

## CURRICULUM VITAE

### Mark Rebeiz, PhD

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### EDUCATION

- Ph.D. University of California, San Diego, Biological Sciences (2006).
- M.S. University of Illinois at Urbana-Champaign, Reproductive Biology (1999)
- B.S. University of Illinois at Urbana-Champaign, Agricultural Sciences (1995)

### POSITIONS

- 2010-present Assistant Professor of Biological sciences, University of Pittsburgh
- 2006-2010 Postdoctoral Research, University of Wisconsin, Madison  
Advisor: Sean B. Carroll  
Research Topic: The evolution of morphology and regulatory sequences
- 2000-2006 Doctoral research, University of California, San Diego  
Advisor: James W. Posakony  
Research Topic: Genomic *cis*-regulatory networks in development
- 1998-2000 Research specialist, University of Illinois at Urbana-Champaign  
Supervisor: Harris A. Lewin  
Research Topic: Mapping evolutionary breakpoints in mammalian genomes
- 1996-1998 Master's research, University of Illinois at Urbana-Champaign  
Advisor: David J. Miller  
Research Topic: Molecular mechanisms of sperm-egg adhesion

### COMMUNITY SERVICE

2003-present: Curator, the GenePalette Software Tool ([www.genepalette.org](http://www.genepalette.org)). Designed a software tool for genome sequence visualization and manipulation. The software has been used as a teaching tool in college courses, and its use has been cited in prominent journals, including *Nature*, *PLoS Biology*, and *PNAS*.

## PUBLICATIONS

- 2011** **Rebeiz M**, Castro B, Liu F, Yue F, Posakony JW. Ancestral and conserved cis-regulatory architectures in developmental control genes. Submitted
- Rebeiz M\***, Jikomes N\*, Kassner VA, Carroll SB. The evolutionary origin of a novel gene expression pattern through co-option of latent activities of existing regulatory sequences. *PNAS*. 2011. Jun 21;108:10036-43 [Faculty of 1000 F-Factor 6]
- 2010** **Rebeiz M\***, Miller SJ\*, Posakony JW. Notch regulates *numb*: Integration of conditional and autonomous cell fate specification. *Development*. 2010 Dec 9; 138:215-225
- 2009** **Rebeiz M**, Pool JE, Kassner VA, Aquadro CF, Carroll SB. Stepwise modification of a modular enhancer underlies adaptation in a *Drosophila* population. *Science*. 2009 Dec 18; 326(5960):1663-1667 [Faculty of 1000 F-Factor 11]
- Rebeiz M\***, Ramos-Womack M\*, Jeong S, Andolfatto P, Werner T, True J, Stern DL, Carroll SB. Evolution of the *tan* locus underlies pigment loss in *Drosophila santomea*: A response to Matute et al. *Cell*. 2009 Dec 11; 139(6):1189-1196
- 2008** Jeong S, **Rebeiz M**, Andolfatto P, Werner T, True J, Carroll SB. The evolution of gene regulation underlies a morphological difference between two *Drosophila* sister species. *Cell*. 2008 Mar 7;132(5):783-93 [Faculty of 1000 F-Factor 11]
- 2005** **Rebeiz M**, Stone T, Posakony JW. An ancient transcriptional regulatory linkage. *Dev Biol*. 2005 May 15;281(2):299-308. [Faculty of 1000 F-Factor 6]
- 2004** **Rebeiz M**, Posakony JW. GenePalette: a universal software tool for genome sequence visualization and analysis. *Dev Biol*. 2004 Jul 15;271(2):431-8.
- Everts-van der Wind A, Kata SR, Band MR, **Rebeiz M**, Larkin DM, Everts RE, GreenCA, Liu L, Natarajan S, Goldammer T, Lee JH, McKay S, Womack JE, Lewin HA. A 1463 gene cattle-human comparative map with anchor points defined by human genome sequence coordinates. *Genome Res*. 2004 Jul;14(7):1424-37.
- Liu L, Gong G, Liu Y, Natarajan S, Larkin DM, Everts-van der Wind A, **Rebeiz M**, Beever JE. Multi-species comparative mapping in silico using the COMPASS strategy. *Bioinformatics*. 2004 Jan 22;20(2):148-54.
- 2003** Larkin DM, Everts-van der Wind A, **Rebeiz M**, Schweitzer PA, Bachman S, Green C, Wright CL, Campos EJ, Benson LD, Edwards J, Liu L, Osoegawa K,

Womack JE, de Jong PJ, Lewin HA. A cattle-human comparative map built with cattle BAC-ends and human genome sequence. *Genome Res.* 2003 Aug;13(8):1966-72.

Larson JH, **Rebeiz MJ**, Stiening CM, Windish RL, Beever JE, Lewin HA. MHC class I-like genes in cattle, MHCLA, with similarity to genes encoding NK cell stimulatory ligands. *Immunogenetics.* 2003 Apr;55(1):16-22

**2002** **Rebeiz M**, Reeves NL, Posakony JW. SCORE: a computational approach to the identification of *cis*-regulatory modules and target genes in whole-genome sequence data. *PNAS.* 2002 Jul 23;99(15):9888-93.

**2000** Band MR, Larson JH, **Rebeiz M**, Green CA, Heyen DW, Donovan J, Windish R, Steining C, Mahyuddin P, Womack JE, Lewin HA. An ordered comparative map of the cattle and human genomes. *Genome Res.* 2000 Sep;10(9):1359-68.

