

CURRICULUM VITAE

Name: Hugh M. Robertson

Date of Birth: December 19, 1955

Place of Birth: Johannesburg, South Africa

Citizenship: South Africa, permanent resident in USA

Education

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| 1976 | B.Sc. (Zoology and Biochemistry), University of the Witwatersrand, South Africa |
| 1977 | B.Sc. Honours (Zoology and Molecular Genetics), University of the Witwatersrand, South Africa |
| 1982 | Ph.D. (Zoology), with Hugh E. H. Paterson, University of the Witwatersrand, South Africa |

Postdoctoral Training

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| 1982-84 | Guyer Postdoctoral Fellow with Jack P. Hailman, Department of Zoology, University of Wisconsin, Madison, WI |
| 1985-87 | Postdoctoral Researcher with William R. Engels, Department of Genetics, University of Wisconsin, Madison, WI |

Positions Held

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| 1987-93 | Assistant Professor, Department of Entomology, University of Illinois at Urbana-Champaign, Urbana, IL |
| 1993-99 | Associate Professor, Department of Entomology, UIUC |
| 1999-present | Full Professor, Department of Entomology, UIUC |
| 1992-present | Adjunct Professional Scientist, Center for Economic Entomology, Illinois Natural History Survey, Champaign, IL |
| 1999-present | Joint Appointee, Department of Cell and Developmental Biology, UIUC |
| 2000-present | Affiliate, Graduate Program in Ecology and Evolutionary Biology, UIUC |
| 2001-present | Affiliate, Neuroscience Graduate Program, UIUC |
| 2005-present | Member of Institute for Genomic Biology, UIUC |

Grant Support

External

- 1989-93 “Regulation of the *P* element transposon in *Drosophila*”, NSF-DMB Eukaryotic Genetics Program (\$263,000 total)
- 1991-94 “Cytoplasmic incompatibility in insects”, USDA-NRI Competitive Research Grants Program (Timothy Karr as co-PI) (\$210,000 total)
- 1994-97 “*Mariner* transposons as genetic tools for insects”, NIH-NIAID Tropical Medicine Program (\$470,000 total).
- 1994-97 “The *mariner* transposons of insects”, NSF-MCB Eukaryotic Genetics Program (\$267,000 total)
- 1995-98 “P transposable elements in insects beyond *Drosophila*”, USDA-NRI Competitive Research Grants Program (\$225,000 total)
- 1997-01 “Olfactory receptors of insect antennae”, NSF-IBN Sensory Systems Program (James Nardi as co-PI) (\$225,000 total)
- 1998-02 “*Mariner* transposons as genetic tools for insects”, NIH-NIAID Tropical Medicine (\$479,000 total) (50% subcontracted with David Lampe at Duquesne University)
- 1999-03 “The *mariner* transposons of mammals”, NIH-NIGMS Mammalian Genetics (\$490,000 total)
- 2003-07 "Gustatory and olfactory receptors of *Anopheles gambiae*", NIH-NIAID Tropical Medicine (\$1,056,000 total)
- 2005-08 "Functional genomics of chronobiological plasticity in honey bee", US-Israel Bi-National Science Foundation (\$200,000 total), Co-PI with Guy Bloch and Susan Fahrbach.
- 2006-09 “Chemical perception genes from the Lepidoptera: Odorant and gustatory receptors mediating host selection and feeding behavior”, USDA-NRI Competitive Research Grants Program (\$375,000 total)
- 2006-09 “Genomics of diapause and chemoperception in the apple maggot fly”, USDA-NRI Competitive Research Grants Program (co-PI with Setwart Berlocher and Jeff Feder) (\$360,000 total)

Internal

- 1990 “Molecular phylogeny of Odonata”, UIUC Research Board (\$7,000)
- 1991-92 “Cytoplasmic incompatibility in insects”, UIUC Research Board (\$10,700)
- 1994 “Phylogenetic relationships of Strepsiptera”, Herbert Ross Memorial Fund (\$800)
- 1994-95 “Cytoplasmic incompatibility in insects”, UIUC Research Board (\$5,500)

