

MARTA L. WAYNE
CURRICULUM VITAE

Department of Biology
University of Florida
P. O. Box 118525
Gainesville, FL 32611-8525
Phone: (352) 392-9925
Fax: (352) 392-3704
E-mail: mlwayne@ufl.edu or mlwayne@me.com
Website: <http://web.me.com/mlwayne/iWeb/Wayne%20Lab/>

CURRENT POSITION:

Professor and Chair, Department of Biology

POSITIONS HELD:

Visiting Professor, Department of Biology, McMaster University, 2013.

Professor, Department of Biology, 2011-present

Director, UF Graduate Program in Genetics & Genomics, 2006-2009
University of Florida

Visiting Adjunct Associate Professor, Division of Integrative Biology, University of Texas at Austin,
Spring 2009.

Associate Professor, UF Department of Biology, 2005-2011

Assistant Professor, UF Department of Zoology, 1998-2005
University of Florida

Postdoctoral Research Fellow, 1994-1998
North Carolina State University, Department of Genetics
Sponsor: Trudy F. C. Mackay

EDUCATION:

University of Chicago, Department of Ecology and Evolution
Visiting graduate student, 1992-1994

Princeton University, Department of Ecology and Evolutionary Biology
Thesis advisor: Martin Kreitman
M.S. 1991, Ph.D. 1994

University of California, San Diego, Department of Biology
Advisor: Dan L. Lindsley
B.A. 1988

HONORS/AWARDS:

UF HHMI Science for Life Distinguished Mentor Award, 2013.
UF College of Liberal Arts and Sciences College Teaching Award, 2012.
Colonel Allan R. and Margaret G. Crow CLAS Term Professor, 2010-2011

UF College of Liberal Arts and Sciences College Faculty Advising Award nominee, 2009.
Outstanding Faculty Honoree, UF College of Liberal Arts and Sciences Convocation Fall 2008,
2009, 2010, 2011, 2014, 2015, 2016.
Outstanding Faculty Honoree, UF College of Liberal Arts and Sciences Graduation Spring 2008
UF College of Liberal Arts and Sciences College Teaching Award nominee, 2005.
UF College of Liberal Arts and Sciences College Teaching Award, 2002.
Center for Women's Studies and Gender Research Award (\$1000), UF, 2002.
College of Liberal Arts and Sciences College Teaching Award (\$2000), UF, 2001-2002.
Young Investigator Award, Tri-National Workshop on Molecular Evolution, NSF, 1997.
Full Member, Sigma Xi, the Scientific Research Society, 1997.
Young Investigator Award, Response and Adaptation to the Environment Conference, U.S. Army
Research Office, 1996.
Teaching Excellence Initiative Award, Women and Gender in Science and Technology, North
Carolina State University, 1996-1997.
Butler College Graduate Fellow (Teaching Award), Princeton University, 1990.

EXTERNAL GRANTS FUNDED:

National Institutes of Health 1R01GM106174 *Rapid Induction of apoptosis against viral infection*,
(\$1,139,050). PI Lei Zhou, UF; co-PIs James Becnell UF USDA and Marta L. Wayne, 01/01/2014
- 12/31/2017.

National Institutes of Health 5R01 GM083192, *Sigma virus in Drosophila: a model system for the
evolution of virulence*, (\$1,178,302), PI M. L. Wayne, co-PIs B. M. Bolker and R. D. Holt,
5/1/2009-4/30/2013.

National Institutes of Health 5R01 GM083192S2, *Sigma virus in Drosophila: a model system for
the evolution of virulence*, (\$26,249), PI M. L. Wayne, Research Supplement to Promote Diversity
in Health-Related Research for postbaccalaureate student Eve A. Culbreth, 2012-2013.

National Institutes of Health 5R01 GM083192S1, *Sigma virus in Drosophila: a model system for
the evolution of virulence*, (\$43,188), PI M. L. Wayne, Research Supplement to Promote Diversity
in Health-Related Research for postbaccalaureate student Brennin Y. Brown, 2009-2010.

