Travel Grant ($500)

2014 GRAC travel funds, Department of Integrative Biology, UC Berkeley ($250)

2012-2013 IGERT Fellow, Program in Comparative Genomics, University of Arizona

2013 NSF-GRFP Honorable Mention

2012 Awarded Highest Honors for Senior Honors Thesis, University of Michigan

2012 Phi Beta Kappa, University of Michigan

2010, 2011, 2012 James B. Angell Scholar, University of Michigan

2009 William J. Branstrom Freshman Prize, University of Michigan

2008-2012 University Honors/ Dean’s List, University of Michigan

**TEACHING EXPERIENCE**

2015, 2017 Graduate Student Instructor, Evolutionary Medicine (IB 169), University of California, Berkeley CA

2016 Guest lecturer on the topic of speciation, Evolution and Earth History: From Genes to Fossils (IB167), University of California, Berkeley CA

2016 Graduate Student Instructor, Evolution and Earth History: From Genes to Fossils (IB167), University of California, Berkeley CA

2013, 2014, 2015, 2016 Graduate Student Instructor, General Biology (Bio 1B), University of California, Berkeley CA

2011-2012 Undergraduate study group leader, Introductory Biology (Molecular, Cellular, and Developmental), Science Learning Center, University of Michigan, Ann Arbor MI

**SERVICE AND OUTREACH**

1. **Developing workshops for the Computational Genomics Resource Laboratory (CGRL), Berkeley CA (2015-present)**

* **Mack KL.**2017. RNA-seq data analysis.Invited workshop at Computational Genomics Resource Laboratory (CGRL), Berkeley CA.
* **Mack KL.**2016. RNA-seq for eukaryotic organisms.Invited workshop at Computational Genomics Resource Laboratory (CGRL), Berkeley CA.
* **Mack KL.** 2016. RNA-seq workshop for model and non-model systems. Invited workshop at Computational Genomics Resource Laboratory (CGRL), Berkeley CA.
* **Mack KL.** 2015. RNA-seq workshop for model and non-model systems. Invited workshop at Computational Genomics Resource Laboratory (CGRL), Berkeley CA.
* **Mack K.** 2015. RNAseq workshop: from FASTQ files to differential expression. Invited workshop at Computational Genomics Resource Laboratory (CGRL), Berkeley CA.

2. **Undergraduate mentor(2013-present)***.* Undergraduate mentor at UC Berkeley through the Undergraduate Research Apprenticeship Program (URAP).

3. **Integrative Biology Graduate Student Association Representative (2015-2016)**Responsible for securing funding and organizing graduate student activities for the Integrative Biology department.

4. **‘Be A Scientist’ mentor (2017-present)**

Responsible forguiding a group of 7th graders at King Middle through independent science projects. Students frame a testable question, design their experiment, and analyze data over a 6-week period.

5. **Professional Memberships**

 Society for the Study of Evolution (SSE)

 Society for Integrative and Comparative Biology

Sigma Xi

6. **Public outreach**

* Interviewed on the *The Graduates* radio show, UC Berkeley. KALX 90.7FM (2017).
* Interviewed for the UC Berkeley Integrative Biology Newsletter *Insight* (2017).
* Cal Day, UC Berkeley, Volunteer (2016, 2015, 2014)
* Berkeley Museum of Vertebrate Zoology tour guide