**Rebeiz M**, Lewin HA. Compass of 47,787 cattle ESTs. *Anim Biotechnol.* 2000 Nov;11(2):75-241

**1999** **Rebeiz M**, Miller DJ. Porcine sperm surface  $\beta$ 1,4galactosyltransferase binds to the zona pellucida but is not necessary or sufficient to mediate sperm-zona pellucida binding. *Mol Reprod Dev.* 1999 Dec;54(4):379-87.

\* authors contributed equally

### Book Chapters

**Rebeiz M**, Williams TM. "Experimental Approaches to evaluate the Contribution of candidate *cis*-regulatory mutations to phenotypic evolution" *Methods in Molecular Biology: Molecular Methods for Evolutionary Genetics*. Humana Press Edited by V. Orgogozo and M. Rockman. *In Press*.

### COMPETITIVE FUNDING

**2011-2013** Alfred P. Sloan Research Fellow (Molecular Biology)

**2006-2009** NIH/NIGMS Kirschstein National Research Service Award Postdoctoral Fellowship

**1996-1998** Jonathan Baldwin Turner Fellowship

### INVITED SEMINARS

**2011** Case Western Reserve University, Department of Biological Sciences, Cleveland, OH

University of Pittsburgh Science 2011 Celebration, Pittsburgh, PA

University of Pittsburgh, Department of Developmental Biology, Pittsburgh, PA

Bowling Green State University, Department of Biological Sciences, Bowling Green, OH

Dayton University, Department of Biological Sciences, Dayton, OH

**2010**

Pittsburgh Chromatin Club Minisymposium, University of Pittsburgh, Pittsburgh, PA

Pittsburgh Area Fly Meeting, Carnegie Mellon University, Pittsburgh, PA

University of Pittsburgh, Department of Biological Sciences Retreat, Pittsburgh, PA

Columbia University, Department of Biochemistry and Molecular Biophysics, New York, NY

University of Chicago, Department of Organismal Biology and Anatomy, Chicago, IL

University of North Carolina, Chapel Hill, Department of Cell and Developmental Biology, Chapel Hill, NC

Boston University, Department of Biology, Boston, MA

University of Michigan, Department of Human Genetics, Ann Arbor, MI

University of Missouri, St. Louis, Department of Biology, St. Louis MO

Washington University, Department of Developmental Biology, St. Louis, MO

Rensselaer Polytechnic Institute, Department of Biology, Troy, NY

University of Southern California, Department of Molecular and Computational Biology, Los Angeles, CA

University of Massachusetts Medical School, Program in Gene Function and Expression, Worcester, MA

University of Kentucky, Department of Biology, Lexington, KY

University of Pittsburgh, Department of Biological Sciences, Pittsburgh, PA

University of Massachusetts, Amherst, Department of Biology, Amherst MA

**2009**

College of Charleston, Department of Biology, Charleston, SC

Claremont Colleges, Joint Sciences Department, Claremont, CA

University of Buffalo, Department of Biological Sciences, Buffalo, New York

100<sup>th</sup> International Titisee Conference on Genome evolution and the origin of novel gene functions

University of Wisconsin Evolution Seminar Series

## **MEDIA**

**2011**

“Leaky” Genes Put Evolution on the Fast Track, Pitt and UW-Madison Researchers Find’. *Pitt Chronicle*, June 20

‘Hunt for Genetic Roots of Evolution Earns Mark Rebeiz Honor of Being Named 2011 Sloan Foundation Fellow’. *Pitt Chronicle*, March 21

**2009**

‘Researchers Trace the Evolutionary Path to a Color Shift in African Fruit Flies’. *HHMI News*, December 17

## **TEACHING**

**2012**

Genetics Laboratory  
MCDB Core Course Genetics (Module IV, 2 lectures)  
MCDB Core Course Development (Module VI, 1 lecture)

**2011**

MCDB Core Course Genetics (Module IV, 2 lectures)  
MCDB Core Course Development (Module VI, 1 lecture)

**2010**

BioSci 1540 Computational Biology (2 lectures)

**2004**

Teaching assistant, Evolution of proteins, genes and genomes, UCSD

**2003**

Teaching assistant, Developmental Biology, UCSD

**2002**

Teaching assistant, Molecular Biology Laboratory, UCSD

## **ADVISING**

Graduate:

Rachel Young 2010 - present

William Glassford 2011 - present

Undergraduates:

Thomas Pham 2011-present  
Corey Mele 2011-present  
Kerry Hancuch 2011- present  
Megan Anderson 2011-present  
Chas Elliot 2011-present  
Steven Weiss 2011 - present  
Samantha Brecht 2011- present  
Kelsey Stayer 2010 - present  
Nick Jikomes 2007 – 2011

**GRADUATE STUDENT COMMITTEES**

<b>2010-present</b>	Beth Raupach	Biological Sciences
<b>2011-present</b>	Hao Ji	Biological Sciences
<b>2011-present</b>	Nathan Brown	Biological Sciences
<b>2011-present</b>	Julia Barker	Biological Sciences

**DEPARTMENT and UNIVERSITY SERVICE**

**2011-2012** Senior Member, Biological Sciences Retreat Planning Committee  
Member Biological Sciences Graduate Recruiting Committee

**2010-2011** Member, Biological Sciences Retreat Planning Committee  
Ad Hoc Member, Biological Sciences Graduate Recruiting Committee

**JOURNAL REVIEWER**

Mol. Ecology, Dev. Dynamics, Curr. Topics in Dev. Biology, BMC genomics, Evolution & Development, PLoS Genetics, Journal of Vis. Experiments

**Last Updated on 9/20/2011**