National Institutes of Health R01 GM077618S1, *Allele-Specific Expression in Drosophila*,
(\$387,696; Wayne subcontract \$87,900), PI L. M. McIntyre, ARRA Administrative Supplement,
2009-2011.

National Institutes of Health R01 GM077618 *Allele-Specific Expression in Drosophila*,
(\$1,127,695; Wayne subcontract \$226,432), PI L. M. McIntyre, co-PIs M. L. Wayne and S. V.
Nuzhdin, 2007-2010.

National Science Foundation Grant DGE-0231856, *Science Partners in Inquiry-based
Collaborative Education II (SPICE II)*, PI D. Levey, Co-PIs D. G. Bloomquist, T. L. Crisman, M. J.
Koroly, A. S. Lindner, R. Quintana, and M. L. Wayne (\$2,066,522), 2006-2010.

National Science Foundation DEB-0513016, *Society for Molecular Biology and Evolution Young
Investigators' Workshop*, PI M. L. Wayne, Co-PI L. Katz (\$35,988), 2005-2007.

National Science Foundation Grant DGE-0231856, *Science Partners in Inquiry-based
Collaborative Education (SPICE)*, PI D. Levey, Co-PIs J. Andino, B. Camp, P. Chadik, L. Jones,

T. Emmel, L. Guillette, R. Harbrucker, B. Holt, M. J. Koroly, A. Kwolek-Folland, and M. L. Wayne (\$1,445,000), 2003-2006.

National Institutes of Health Integrated and Collaborative Research Grant R24 GM65513-01, *Quantitative genomics of sexual dimorphism*, PI Sergey Nuzhdin, Co-PIs G. Gibson, L. Harshman, A. Kopp, L. M. McIntyre, M. L. Wayne (\$1,504,263), 2002-2005.

National Institutes of Health Grant R01 GM59884-02, *Evolutionary quantitative genetics of ovariole number in Drosophila*, PI M. L. Wayne (\$780,261), UF, 2000-2005.

Co-Principal Investigator, SUCCEED (Southeastern Universities and Colleges Coalition for Engineering Education) grant (\$15,897); *Innovations in Engineering Education: Women's Studies and the Retention of Women Students*, NC State University, 1996.

National Institutes of Health NRSA Postdoctoral Research Fellowship, North Carolina State University, 1994-1997.

INTERNAL GRANTS:

UFIC Study Abroad Development Grant, Service Learning for the Health Professions, Cusco, Peru (\$4000). Gillian Lord and Marta Wayne, 2015. Created a syllabus for a new section of existing course ZOO4956, Overseas Studies, *Infectious Disease in the Americas*; worked to ensure that student and patient safety are addressed.

Emerging Pathogens Institute/Interdisciplinary Center for Biotechnology Research Innovative Projects Initiative (SOLiD sequencing estimate of within-host variation for an RNA virus; \$12,200), UF, 2008.

Zoology Travel Committee Award (\$300), UF, 2001, 2002, 2003, 2004, 2005.

College of Liberal Arts and Sciences Travel Committee Award (\$400), UF, 1999, 2001, 2002, 2004, 2005.

College of Liberal Arts and Sciences Research Initiation Projects Grant (\$14,740), UF, 1999.

TEACHING BEYOND UF:

Instructor, Summer Institute in Statistical Genetics, Quantitative Genetics Module, North Carolina State University, June 2003-2005.

Instructor, Summer Institute in Statistical Genetics, Molecular Evolution Module, North Carolina State University, June 1996-1999.

Course Co-Designer and Co-Instructor, Women and Gender in Science and Technology, North Carolina State University, Spring 1997.

GRADUATE STUDENTS MENTORED:

Current: Katye Totten, M. S. in progress; Luciano Soares, co-mentored with Karen Bjorndal, Ph. D. in progress; Luke Trimmer-Smith, Ph. D. in progress.

