

REBEKAH L. ROGERS

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Postdoctoral Researcher - Sept 2014-present
University of California, Berkeley, California
Dept. of Integrative Biology
Montgomery W. Slatkin, Advisor

Postdoctoral Fellow - April 2011- Aug 2014
University of California, Irvine, California
Dept. of Ecology and Evolutionary Biology
Kevin R. Thornton, Advisor

EDUCATION

Harvard University, Cambridge, Massachusetts - May 2011
Dept. of Organismic and Evolutionary Biology
Ph.D. in Biology
Daniel L. Hartl, Advisor

University of Georgia, Athens, Georgia - May 2006
Department of Genetics, Franklin College of Arts and Sciences
B.S. in Genetics with Highest Honors, *summa cum laude*
University of Georgia Foundation Fellow, Phi Beta Kappa, Phi Kappa Phi

GRANTS

2011-2014. NIH/NIGMS Ruth L. Kirschstein National Research Service Award
Postdoctoral Fellowship. 3 years salary, benefits, and travel funds.
2012. UC Irvine Center for Complex Biological Systems Opportunity Award. \$11,000.
2010. Society for Molecular Biology and Evolution Graduate Student Travel Award. \$1500.
2010. Harvard Graduate Student Council Conference Travel Grant. \$750.

PUBLICATIONS

14. **Rogers, RL**, et al., with R Nielsen. Hostile takeover by transposable elements in the strawberry poison dart frog. In prep.
13. **Rogers, RL**, MW Slatkin. Genomic disintegration in dwindling populations of woolly mammoths. In prep.
12. **Rogers, RL**. 2015. Chromosomal rearrangements as barriers to genetic homogenization between archaic and modern humans. *Molecular Biology and Evolution*. 32:3064-3078. arXiv: 1505.07047
11. Modelewski, A, D Risso, **RL Rogers**, MW Slatkin, L He. Retrotransposons reshape transcriptomes for mammalian pre-implantation development. In prep.
10. **Rogers, RL**, L Shao, and KR Thornton. Tandem duplications facilitate rapid changes in gene expression via exon shuffling. *Major Revision, PLoS Genetics*.
9. **Rogers, RL**, JM Cridland, L Shao, TT Hu, P Andolfatto, and KR Thornton. 2015. Tandem duplications and the limits of natural selection in *Drosophila yakuba* and *Drosophila simulans*. *PLoS*

One. 10(7): e0132184. arXiv: 1405.0518

8. **Rogers, RL**, L Shao, J Sanjak, P Andolfatto and KR Thornton. 2014. Revised annotations, sex-biased expression, and lineage-specific genes in the *Drosophila melanogaster* group. G3: Genes, Genomes, Genetics 4: 2345-2351. arXiv:1408.0247
7. **Rogers, RL**, JM Cridland, L Shao, TT Hu, P Andolfatto, and KR Thornton. 2014. Landscape of standing variation for tandem duplications in *Drosophila yakuba* and *Drosophila simulans*. Molecular Biology and Evolution 31:1750-1766. arXiv:1401.7371
6. **Rogers, RL** and DL Hartl. 2012. *Rapid Evolution via Chimeric Genes* in Rapidly Evolving Genes and Genetic Systems. Invited Book Chapter. R Singh and RJ Kulathinal Eds.
5. **Rogers, RL** and DL Hartl. 2012. Chimeric genes as a source of rapid evolution in *Drosophila melanogaster*. Molecular Biology and Evolution 29: 517-529.
4. **Rogers, RL**, T Bedford, AM Lyons and DL Hartl. 2010. Adaptive impacts of the chimeric gene *Quetzalcoatl* in *Drosophila melanogaster*. Proc. Nat. Acad. Sci. USA 107:10943-10948.
3. **Rogers, RL**, T Bedford, and DL Hartl. 2009. Formation and longevity of chimeric and duplicate genes in *Drosophila melanogaster*. Genetics 181: 313-322.
2. Pontaroli, AC, **RL Rogers**, Q Zhang, ME Shields, TM Davis, KM Folta, P SanMiguel, and JL Bennetzen. 2008. Gene content and distribution in the nuclear genome of *Fragaria vesca*. The Plant Genome 2: 93-101.
1. Haggerty, TM, JT Garner and **R Rogers**. 2005. Reproductive phenology in *Megalonaias nervosa* (Bivalvia: Unionidae) in Wheeler Reservoir, Tennessee River, Alabama, USA. Hydrobiologia 539: 131-136.

BIOINFORMATICS TOOLS AND METHODS

- 2014. Hidden Markov Models for gene-model free differential expression testing (11)
- 2014. Duplication discovery pipeline in next-generation sequencing data (7)
- 2014. Hidden Markov Model to identify coverage changes in next-gen sequencing data (7)
- 2014. Confirmation of structural changes using PacBio data (7)
- 2014. RNA-editing detection algorithm (in collaboration with E. Park) (10)
- 2014. UCSC hub and browser tracks for data sharing (7,8)
- 2014. Github repositories for code and data sharing (7,8,11)
- 2009. Chimeric gene identification algorithm (4)
- 2009. Poisson models of gene duplication, loss, and preservation (4)

*Associated manuscripts in parentheses

DISSERTATION

- 2011. Evolution of chimeric genes in *Drosophila melanogaster*.