- 1996 “Olfactory receptors in the antenna of *Manduca sexta*”, UIUC Research Board (\$7,900), co-PI with James Nardi, Steve Miklasz, and Shong-Wan Norby.
- 1997 “*Wolbachia* infections in tephritid flies”, UIUC Research Board (\$8,150)
- 1997-99 “Phylogenomics”, UIUC Critical Research Initiatives (\$200,000), PI - Harris Lewin
- 1998-00 “The molecular basis of insect olfaction”, UIUC Critical Research Initiatives (\$200,000), with eight co-PIs.
- 1999-01 “Sociogenomics”, UIUC Critical Research Initiatives (\$200,000), PI - Gene Robinson.
- 2003 “Pheromone receptors of moths”, UIUC Research Board (\$22,000)

Awards and Honors

- 1998-00 University Scholar, University of Illinois, Urbana-Champaign (\$18,000)
- 1999 Fellow of the American Association for the Advancement of Science
- 2003 UIUC College of ACES Team Award as part of the Western Corn Rootworm Strategic Pest Management Team Project (\$600)
- 2004 Rated “Outstanding” on the “Incomplete List of Teachers Ranked as Excellent by their Students” for Spring 2004 for IB396 Comparative Eukaryotic Genomics

Invited Talks at Conferences and Departments since 2000

- 2000 Plant Pathology, University of Illinois, Urbana, IL
Laboratory of Genetics, University of Wisconsin, Madison, WI
Department of Cell and Structural Biology, University of Illinois, Urbana, IL
Department of Biology, University of Oregon, Eugene, OR
- 2001 Department of Biology, University of Oregon, Eugene, OR
Banbury Center on Chemosensory Receptors, Cold Spring Harbor, NY
Department of Genetics, North Carolina State University, Raleigh, NC
Gordon Conference on the Chemical Senses, Newport, RI
- 2002 4th International Symposium on Molecular Insect Science, Tucson, AZ
Department of Biology, Indiana University, Bloomington IN (declined)
- 2003 NAS Sackler - Chemical Communication in Post-Genomic World, Irvine, CA
4th IW - Transgenesis/Genomics of Invertebrate Organisms, Asilomar, CA
Gothenburg Summer School on Genomics and Bioinformatics, Sweden (declined)
Baylor Human Genome Sequencing Center, Houston, TX
Livestock Genome Symposium, Del Lago Resort, TX

- 2004 Keystone Symposium on Genetic Manipulation of Insects, Taos, NM
 Department of Molecular Biology, Vanderbilt University, Nashville, TN
 Department of Biological Sciences, Duquesne University, Pittsburg, PA
 Department of Zoology, University of the Witwatersrand, Johannesburg, SA
 Biotechnology Group, University of Pretoria, South Africa
 Workshop on Comparative Drosophila Genomics, Harvard University, MA
 16th International Genome Sequencing and Analysis Conference, Washington, DC
 Entomological Society of America Annual Meeting, Salt Lake City, UT
 International Symposium on Diabrotica Genetics, Kansas City, MO
- 2005 Genome Training Grant Mini-Symposium, University of Washington, Seattle, WA
 Department of Biological Sciences, Illinois State University, Normal, IL
- 2006 Department of Entomology, University of California at Riverside, Riverside, CA
- 2007 Department of Biology, University of Vermont, Bellingham, VT
 Cold Spring Harbor meeting on Honey Bee Genomic Biology, CSH, NY
 Cold Spring Harbor meeting on Biology of Genomes, CSH, NY
 NESCent Catalysis - Origins and Evolution of Chemoreception, Durham, NC