Previous: Meghan Bentz, M. S. (2016); Carol M. Chaffee, Ph.D. (2013); Frank A. Bouchard, Ph.D. (2011); Lisa Tascille Crummett, Ph.D. (2008); Cecelia Miles, Ph.D. (2006); Kelly M. Jones, M.S. (2006); Daniel Janes, Ph.D. (2004)

SERVICE FOR THE PROFESSION:

Chair, NIH GGG-L(50)/ Advanced Genomic Technology Development Panel 15 March 2017.

Reviewer, SMBE Satellite Meeting Proposals (2017).

Reviewer, GBE Best Paper (2017).

External Examiner for PhD candidate Alison Wardlaw, "Theoretical Evolutionary Biology of Sex and Disease", University of Toronto, 2016.

Chair, Society for the Study of Evolution Nominating Committee, 2016 (member 2014-15).

Co-Chair, TAGC Genetics Society of America, Evolution and Quantitative Biology - Evolution & Quantitative Genetics I Panel (recruiting and selecting speakers).

External Mentor for Christine Parent, project director for NIH COBRE Center for Modeling Complex Interactions at the University of Idaho, 2015 - present.

Selected participant, Biological and Ecological Sciences Coalition (BESC) Congressional Visits Day, one day of intensive training followed by one day meeting with legislators, 2015.

Chair, NIH GVE Conflict Review Panel, June 2015.

Member, External Review Team, Department of Biology, Colorado State University, 2013.

Member, Genetics Society of America Women in Genetics Committee, 2013-2015.

Councillor, Society for Molecular Biology & Evolution, 2013-2015.

F1000 member, 2013 (ongoing).

Chair, NIH Genetic Variation and Evolution Study Section, 2012-2013.

Member, SMBE Finance Committee, 2010.

Member, NIH Genetic Variation and Evolution Study Section, 2009-2012.

Member, NESCent Advisory Board, 2009-2012.

Science Advisor, NIH Evolution and Medicine Supplement, Biological Sciences Curriculum Study (company developing curricula for middle and high school students relating evolution and medicine), 2009-2011.

NIH Challenge Grants, Stage 1 Reviewer, 2009.

Advisory Board, Women Evolving Biological Sciences (WEBS), an NSF-funded project aimed at retention of women in science, 2007-2013.

Member, NESCent (NSF National Evolutionary Synthesis Center) Working Group, "**Synergistic Evolutionary LEarning Consortium: Evolution in AcTION** (SELECTION Working Group), 2006-2007.

NIH Special Emphasis Panel, Genetic Basis of Psychiatric Disorders, December 2005.

NIH Genetic Variation and Evolution Panel member, March 2005, October 2005, February 2006.

Associate Editor, *Evolution* (2008-2011), *Genome Biology and Evolution* (2009-present), *Molecular Biology and Evolution* (2004-2008), and *Genetica* (2005-2007).

Treasurer for the Society for Molecular Biology and Evolution, 2003-2005, 2006-2008.

Panel member, NASA Organismal Biology Flight Panel, 2001.

Evolution Education Representative for the Society of Molecular Biology and Evolution, 2000-2002.

Adjunct Professor, Center for Women's Studies and Gender Research, UF.

Ad hoc write-in reviewer, NSF, 1998 - present.

Ad hoc panel member, Genetics Study Section, NIH, 2000, 2001, 2002, 2003.

Guest editor, special issue of National Women's Studies Association Journal: "The Scientific Search for Sex Differences", 1999.

Reviewer for *Genetics, Evolution, Molecular Biology and Evolution, Genetical Research, American Naturalist, Proceedings of the Royal Society, PNAS, etc.*

SERVICE FOR THE DEPARTMENT, COLLEGE, AND UNIVERSITY:

Chair Search External Committee Member, UF CLAS Chemistry, 2017.