INVITED SEMINARS

- 2016. Keynote invited speaker. RECOMB-CG satellite meeting. Montreal, Canada. (upcoming)
- 2016. Dept. of Human Genetics, University of California, Los Angeles, CA (upcoming)
- 2015. Dept. of Zoology, Cambridge University, Cambridge, UK.
- 2015. Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany.
- 2015. Dept. of Anthropology, Southampton University, Southampton, UK.
- 2015. MRC Clinical Sciences Center, Molecular Systems, London, UK.
- 2015. Evolution and Ecology, University of California, Davis CA.
- 2014. Lee University and the American Chemical Society, Chattanooga, TN.
- 2014. Dept. of Ecology and Evolutionary Biology, University of California, Irvine, CA.

- 2011. Dept. of Biology, California State University, Dominguez Hills, CA.
- 2009. Dept. of Genetics, University of Georgia, Athens, GA.
- 2011. NerdNite, Middlesex Lounge, Cambridge MA.

ORAL PRESENTATIONS

- 2013. Southern California Evolutionary Genomics Meeting, Irvine, CA.
- 2013. UC Irvine Systems Biology Retreat, Los Angeles, CA.
- 2012. 1st Joint Congress on Evolutionary Biology, Ottawa, Canada.
- 2012. 53rd Annual *Drosophila* Research Conference, Chicago, IL.
- 2010. Society for Molecular Biology and Evolution, Lyon, France.
- 2008. 50th Annual *Drosophila* Research Conference, Chicago, IL.

POSTER PRESENTATIONS

- 2015. Society of Molecular Biology and Evolution, Vienna, Austria.
- 2014. Society of Molecular Biology and Evolution, San Juan, Puerto Rico.
- 2014. 55th Annual *Drosophila* Research Conference, San Diego, CA.
- 2013. Society of Molecular Biology and Evolution, Chicago, IL.
- 2013. 54th Annual *Drosophila* Research Conference, Washington, DC.
- 2012. UC Irvine Center for Complex Biological Systems Retreat.
- 2010. 51st Annual *Drosophila* Research Conference, Washington, DC.
- 2009. Society for Molecular Biology and Evolution, Iowa City, IA.
- 2008. Society for Molecular Biology and Evolution, Barcelona, Spain.

HONORS AND AWARDS

- 2014. UC Irvine Dean's Award for Postdoctoral Excellence
- 2008. NSF Graduate Research Fellowship Honorable Mention
- 2006. NSF Graduate Research Fellowship Honorable Mention
- 2006. Harvard University James Mills Peirce Fellowship
- 2006. University of Georgia Best Female Honors Science Student
- 2006. University of Georgia Dept. of Genetics Cynthia Kenyon Award
- 2004. Goldwater Scholar
- 2002. Intel International Science and Engineering Fair Finalist
- 2001. Intel Science Talent Search Semifinalist
- 2001. Intel International Science and Engineering Fair Finalist

TEACHING

- Professor, USA Biological Olympiad (2014)
- Professor, Research Science Institute at MIT, 1 week genetics course (2009-2011)
- Teaching Fellow, Advanced evolutionary biology, Harvard University (Spring 2010)
- Teaching Fellow, Introductory genetics and evolution, Harvard University (Spring 2008)
- Tutor for SATII Biology (2008-2009)
- Grader, Introductory genetics and evolution, Harvard University (2009)
- Teaching Assistant for the Research Science Institute (2005)
- Video Chat Invited Course Speaker, University of Rochester (2014)

SERVICE

- Harvard University Women in Science Mentor (2007-2011)
- Exam author, USA Biological Olympiad (Exams 2013-2016)
- Judge, Orange County Science and Engineering Fair (2012, 2014)

Judge, Intel International Science and Engineering Fair, Los Angeles (2011, 2014)
Judge, Massachusetts State Science and Engineering Fair (2009, 2010)
Judge, Georgia State Science Fair (2004)
Judge, Georgia Jr. Academy of Sciences Paper Reading (2004)
Sex and Conflict Symposium, Harvard University. Organizing Committee (2007)

PEER REVIEW

National Science Foundation *ad hoc* proposal reviewer (2015)
Genome Biology and Evolution (2015)
Molecular Biology and Evolution (20016, 2015, 2014, 2011)
Frontiers in Ecology and Evolution (2014)
Heredity (2013)
BMC Evolutionary Biology (2013)
Bioinformatics (2012)
Genetics (2009)

PROFESSIONAL MEMBERSHIPS

Genetics Society of America, Society for Molecular Biology and Evolution

REFERENCES

Montgomery W. Slatkin
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