Presented Papers at Conferences since 2000

- 2000 Annual American Chemosensory Society Conference, Sarasota, FL
 Society for Molecular Biology and Evolution, Yale University, CT
 Midwest Drosophila Conference, Allerton Park, IL
- 2001 Annual Drosophila Research Conference, Washington, DC
 Annual American Chemosensory Society Conference, Sarasota, FL
 Midwest Drosophila Conference, Allerton Park, IL
 Entomological Society of America Annual Meeting, San Diego, CA
- 2002 Annual Drosophila Research Conference, San Diego, CA
 Annual American Chemosensory Society Conference, Sarasota, FL
 Annual Society for the Study of Evolution Meeting, Urbana, IL
- 2003 Keystone Symposium on Transposition and Recombination, Sante Fe, NM
 Annual American Chemosensory Society Conference, Sarasota, FL
 14th International C. elegans Conference, Los Angeles, CA
 XIX International Congress of Genetics, Melbourne, Australia
 Great Barrier Reef Drosophila Conference, Cairns, Australia
 Midwest Drosophila Conference, Allerton Park, IL
 Entomological Society of America Annual Meeting, Cincinnati, OH
- 2004 Annual Drosophila Conference, Washington, DC
 Annual American Chemosensory Society Conference, Sarasota, FL
 The Biology of Genomes, Cold Spring Harbor Laboratory, NY
- 2007 Keystone Symposium: Chemical Senses: from Genes to Perception, Snowbird, UT

Postdoctoral Fellows, Research Associates, and Research Scientists

Rita Avancini (1989 - 1990; 1994)
Scott O'Neill (1990 - 1991)
David Lampe (1992 - 1998)
Felipe Soto-Adames (1995 - 1996)
David Witherspoon (2001)
Barry Williams (2001)
Kevin Wanner (2005 - present)

Graduate Students

Major Advisor

PhD candidates (dates in my lab)

Felipe Soto-Adames (Spring 1990 - Fall 1994)
Rosanna Giordano (Fall 1990 - Fall 1997)
Chun-Liang Chen (Spring 1995 - Fall 1997)
Karlene Ramsdell (Fall 1999 - Spring 2004) (coadvised with Stewart Berlocher)
Harland Patch (Fall 1998 - Spring 2005)

MS candidates (dates in my lab)

Susan Ratcliffe (Fall 1993 - Fall 1995)
Kimberly Walden (Spring 1994 - Fall 1995)
Michelle Asplund (Fall 1994 - Spring 1995)
John Sherwood (Fall 1995 - Summer 1997)
Ellen Todres (Fall 1998 - Spring 2000)
Lauren Kent (Summer 2002 - present)
Kalista Andropolis (Fall 2005 - present)

Minor Advisor

PhD candidates (graduation date)

Mark Sturtevant (CSB) (1991)
Lynetta Binger (Entomology) (1991)
Michael Cohen (Entomology) (1991)
David Stock (EEE) (1992)
David Lampe (Entomology) (1992)
Choon-Bok Song (EEE) (1993)
Scott Stoltenberg (EEE) (1995)
Michael Baker (Entomology) (1995)
Leelen Solter (Entomology) (1996)
Chien-Fu Hung (Entomology) (1996)
Steven Gaimari (Entomology) (1998)
Susan Ratcliffe (Entomology) (1999)
Daniel Toma (EEE) (1999)
Yehuda Ben-Shahar (Entomology) (2002)
Po-Ju Chu (Physiology) (2002)
Rebecca Petersen (Entomology) (2003)
Weimin Li (Entomology) (2003)
Jeffrey Heilveil (Entomology) (2004)
Annelie van der Wind (Animal Sciences) (2005)

Josh Larson (Animal Sciences)
Scott Siechen (CSB)
Shuning Hsu (CSB)
Charu Gupta Kumar (Animal Sciences)
Beth Ruedi (PEEB)
Ying Jiang (CSB)
Chris Smith (PEEB)

MS candidates (graduation date)

Lynetta Binger (Entomology) (1989)
Michael Baker (Entomology) (1990)
Chun-Liang Chen (Entomology) (1995)
Ria Barrido (Entomology) (1998)

Undergraduate Students (dates in my lab) (undergraduate thesis/honors)