Member, a2ru (Alliance for the Arts in Research Universities) UF 2017 Student Summit Steering Committee, UF College of the Arts (2016-2017).

Member, UF a2ru (Alliance for the Arts in Research Universities) Leadership Council, 2015-present.

Member, Health Disparities and Society Minor Steering Committee, UF Center for Gender, Sexualities, and Women's Studies Research, 2016-present.

Member, Internal Research Advisory Board, UF Emerging Pathogens Institute, 2014-present.

Elected Member, CLAS Faculty Council, 2013-2014.

Biology Major Executive Committee, 2013-2014.

Member, Center for Gender, Sexualities, and Women's Studies Research Council, 2012-present.

Member, CLAS Curriculum Committee, 2009-2011 (elected Chair, 2010-2011).

Member, UF Genetics Institute Strategic Planning Committee, 2009-2014.

Member, Department of Biology Strategic Planning Committee, 2009-2010.

Chair, Quantitative/Theoretical Evolutionary Biology Search Committee, 2009.

Member, UF Genetics Institute Executive Committee, 2006-present.

Member, Zoology Department Merit Pay Committee (elected), 2007-2008.

Member, UF External Search Committee Member, Population Genetics (Botany), 2005.

Member, Zoology Department Undergraduate Curriculum Committee 2002-2008.

Member, Biotechnology Advisory Committee 2003-2005.

Member, Provost's Commission on Women Faculty 2001-2004.

Member, CLAS Teaching and Advising Awards Committee 2002-2003.

Member, CLAS 150th Celebration Organizing Committee, 2002-2003.

Member, Zoology Department Executive Committee 2002-2004.

Member, Zoology Department Search Committees (five).

Member, Zoology Department Seminar Committee Co-Chair, 1999-2003.

Organizer, Special Topics Evolutionary Genetics (ZOO 6927), 1999-2002.

Member, UF External Search Committees: Insect Physiology (Entomology) and Conservation Genetics (WEC and Fisheries), 2003-2004.

Faculty advisor, UF Camp Kesem (2011-2014); UF Women in Science and Engineering (2005-2014).

PRESENTATIONS:

Invited talk, "Host RNA Editing as a Selective Force on RNA Viruses", Ecology & Evolution of Viruses Workshop, American Society for Virology, Madison WI, 24 June 2017.

Moderator and panelist, "Murky Waters: Navigating Interdisciplinary Collaborations", a2ru (Alliance for the Arts in Research Universities) UF Student Summit 2017.

Invited seminar, "The Role of Host Defenses in Shaping Viral Evolution: *Drosophila melanogaster* and DMelSV", University of Toronto, Canada, 7 July 2016.

Invited seminar, Host Bites Virus: *Drosophila melanogaster* and Sigma Virus, University of Idaho, 15 April 2016.

Invited seminar, The coevolution of viruses and their hosts; or, why viruses make us sick, Daytona State College, 31 August 2015.

Selected talk, Host defenses constrain viral evolution in DMelSV (Rhabdoviridae) of *Drosophila melanogaster*, Society for Molecular Biology & Evolution conference, Vienna, Austria, 15 July 2015.

Invited seminar, Host defenses work together to constrain viral evolution, University of Houston, 25 March 2015.

Selected talk, Host defenses constrain viral evolution in DMelSV (Rhabdoviridae) of *Drosophila melanogaster*, Virus Evolution Workshop, State College, PA, 21 March 2015.

Selected panel, Shaping technological literacy for feminist science studies, National Womens' Studies Association, San Juan, Puerto Rico, 13 November 2014.

Invited seminar, Texas State University, Virulence, viruses, and fruit flies, 18 April 2014.

Invited talk, Drosophila Virus Working Group, University of Idaho, The sigma virus-Drosophila experimental evolution system, 19 August 2013.

Invited seminar, University of Toronto, Canada, Onward and upward: experimental evolution in sigma virus and *Drosophila melanogaster*, 17 May 2013.

