

MATTHEW D. MACMANES, PH.D

PROFESSIONAL PREPARATION

UNIVERSITY OF MICHIGAN	NATURAL RESOURCES	B.S. 2005
UNIVERSITY OF CALIFORNIA, BERKELEY	INTEGRATIVE BIOLOGY PI: EILEEN LACEY	PH.D. 2011
UNIVERSITY OF CALIFORNIA, BERKELEY	CALIFORNIA INSTITUTE FOR QUANT. BIOSCI. PI: MICHAEL EISEN	POSTDOC 2011-2013

PUBLICATIONS

1. QUAN, Y. F., **M. D. MACMANES**, L. A. EBENSBERGER, E. A. LACEY AND L. D. HAYES, 2009 Isolation and characterization of polymorphic microsatellite loci from *Octodon degus*. *Molecular Ecology Resources*: 3. <http://dx.doi.org/10.1111/j.1755-0998.2009.02536.x>
2. BENEDICT, L., **M. D. MACMANES**, J. FUCHS and R. C. K. BOWIE, 2010 When non-coding is non- neutral: the role of CHD1 gene polymorphism in sexing, in phylogenetics and as a correlate of fitness in birds. *Ibis*: 1-3. <http://dx.doi.org/10.1111/j.1474-919X.2010.01015.x>
3. ROWE, K., S. SINGHAL, **M.D. MACMANES**, J. AYROLES, T.L. MORELLI, E.M. RUBRIDGE, K. BI, AND C.C. MORITZ. (2011) Museum genomics: Low cost and high accuracy genetic data from historical specimens. *Molecular Ecology Resources*. <http://dx.doi.org/10.1111/j.1755-0998.2011.03052.x>
4. **MACMANES. M.D.** (2011). Promiscuity in mice is associated with increased Vaginal Bacterial Diversity. *Naturwissenschaften* 98: 951–960. <http://dx.doi.org/10.1007/s00114-011-0848-2> PMID [21964973](#)
5. **MACMANES. M.D.** and E.A. LACEY (2012). Is Promiscuity in mice associated with enhanced selection on MHC genes. *Accepted*, PLoS One.
6. **MACMANES. M.D.** and E.A. LACEY (2012). The social brain: Transcriptome assembly and characterization of the hippocampus from a social subterranean rodent, the tuco-tuco (*Ctenomys sociabilis*). *In review*. PLoS One
7. **MACMANES. M.D.** and E.A. LACEY (2012). Differences in sexual behavior influence patterns of selection on genes underlying immune function. *In prep*.

GRANTS AND FELLOWSHIPS

1. **NIH NRSA POSTDOCTORAL FELLOWSHIP** 1F32DK093227-01 (2011): Using genomics to understand physiologic water conservation in desert rodents
2. **TERAGRID SUPERCOMPUTING ALLOCATION** IBN100014 (2011): Analysis of next generation sequence data to advance evolutionary insights
3. **MVZ FELLOWSHIP (2010)**
4. **NSF DOCTORAL DISSERTATION IMPROVEMENT GRANT** 0909798 (2008): MHC and Mating Systems: Is sexual behavior related to selection on MHC genes?
5. **UC NRS MILDRED MATHIAS RESEARCH AWARD** (2007): For research conducted at Boyd Deep Canyon Desert Research Center.
6. **NSF GRADUATE RESEARCH FELLOWSHIP** (2007): Sexually transmitted disease as a driver of phenotypic and genotypic variability across the monogamy-promiscuity continuum in the genus *Peromyscus*
7. **MVZ MARTENS RESEARCH AWARD** (2006): For research conducted at Boyd Deep Canyon Desert Research Center.
8. **CALIFORNIA DESERT RESEARCH FUND AWARD** (2006): For research conducted at Boyd Deep Canyon Desert Research Center.

PRESENTATIONS

1. Summer 2012
Contributed Talk: "Parentesco e estrutura social do rabo-de-facho, *Trinomys yonenagae* (Echimyidae) nas dunas do rio São Francisco, BA" Congresso Brasileiro de Mastozoologia 2012. (Presented by Wly dos Santos)
Contributed Talk: "No water, no pee, no problem! Using genomics to understand adaptation to desert life in *Peromyscus eremicus*" Evolution 2012. Ottawa, Ontario. Canada
2. Winter 2012
Invited Talk: "Conquer Data-Intensive Biosciences Problems" SGI, Fremont, CA. Link to webinar (registration required): <http://info.sgi.com/genomics/webinar.aspx>
3. Winter 2012
Invited Talk: "Behavioral Genomics: Using Transcriptome Sequencing to Identify Genes Influencing Social Behavior" UC Berkeley, MVZ. Link to video: <http://youtu.be/0eIN5j-SWQY>
4. Summer 2011
Contributed Talk: "Understanding the relationship between sexual behavior, selection on immunogenes, and vaginal bacteria in Peromyscine rodents" Evolution Conference. Norman, OK
5. Summer 2011
Contributed Talk: "Behavioral genomics: Using transcriptome sequencing to identify genes influencing social behavior" Mammalogy Conference. Portland, OR
6. Summer 2010
Contributed Talk: "Scale matters: sex and selection on MHC genes in the genus *Peromyscus*" Evolution Conference. Portland, OR
7. Fall 2009
Contributed Talk: "Mating systems are continuous variables"
Animal Behavior Lunch Seminar Series, UC Berkeley
8. Summer 2009
Contributed Talk: "MHC and mating systems: Is sexual behavior related to selection on MHC genes?" Evolution Conference. Moscow, ID
9. Summer 2008
Contributed Poster: "MHC and mating systems: Is sexual behavior related to selection on MHC genes?" International Society for Behavioral Ecology. Ithaca, NY
10. Spring 2008
Contributed Talk: "The genetic mating system of *Peromyscus eremicus*"
Animal Behavior Lunch Seminar Series, UC Berkeley

SYNERGISTIC ACTIVITIES

1. 2005- Current
Mentored Undergraduate Students
Served as a mentor for UC Berkeley undergraduates: Robert Beck (2006), Manpuneet Samra (2006), Katharine Lovett (2007), Quang Nguyen (2008) and Soo Ro in lab techniques
2. 2005- Current
Society Membership
SSE, ISBE, ASM, Sigma Xi,
3. 2006-2011
Childhood Education
Organized educational program (four events) that brought children to the Museum of Vertebrate Zoology to learn about biodiversity and conservation
4. 2005- Current
Peer Reviewer
NSF-BIO *ad hoc.*, J. Mammalogy, Behavioral Ecology, Southeastern Naturalist, Evolutionary Ecology

5. 2008-2010
Behavior Lunch Seminar Series
Coordinated speakers, schedules, and attendance for UC Berkeley Behavior Seminar Series.
6. 2008-2010
Graduate Admissions Committee Member
Served as graduate student representative on admissions committee. Evaluated applications, with specific attention to increasing minority representation.
7. 2005-2008
Minority Retention and Recruitment
Participation in the Berkeley EDGE, a NSF funded program with aims of increasing minority recruitment, retention, and advancement in science and engineering

PRESS AND RESEARCH WRITEUP

1. White Paper: Blacklight at Pittsburgh Supercomputing Center Shines Light on Life Sciences Research. SGI. January 2012 pp 4-5 <http://macmanes.com/Docs/SGL.pdf>
2. Pursuing the mystery of the monogamous mouse. Transect 2006. 25:1 pp 14-15. <http://nrs.ucop.edu/media/transect/pdf/TR25.1-Full-Issue.pdf>