Elisa Becker (Spring and Summer 1988)
Michael Rountree (Summer 1988 - Summer 1990) (distinction)
Eziel Chanda (Summer 1990)
Brian Gelbach (Summer 1989 - Fall 1990)
Linda Chan (Fall 1989 - Spring 1990)
Melinda Snep (Summer 1990 - Summer 1991) (distinction)
Angela Colbert (Fall 1990 - Spring 1992) (distinction)
Jody Enos (Spring 1991)
Angela Mold (Summer 1991)
Shelli Seebruch (Fall 1991 - Spring 1993) (distinction)
Gregory Swanson (Spring 1992)
Matthew Sharkey (Summer 1992 - Spring 1994)
Karen Zumpano (Fall 1992 - Summer 1995) (distinction)
Michelle Lepkowitz (Spring 1993 - Fall 1993)
Paul White (Summer 1993 - Spring 1994)
Tessi Grant (Summer 1995 - Summer 1996) (high distinction)
Purvi Patel (Spring 1995 - Spring 1997) (distinction)
Barbara Linkhart (Fall 1995 - Spring 1997)
Erin Lockhard (Spring 1996 - Spring 1998) (distinction)
Chad Sears (Fall 1996 - Spring 1999) (high distinction)
Lindsey Schmidt (Spring 1998 - Summer 1999) (distinction)
Christina Brakebill (Summer 1998 - Summer 1999) (high distinction)
Paneez Mostafavipour (Summer 1998 - Spring 2000)
Chris Michelsen (Fall 1999 - Summer 2001)
Nathan Houchens (Spring 2001 - Spring 2002)
Colin Stoetzner (Summer 2001 - Fall 2002)
Kim Ly (Fall 2001 - Summer 2003) (distinction)
Gregory New (Summer 2002 - Summer 2003) (distinction)
Joy Daniel (Fall 2002 - Spring 2003)
Joseph Postula (Spring 2003 - Summer 2003)
George Abraham (Spring 2003)
Colin Sauer (Summer 2003 - Spring 2004) (distinction)
Julia Navik (Fall 2003 - Summer 2004)

Jaclyn Wegner (Spring 2004 – Fall 2005)
Carolyn Kelly (Fall 2004 - present)
Ben Goold (Summer 2005 – Fall 2005)
Hela Kotob (Fall 2005 – present)
Allison Mooney (Spring 2006 – present)

Technicians and hourly workers (dates working in lab)

Kimberly Walden (Spring 1996 - present)
Rebecca Martos (Spring 1996 - Summer 1997)
Susan Rovelstad (Summer 1998 - Summer 1999)
Andy Bredemeyer (Spring 2000 - Summer 2000)
Lindsay Schmidt (Fall 2001 - Spring 2002)
Colin Stoetzner (Summer 2003 - Fall 2003)
Kim Ly (Summer 2003 - Summer 2004)

Courses Taught and Guest Lecturing

ZOO 962 Seminar on Speciation (with Jack Hailman), University of Wisconsin, Fall 1982

ZOO 410 Organic Evolution, 42 lectures, University of Wisconsin, Spring 1985

BIO/IB 104 Introduction to Animal Biology, 12 lectures in Spring 1988, 8 lectures in Fall 1988, 20 lectures in Spring 1989, 11 lectures in Fall 1989, 36 lectures in Spring 1990, 10 lectures in Fall 1990, 10 lectures in Spring 1991, 18 lectures in Fall 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 40 lectures in Fall 2001, 25 lectures Fall 2002, 2003, 2004, 2005

IB 150 Organismal and Evolutionary Biology, 20 lectures in Spring 2005

IB 504 Genomic Analysis of Insects, 40 lectures, Spring 1989, 1991, 1993, 1995, 1997, 1999, 2001, 2003, 2005

IB 396 Comparative Eukaryotic Genomics, 25 lectures, Spring 2004

CSB 410 Comparative Eukaryotic Genomics, Graduate Seminar, Spring 2003

ENT 426 Insect Behavior Graduate Seminar, Fall 1988

ENT 426 Molecular Phylogeny of Insects Graduate Seminar (with Stewart Berlocher and Ellis MacLeod), Spring 1990

ENT 426 Insect Ecology Graduate Seminar (with May Berenbaum), Fall 1995

ENT 105 Insects and People, guest lab, Spring 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 1999, 2000, 2002