Invited seminar, University of Rochester, Onward and upward: experimental evolution in sigma virus and *Drosophila melanogaster*, 3 May 2013.

Invited seminar, University of Western Ontario, Canada, Onward and upward: experimental evolution in sigma virus and *Drosophila melanogaster*, 21 March 2013.

Contributed talk, EEID PI meeting (invited meeting open only to PIs of NIH or NSF grants related to Ecology & Evolution of Infectious Disease), Experimental evolution of sigma virus in *Drosophila*, 17 March 2013.

Invited seminar, McMaster University, Canada, Sigma virus in *Drosophila*: shifting optima, shifting hosts, 30 January 2013.

Invited seminar, Augustana College, SD, Cautionary tales on the evolution of virulence: sigma virus and *Drosophila*, 9 May 2012.

Invited seminar, NC State University Distinguished Seminar Speaker, Coevolution of sigma virus and *Drosophila*, 1 February 2012.

Invited seminar, Union College (Women's Studies), The Tightrope Extends: The Feminist Life of a *Drosophilist* after Tenure, 18 January 2012.

Invited seminar, Emory University, Sigma virus in *Drosophila*: insights into host pathogen coevolution, 3 November 2011.

Invited presentation, Radiation effects on organisms distributed near Fukushima Daiichi Nuclear

Power Station, Society for Molecular Biology and Evolution (a call for action), Kyoto, Japan, 27 July 2011.

Selected talk, Molecular basis of the evolution of virulence in sigma virus in *Drosophila*, Society for Molecular Biology and Evolution, Kyoto, Japan, 27 July 2011.

Workshop organizer, Mapping the pestilential landscape: tolerance, resistance, and virulence, EEID PI meeting (invited meeting open only to PIs of NIH or NSF grants related to Ecology & Evolution of Infectious Disease), Madison WI, 29 March 2011.

Contributed talk, Persistence of the virulent, vertically transmitted rhabdovirus sigma in natural populations of *Drosophila melanogaster*, Workshop in Virus Evolution, Samuel Roberts Noble Foundation, Ardmore, OK, 22 October 2010.

Contributed poster, Society for Molecular Biology and Evolution, NextGen sequencing reveals within and between-host variation in sigma virus (Rhaboviridae), Lyon, France, 6 July 2010.

Invited seminar, University of Kentucky, Coevolving variation: sex, flies, and viruses, 14 December 2009.

Contributed talk, Society for the Study of Evolution, Evolution of Dosage Compensation, Moscow, ID, 14 June 2009.

Invited seminar, Qu'est-ce que c'est la difference? Expression, sex, and dosage in *Drosophila*. University of Texas Austin, Department of Integrative Biology, 6 April 2009.

Invited workshop talk, *Drosophila* Research Conference, Pourquoi la difference? Evolutionary perspectives on sex differences in *Drosophila*, Chicago, IL, 6 March 2009.

Contributed talk, Society for the Study of Evolution, Genetic Architecture of Immune Genes in *Drosophila*, Minneapolis, MN, 21 June 2008.

Selected talk, Society for Molecular Biology and Evolution, Males are the simpler sex in *Drosophila melanogaster*, Halifax, Nova Scotia, 27 June 2007.

Invited speaker and participant, Astrobiology Small Payloads Workshop, NASA Ames Research Center, Mountainview CA, 18-20 June 2007.

Invited seminar, Males are the simpler sex, Heinrich Heine Universitaet, Duesseldorf Germany, 7 December 2007.

Selected talk, *Drosophila* Research Conference, Tales from the X files: chromosomal context, dosage compensation, and gene expression, 30 March 2006.

Invited seminar, Cornell University, Department of Molecular Biology and Genetics, Genetic architecture of gene expression, 20 January 2006.

Invited seminar, Smith College, Sex and genetics: Ovariole number in *Drosophila*, 3 October 2005.

