

Wendy E. Grus

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Department of Ecology and Evolutionary Biology
University of Michigan
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Education

September 2002 - present PhD student
University of Michigan Department of Ecology and Evolutionary Biology

Thesis: "Origin and evolution of the vomeronasal system viewed through system-specific genes."
Advisor: Jianzhi George Zhang.

August 1998 - May 2002 BS Ecology *magna cum laude*
University of Georgia BSCHEM Chemistry *magna cum laude*

Teaching Experience/Enrichment

May 2006 Rackham-CRLT Seminar on College Teaching: Preparing Future Faculty
Winter 2006, Winter 2007 Tutor for Genetics
September 2002 – April 2005 Graduate Student Instructor
University of Michigan, Department of Biology, Ann Arbor MI
Fall 2002: Introduction to Biology
Winter 2003: Evolution
Fall 2004, Winter 2005: Genetics
August 2000 - December 2000 Laboratory Teaching Assistant, General Chemistry
University of Georgia, Department of Chemistry, Athens GA

Awards and Fellowships

Rackham Graduate Student Research Grant – 2007
Rackham One Term Dissertation Fellowship - 2007
NIH Graduate Student Research Festival Participant - 2006
EEB Outstanding Student Paper Award – 2006
Rackham Teaching Fellow - 2006
AChemS Housing Award 2006, 2007
NIH Genome Science Training Grant, predoctoral traineeship (tuition, stipend, travel) – 2005-2007
EEB Block Grant– 2003, 2004, 2005 (Okkelberg), 2006 (Edwards)
Rackham Travel Grant – 2004, 2005, 2006, 2007
Georgia Ornithological Society, H. Branche Howe Jr. Fellowship – 2003

Professional Service

Ad hoc reviewer for: *Gene, Molecular Biology and Evolution, Journal of Comparative Neurology, Genome Research, Chemical Senses*
Graduate Student Representative to departmental Graduate Affairs Committee

Professional Societies

Society for the Study of Evolution
Association of Chemoreception Sciences
Society for Molecular Biology and Evolution

Publications (+co-first authors)

1. **W.E. Grus** and J. Zhang. Distinct evolutionary patterns between chemoreceptors of two vertebrate olfactory systems and the differential tuning hypothesis. Submitted.

2. **W.E. Grus**, P. Shi, and J. Zhang. Largest vertebrate vomeronasal type 1 receptor (V1R) gene repertoire in the semi-aquatic platypus. *Molecular Biology and Evolution*, 24 (2007) 2153-2157.
3. X. Wang+, **W.E. Grus**+, and J. Zhang. Gene losses during human origins. *PLoS Biology* 4 (2006) 370-377.
4. **W.E. Grus**+, P. Shi+, Y.-p. Zhang, and J. Zhang. Dramatic variation of the vomeronasal pheromone receptor gene repertoire among five orders of placental and marsupial mammals. *PNAS* 102 (2005) 5767-5772.
5. **W.E. Grus** and J. Zhang. Rapid turnover and species-specificity of vomeronasal pheromone receptor genes in mice and rats. *Gene* 340 (2004) 303-312.

Invited Reviews

6. **W.E. Grus** and J. Zhang. "Human Lineage-specific Gene Inactivation" in *Encyclopedia of Life Sciences Handbook of Human Molecular Evolution*. Edited by David N. Cooper and Hildegard Kehrer-Sawatzki. John Wiley and Sons, Ltd. (2008).
7. **W.E. Grus** and J. Zhang. Origin and evolution of the vomeronasal system viewed through system-specific genes. *Bioessays* 28 (2006) 709-718.

Publications from undergraduate research

8. **W.E. Grus**, G.R. Graves, and T.C. Glenn. Geographic variation in the mitochondrial control region of black-throated blue warblers. Submitted to *Auk*.

Posters/Presentations (*invited)

1. * "Evolution of the vomeronasal system viewed through system-specific genes." **presentation**, Notre Dame, South Bend, IN, October 2007.
2. * "Evolution of the vomeronasal system viewed through system-specific genes." **presentation**, University of Georgia, Athens, GA, October 2007.
3. "Distinct evolutionary patterns between chemoreceptors of two vertebrate olfactory systems." **presentation**, Society for Molecular Evolution and Biology meeting, Halifax, Nova Scotia, Canada, June 2007.
4. * "Evolution of the vomeronasal system viewed through system-specific genes." **presentation**, UC Berkeley, Berkeley, CA, June 2007.
5. "Striking differences in evolutionary patterns in vomeronasal receptors compared to main olfactory receptors." **poster**. Association for Chemoreception Sciences meeting, Sarasota, FL, April 2007.
6. "Vomero, vomero, wherefore art thou, vomero: The origin of the vomeronasal system." **presentation**. EEB departmental lunch seminar, March 2007.
7. "System-specific genes reveal an earlier origin for the vomeronasal system." **poster**, Young Scientist Symposium, University of Michigan, March 2007.
8. * "Evolution of the vomeronasal system viewed through system-specific genes" **presentation**, Duke University, Durham, NC, December 2006.
9. * "Dramatic variation in V1R vomeronasal receptor repertoires in mammals" **presentation**, Jackson Laboratories, Bar Harbor, ME, December 2006.
10. "System-Specific Genes Reveal an Earlier Origin for the Vomeronasal System" **poster**. NIH Graduate Student Research Festival, Bethesda, MD, October 2006.
11. "System-specific genes reveal an earlier origin for the vomeronasal system" **presentation**, Society for Molecular Biology and Evolution meeting, Tempe, AZ, May 2006.
12. "An earlier origin for the vomeronasal system: Trpc2 in sea lamprey (*Petromyzon marinus*)" **poster**, Association for Chemoreception Sciences meeting, Sarasota, FL, April 2006.
13. "Gene losses during human origins" **presentation**, EEB lunch seminar with X. Wang, Ann Arbor, MI, November 2005
14. "Something smells fishy: an earlier origin for the vomeronasal signal transduction pathway", **poster**, Developmental Basis for Evolutionary Change, Chicago, Illinois, October 2005
15. "Something smells fishy: The evolution of the vomeronasal system determined by vomeronasal-specific genes", **presentation**, Evolution meeting, Fairbanks, Alaska, June 2005
16. "Evolution of vomeronasal-specific genes in vertebrates," **presentation**, EEB departmental lunch seminar, September 2004.
17. "Rapid turnover and species-specificity of vomeronasal pheromone receptor genes in mice and rats," **poster**, Genomes and Evolution, Society for Molecular Biology and Evolution meeting, State College, Pennsylvania, June 2004.
18. "Recombination and Genome Evolution: Chromosome size effects on avian introns," **poster**, Evolutionary Genomics Meeting, Tucson, Arizona, January 2004.
19. "Genetic variation in falcons of Greenland determined by microsatellite analysis," **presentation**, EEB Evaluation Seminar, October 2003.