BIO 390b Principles of Systematics, guest lecture, Fall 1994

BIO 390M School of Life Sciences Scholars Seminar, guest lecture, Spring 1996, 1997

- MICRO 240 Computing in Molecular Biology, two guest lectures, Spring 1998
- Genetic Engineering and Biotechnology Summer Workshop for Teachers, guest lecture, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996

Committees (Unit, Chair) since 2000

- 2000-01 Graduate Student Administration (Department of Entomology)
Courses and Curriculum (School of Integrative Biology, Chair)
Gender Equity (UIUC)
- 2001-02 Graduate Student Administration (Department of Entomology)
Graduate Admissions (Cell and Structural Biology)
Courses and Curriculum (School of Integrative Biology, Chair)
Entomology Chair Evaluation (College of Liberal Arts and Sciences)
LAS Faculty Appeals (College of Liberal Arts and Sciences)
- 2002-03 Graduate Student Administration (Department of Entomology, Co-chair)
Seminar (Cell and Structural Biology)
Capricious Grading (School of Integrative Biology)
Fellowships (School of Integrative Biology)
Courses and Curriculum (School of Integrative Biology, Chair)
CMBTG Fellowship (College of Liberal Arts and Sciences)
Review of Head of Microbiology (College of Liberal Arts and Sciences, Chair)
LAS Faculty Appeals (College of Liberal Arts and Sciences, Chair)
LAS Policy and Development (College of Liberal Arts and Sciences)
- 2003-04 Seminar (Cell and Structural Biology)
Entrance Committee (Program in Ecology and Evolutionary Biology)
Fellowships (School of Integrative Biology)
Faculty Search Committee (School of Integrative Biology)
LAS Policy and Development (College of Liberal Arts and Sciences)
- 2004-05 5-year review of Head of MCB (College of Liberal Arts and Sciences, Chair)
University Scholars Selection Committee (UIUC)
- 2005-06 Sabbatical for Spring 2006
- 2006-07 School of Integrative Biology Executive Committee (SIB)

Professional Service

- Member of Advisory Board for BeeBase, 2005 - present.
- Member of Editorial Board for Insect Molecular Biology, 2005 - present.
- Member of Steering Committee for the honey bee genome project, 2001 - present.
- Manuscript reviewer for:

Animal Behavior (8), Annals of the Entomological Society of America (2), Behavioral Ecology and Sociobiology (1), BioMedCentral Evolutionary Biology (1), BioMedCentral Genomics (1), BioTechniques (1), Cell and Tissue Research (1), Chromosoma (1), Comparative Biochemistry and Physiology (1), Current Biology (2), Current Science (1), Evolution (1), Gene (7), Genetica (8), Genetics (31), Genome (1), Genome Research (3), Heredity (1), Insect Biochemistry and Molecular Biology (9), Insect Molecular Biology (22), In Vitro Cellular and Developmental Biology (1), JAMCA (1), Journal of Insect Behavior (1), Journal of Insect Physiology (1), Journal of Insect Science (1), Journal of Medical Entomology (2), Journal of Molecular Evolution (13), Molecular Biology and Evolution (18), Molecular and Cellular Biology (1), Molecular Ecology (2), Molecular and General Genetics (4), Nature Biotechnology (2), Nature Neuroscience (2), Nucleic Acids Research (4), Proceedings of the National Academy of Sciences (USA) (19), Proceedings of the Royal Society of London Biological Sciences (1), Science (2), Systematic Zoology (1), Trends in Genetics (4), various book chapters (2); total 184 manuscripts

External grant proposal reviewer for:

NSF (28), USDA (16), BARD (1), NIH (2), March of Dimes (1), SUNY College (1), Academy for Educational Development (1), NERC UK (3), NERC Canada (2), Smithsonian (1), Wellcome Trust (3), US-Israel BSF (1), UIUC Research Board (13); total 71 proposals