Invited speaker, American Sociology Association Special Panel on Empirical Responses to the Summers' Controversy: Vive la variance? On genetic differences in scientific aptitude between the genders, 14 August 2005.

Invited seminar, University of Southern California, Molecular Biology and Biocomputing Department, Genetic Architecture of Gene Expression in *Drosophila*, 5 February 2004.

Plenary speaker, Keystone Symposium in Natural Variation and Quantitative Genetics in Model Organisms, 10 January 2004, Sex Dimorphism and Non-Additivity in Gene Expression in *Drosophila*.

Invited seminar, University of Washington Department of Ecology and Evolution, 4 November 2003, QTL for Ovarioles and Other Fitness Traits.

Invited seminar, Fred Hutchinson Cancer Research Institute, Seattle, WA, 3 November 2003, Gene Discovery for a Complex Trait in *Drosophila melanogaster*.

Invited seminar, NASA Ames Research Center, 13 August 2003, *Drosophila melanogaster* as a model system for the evolution of complex traits.

Symposium speaker, The Role of Linkage Disequilibrium in the Genetics of Complex Traits, Society for Molecular Biology and Evolution, 27 June 2003, Linking complex traits and gene expression.

Invited seminar, Indiana University at Bloomington, Ecology and Evolution Seminar Series, 14 March 2003, Expression variation and complex traits: ovariole number in *Drosophila melanogaster*.

Invited seminar, Purdue University, Bioinformatics Seminar Series, 11 March 2003, Candidate gene discovery: Combining mapping and microarrays in the genetic analysis of an adaptive trait in *Drosophila*.

Invited seminar, University of South Florida, 9 January 2003, Discovering candidate genes *de novo*: Integration of microarray and quantitative genetics.

Symposium speaker, Current Themes in Ecology: Environmental Genomics, University of Wageningen, the Netherlands, November 2001, Discovering Candidate Genes *de novo*: Integration of Microarray and Quantitative Genetics.

Invited speaker, University of California Davis, Evolution of Genetic Networks Seminar Series, October 2001, QTL, Candidate Genes, and Microarray.

Selected talk, European Society for Evolutionary Biology, August 2001, Quantitative Trait Genes from Combining QTL and Microarray.

Invited speaker, University of Nebraska Lincoln, Program in Ecology and Evolution, February 2001, Evolutionary Quantitative Genetics of Ovariole Number in *Drosophila melanogaster*.

Invited speaker, University of Nebraska Lincoln, Program in Women's Studies, February 2001, The Unnatural History of Rape: Evolution, Feminism, and Society.

Invited speaker, National Association of Biology Teachers Conference, Orlando, FL October 2001, Evolution in our lives: HIV/AIDS as a model system for teaching evolution.

Invited speaker, Florida State University, September 2000, Quantitative Genetics of Ovariole Number in *Drosophila*.

Invited speaker, Society for the Study of Evolution, Evolution Education Poster Session, June 2000, Evolution in Our Lives: Postmodernism and Evolution Education (with Andrew W. Davis).

National Association of Biology Teachers Convention, 27 October 1999, SMBE-sponsored panelist in Symposium on Teaching Evolution.

Plenary speaker, Southeastern Women's Studies Association Conference, March 1999, Time's fun when you're having flies: experiences of a *Drosophila* biologist.

Invited speaker, Université Paris P. et M. Curie, France, 11 December 1998, Evolutionary quantitative genetics of ovariole number in *Drosophila melanogaster*.

Invited speaker, Université Claude Bernard, Lyon, France, 8 December 1998, Evolutionary quantitative genetics of ovariole number in *Drosophila melanogaster*.

Invited speaker, University of California Davis, 17 June 1998, Evolutionary quantitative genetics of ovariole number in *Drosophila melanogaster*.

Invited speaker, University of Texas at Austin, 6 March 1998, Evolutionary quantitative genetics of ovariole number in *Drosophila melanogaster*.

Invited speaker, University of Florida, 3 February 1998, Evolutionary quantitative genetics of ovariole number in *Drosophila melanogaster*.

Invited speaker, University of Georgia, 30 April 1997, Quantitative genetics of ovariole number in *Drosophila melanogaster*.

Invited speaker, Utah State University, 17 February 1997, Quantitative genetics of ovariole number in *Drosophila melanogaster*.

Selected talk, Response and Adaptation to the Environment Conference, U. S. Army Research Office, October 1996, Quantitative trait loci for olfaction in *Drosophila melanogaster*: natural variation on chromosome 3 and its relationship to fitness, T. F. C. Mackay, J. B. Hackett, R. F. Lyman, M. L. Wayne and R. R. H. Anholt.

Invited speaker, U. C. San Diego, 3 May 1996, Molecular population genetics of *ref(2)P*, a locus which confers viral resistance to *Drosophila melanogaster*.

Selected talk, *Drosophila* Research Conference, April 1996, Quantitative genetic analysis of ovarian traits, M. L. Wayne, J. B. Hackett and T. F. C. Mackay.

Invited speaker, University of Cambridge, 16 November 1995, Molecular population genetics of *ref(2)P*, a locus which confers viral resistance to *Drosophila melanogaster*.

Selected talk, *Drosophila* Research Conference, April 1995, Variations on a theme: a more powerful version of the HKA test and a statistical test of background selection, M. L. Wayne and M. Kreitman.

Invited speaker, Stanford University, 12 April 1994, Linkage and selection at two proximal loci in *Drosophila melanogaster*.

Invited speaker, University of Edinburgh, 21 September 1993, Organization of genetic variation at the molecular level: lessons from *Drosophila*.

PEER-REVIEWED PUBLICATIONS:

Wayne mentees: undergraduate authors indicated by *; graduate student authors indicated by §; postdoctoral authors indicated by †.

- 1) S. S. Rossi, Wayne, M. L., Smith, R. B., Wright, C. E., Andreadis, N. A., and Hofmann, a. f. 1989. Effect of the bile-acid sequestrant colestipol on postprandial serum bile-acid concentration: evaluation by bioluminescent enzymic analysis. *Alimentary Pharmacology & Therapeutics* 3(1): 41-46.
- 2) M. Kreitman and M. L. Wayne 1994. Organization of genetic variation at the molecular level: lessons from *Drosophila*. Molecular Ecology and Evolution: Approaches and Applications. Basel, Birkhauser-Verlag. 157-184.
- 3) M. L. Wayne, D. Contamine and M. Kreitman 1996. Molecular population genetics of *ref(2)P*, a locus conferring viral resistance in *Drosophila melanogaster*, *Molecular Biology and Evolution* 13(1): 191-199.
- 4) M. L. Wayne and M. Kreitman 1996. Reduced variation at *concertina*, a heterochromatic locus in *Drosophila*, *Genetical Research* 68: 101-108.
- 5) T. F. C. Mackay, J. B. Hackett, R. F. Lyman, M. L. Wayne, and R. R. H. Anholt 1996. Quantitative genetic variation of odor-guided behavior in a natural population of *Drosophila melanogaster*. *Genetics* 144(2): 727-735.
- 6) M. L. Wayne, J. B. Hackett and T. F. C. Mackay 1997. Quantitative genetics of ovariole number in *Drosophila melanogaster*. I. Segregating variation, *Evolution* 51: 1156-1163.
- 7) M. L. Wayne and T. F. C. Mackay 1998. Quantitative genetics of ovariole number in *Drosophila melanogaster*. II. Mutational variance and genotype x environment interaction, *Genetics* 148:201-210.
- 8) M. L. Wayne and K. Simonsen 1998. Statistical tests of neutrality in the age of weak selection. *Trends in Ecology and Evolution* 13: 236-240.
- 9) M. L. Wayne 1998. Molecules and the maintenance of genetic variation. In: Proceedings of the Trinational Workshop on Molecular Evolution, Duke Publications Group, pgs. 73-87.
- 10) M. L. Wayne 2000. Walking a Tightrope: The Feminist Life of a *Drosophila* Biologist. *National Women's Studies Association Journal* 12:139-150.