Ad-hoc member of NIH-NIAID-TMP Vector Biology Study Section, Spring 1994 (3 proposals), Fall 1995 (5 proposals), Spring 1999 (5 proposals), Fall 2000 (7 proposals), Spring 2002 (5 proposals), Spring 2004 (8 proposals)

Member of NSF-MCB Eukaryotic Genetics Panel, Fall 1993 (12 proposals)

Member of USDA Competitive Grants Program Entomology Subcellular Panel, Spring 1995 (30 proposals)

Ad-hoc member of NIH-GM Biological Sciences I Study Section, Summer 1996 (3 proposals)

External reviewer for PhD theses: 2

Evaluation of promotion files for other universities: 6

Organizer of the Midwest Drosophila Conference, Allerton Park, IL, 1990-1994

Participant in Workshop on Risks of Releasing Transgenic Arthropod Natural Enemies, Gainesville, FL, Fall 1993

Co-organizer with Babis Savakis of a session on “Transposable Elements and Transformation” at the International Congress of Entomology, Firenze, Italy, August 1996

Professional Society Membership

American Association for the Advancement of Science

Patents

Number 6,368,830 - Hyperactive mutants of *Himar1* transposase and methods for using the same. D. J. Lampe, B. J. Ackerley, E. J. Rubin, and H. M. Robertson. Applied for Sept. 27, 2000; granted April 9, 2002.

Peer-reviewed Publications

1. **Robertson, H. M.** and H. E. H. Paterson 1982. Mate recognition and mechanical isolation in *Enallagma* damselflies. *Evolution* 36, 243-250.
2. **Robertson, H. M.** 1982. Mating behaviour and its relationship to territoriality in *Platycypha caligata* (Odonata; Chlorocyphidae). *Behaviour* 79, 11-27.
3. **Robertson, H. M.** 1982. Courtship displays and mating behaviour of three species of Chlorocyphidae (Zygoptera). *Odonatologica* 11, 53-58.
4. **Robertson, H. M.** 1982. Female courtship summation in *Drosophila melanogaster*. *Animal Behaviour* 30, 1105-1117.
5. **Robertson, H. M.** 1983. Chemical stimuli eliciting male courtship in *Drosophila melanogaster*. *Experientia* 39, 333-335.
6. **Robertson, H. M.** 1983. Mating behavior and the evolution of *Drosophila mauritiana*. *Evolution* 37, 1283-1293.
7. **Robertson, H. M.** and K. J. Tennessen 1984. Precopulatory genital contact in some Zygoptera. *Odonatologica* 13, 591-595.
8. **Robertson, H. M.** 1985. Female dimorphism and mating behaviour in a damselfly, *Ischnura ramburi*: females mimicking males. *Animal Behaviour* 33, 805-809.
9. Engels, W. R., W. K. Benz, C. R. Preston, P. L. Graham, R. W. Phillis and **H. M. Robertson** 1987. Somatic effects of P element activity in *Drosophila melanogaster*: Pupal lethality. *Genetics* 117, 745-757.
10. **Robertson, H. M.**, C. R. Preston, R. W. Phillis, D. M. Johnson-Schlitz, W. K. Benz and W. R. Engels 1988. A stable genomic source of P element transposase in *Drosophila melanogaster*. *Genetics* 118, 461-470.
11. **Robertson, H. M.** 1988. Mating asymmetries and phylogeny in the *Drosophila melanogaster* species complex. *Pacific Science* 42, 72-80.
12. **Robertson, H. M.** and W. R. Engels 1989. Modified P elements that mimic the P cytotype in *Drosophila melanogaster*. *Genetics* 123, 815-824.

13. O'Neill, S. L., R. Giordano, A. M. E. Colbert, T. L. Karr and **H. M. Robertson** 1992. 16S rRNA phylogenetic analysis of the bacterial endosymbionts associated with cytoplasmic incompatibility in insects. *Proceedings of the National Academy of Sciences (USA)* 89, 2699-2702.
14. Gloor, G. B., C. R. Preston, D. M. Johnson-Schlitz, N. A. Nassif, R. W. Phillis, W. K. Benz, **H. M. Robertson** and W. R. Engels 1993. Type I repressors of P element mobility. *Genetics* 135, 81-95.
15. Boyle, L., S. L. O'Neill, **H. M. Robertson** and T. L. Karr 1993. Interspecific and intraspecific horizontal transfer of *Wolbachia* in *Drosophila*. *Science* 260, 1796-1799.
16. **Robertson, H. M.** 1993. The *mariner* transposable element is widespread in insects. *Nature* 362, 241-245.
17. **Robertson, H. M.** and E. G. MacLeod 1993. Five major subfamilies of *mariner* transposable elements in insects, including the Mediterranean fruit fly, and related arthropods. *Insect Molecular Biology* 2, 125-139.
18. Soto-Adames, F. N., **H. M. Robertson** and S. H. Berlocher 1994. Phylogenetic usefulness of partial DNA sequences of G6pdh in hexapod systematics. *Annals of the Entomological Society of America* 87, 723-736.
19. **Robertson, H. M.** and D. J. Lampe 1995. Recent horizontal transfer of a *mariner* element between Diptera and Neuroptera. *Molecular Biology and Evolution* 12, 850-862.
20. Giordano, R., S. L. O'Neill, and **H. M. Robertson** 1995. *Wolbachia* infections and the expression of cytoplasmic incompatibility in *Drosophila sechellia* and *D. mauritiana*. *Genetics* 140, 1307-1317.
21. **Robertson, H. M.**, K. L. Zumpano, A. R. Lohe and D. L. Hartl 1996. Reconstruction of the ancient *mariners* of humans. *Nature Genetics* 12, 360-361.
22. **Robertson, H. M.** and M. L. Asplund 1996. *Bmmar1*: a basal lineage of the *mariner* family of transposable elements in the silkworm moth, *Bombyx mori*. *Insect Biochemistry and Molecular Biology* 26, 945-954.
23. Avancini, R. M. P., K. K. O. Walden and **H. M. Robertson** 1996. The genomes of most animals have multiple members of the *Tc1* family of transposable elements. *Genetica* 98, 131-140.
24. Lampe, D. J., M. E. A. Churchill and **H. M. Robertson**. 1996. A purified *mariner* transposase is sufficient to mediate transposition in vitro. *EMBO Journal* 15, 5470-5479.
25. **Robertson, H. M.** 1996. Members of the pogo superfamily of DNA-mediated transposons in the human genome. *Molecular and General Genetics* 252, 761-766.

26. Chen, C-L., D. J. Lampe, **H. M. Robertson** and J. B. Nardi 1997. Neuroglial is expressed by cells destined to form the prothoracic glands of *Manduca* embryos as they segregate from surrounding cells and rearrange during morphogenesis. *Developmental Biology* 181, 1-13.
27. **Robertson, H. M.** 1997. Multiple *mariner* transposons in flatworms and hydras are related to those of insects. *Journal of Heredity* 88, 195-201.
28. Walden, K. K. O. and **H. M. Robertson** 1997. Ancient DNA from amber fossil bees? *Molecular Biology and Evolution* 14, 1075-1077.
29. Giordano, R., J. J. Jackson and **H. M. Robertson** 1997. The role of *Wolbachia* bacteria in reproductive incompatibilities and hybrid zones of *Diabrotica* beetles and *Gryllus* crickets. *Proceedings of the National Academy of Sciences, USA* 94, 11439-11444.
30. **Robertson, H. M.** and K. L. Zumpano 1997. Molecular evolution of an ancient *mariner* transposon, *Hsmar1*, in the human genome. *Gene* 205, 203-217.
31. **Robertson, H. M.** and R. Martos 1997. Molecular evolution of the second ancient human *mariner* transposon, *Hsmar2*, illustrates patterns of neutral evolution in the human genome lineage. *Gene* 205, 219-228.
32. Lampe, D. J., T. E. Grant and **H. M. Robertson** 1998. Factors affecting transposition of the *Himar1 mariner* transposon *in vitro*. *Genetics* 149, 179-187.
33. **Robertson, H. M.** 1998. Two large families of chemoreceptor genes in the nematodes *Caenorhabditis elegans* and *Caenorhabditis briggsae* reveal extensive gene duplication, diversification, movement, and intron loss. *Genome Research* 8, 449-463.
34. Akerley, B. J., E. J. Rubin, A. Camilli, D. J. Lampe, **H. M. Robertson** and J. J. Mekalanos 1998. Systematic identification of essential genes by *in vitro mariner* mutagenesis. *Proceedings of the National Academy of Sciences, USA* 95, 8927-8932.
35. Zhang, L. U. Sankar, D. J. Lampe, **H. M. Robertson**, and F. L. Graham 1998. The *Himar1 mariner* transposon cloned in a recombinant adenovirus vector is functional in mammalian cells. *Nucleic Acids Research* 26, 3687-3692.
36. Lampe, D. J., Akerley, B. J., Rubin, E. J., Mekalanos, J. J. and **H. M. Robertson**. 1999. Hyperactive transposase mutants of the *Himar1 mariner* transposon. *Proceedings of the National Academy of Science USA* 96, 11428-11433.
37. Reiter, L. T., T. Liehr, B. Rautenstrauss, **H. M. Robertson** and J. R. Lupski. 1999. Human recombination-associated genetic disorders appear to coincide with locations of *mariner* transposons. *Genome Research* 9, 839-843.

38. Nardi, J. B., R. Martos, K. K. O. Walden, D. J. Lampe and **H. M. Robertson**. 1999. Expression of lacunin, a large multidomain extracellular matrix protein, accompanies morphogenesis of epithelial monolayers in *Manduca sexta*. *Insect Biochemistry and Molecular Biology* 29, 883-897.
39. Grossman, G. L., A. J. Cornel, C. S. Rafferty, **H. M. Robertson** and F. H. Collins. 1999. *Tsessebe*, *Topi* and *Tiang*: three distinct *Tc1*-like transposable elements in the malaria vector, *Anopheles gambiae*l. *Genetica* 105, 69-80.
40. **Robertson, H. M.**, R. Martos, C. R. Sears, E. Z. Todres, K. K. O. Walden, and J. B. Nardi. 1999. Diversity of odourant binding proteins revealed by an expressed sequence tag project on male *Manduca sexta* moth antennae. *Insect Molecular Biology* 8, 501-518.
41. **Robertson, H. M.** 2000. The large *srh* family of chemoreceptor genes in *Caenorhabditis* nematodes reveals processes of genome evolution involving large duplications and deletions and intron gains and losses. *Genome Research* 10, 192-203.
42. Torti, C. L. M. Gomulski, D. Moralli, E. Raimondi, **H. M. Robertson**, P. Capy, G. Gasperi and A. R. Malacrida. 2000. Evolution of different subfamilies of *mariner* elements within the medfly genome inferred from abundance and chromosomal distributions. *Chromosoma* 108, 523-532.
43. Zhang, J. K., M. A. Pritchett, D. J. Lampe, **H. M. Robertson** and W. W. Metcalf. 2000. *In vivo* transposon mutagenesis of the methanogenic archaeon *Methanosarcina acetivorans* C2A using a modified version of the insect *mariner*-family transposable element *Himar1*. *Proceedings of the National Academy of Sciences USA* 97, 9665-9970.
44. Todres, E. Z., J. B. Nardi, and **H. M. Robertson**. 2000. The tetraspanin superfamily in insects. *Insect Molecular Biology* 9, 581-590.
45. Bouzat, J. L., L. K. McNeil, **H. M. Robertson**, L. F. Solter, J. Nixon, J. E. Beever, H. R. Gaskin, G. Olsen, S. Subramaniam, M. L. Sogin, and H. A. Lewin. 2000. Phylogenomic analysis of the alpha proteasome gene family from early-diverging eukaryotes. *Journal of Molecular Evolution* 51, 532-543.
46. **Robertson, H. M.** 2001. Updating the *str* and *srj(stl)* families of chemoreceptors in *Caenorhabditis* nematodes reveals frequent gene movement within and between chromosomes. *Chemical Senses* 26, 151-159.
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