- 11) M. B. Wyer, M. Barbercheck, D. Cookmeyer, H. O. Ozturk, and M. L. Wayne 2001 (new editions 2008, 2013). Women, Science and Technology : A Reader in Feminist Science Studies, Routledge.
- 12) M. L. Wayne, J. B. Hackett, C. L. Dilda, S. V. Nuzhdin, E. G. Pasyukova, and T. F. C. Mackay 2001. Quantitative trait locus mapping of fitness-related traits in *Drosophila melanogaster*: ovariole number, body size, early fecundity, and reproductive success. *Genetical Research* 77:107-116.
- 13) D. A. Liberles and M. L. Wayne 2002. Tracking adaptive evolutionary events in genomic sequences. *Genome Biology* 3(6):1018.1-1018.4.
- 14) M. L. Wayne and L. M. McIntyre 2002. Candidate gene discovery: Combining mapping and microarrays in the genetic analysis of an adaptive trait in *Drosophila*. *PNAS* 99: 14903-14906. *The above article was highlighted in "A winning combination", Nature Reviews Genetics 4: 7.*
- 15) C. Coffman, R. W. Doerge, M. L. Wayne, and L. M. McIntyre 2003. Intersection tests for single marker QTL analysis can be more powerful than two marker QTL analysis. *BioMedCentral Genetics* 4:10.
- 16) S. V. Nuzhdin, M. L. Wayne, K. L. Harmon, and L. M. McIntyre 2004. Common pattern of evolution of gene expression level and protein sequence in *Drosophila*. *Molecular Biology and Evolution* 21(7):1308-1317.
- 17) L. M. McIntyre, S. V. Nuzhdin, M. Popp, and M. L. Wayne 2004. Exploiting the null to reduce false positives in microarray experimentation. *Proceedings of the Joint Statistical Meeting*: paper 946.
- 18) G. Gibson, R. Riley-Berger, L. Harshman, A. Kopp, S. Vacha, S. Nuzhdin, and M. L. Wayne 2004. Extensive sex-specific non-additivity in gene expression in *Drosophila melanogaster*. *Genetics* 167(4): 1791-1799.
- 19) M. L. Wayne, Y.-J. Pan, S. V. Nuzhdin, and L. M. McIntyre 2004. Additivity and *trans* acting effects on gene expression in male *Drosophila simulans*. *Genetics* 168(3): 1413-1420.
- 20) M. L. Wayne, A. Korol, and T. F. C. Mackay 2005. Microclinal variation for ovariole number and body size in *Drosophila melanogaster* in "Evolution Canyon". *Genetica* 123(3): 263-270.
- 21) D. S. Richard, R. Rybczynski, T. G. Wilson, Y. Wang, M. L. Wayne, Y. Zhou, L. Partridge, and L. G. Harshman 2005. Insulin signaling is necessary for vitellogenesis in *Drosophila melanogaster* independent of the roles of juvenile hormone and ecdysteroids: female sterility of the *chico*¹ insulin signaling mutation is autonomous to the ovary. *Journal of Insect Physiology* 51:455-464. *This article was labeled a "Hidden Gem" in Faculty of 1000.*
- 22) C. J. Coffman, M. L. Wayne, S. V. Nuzhdin, L. A. Higgins†, and L. M. McIntyre 2005. Identification of co-regulated transcripts affecting male body size in *Drosophila*. *Genome Biology*, 6(6):R53.
- 23) L. A. Higgins†, K. M. Jones*, and M. L. Wayne 2005. Quantitative genetics of natural variation of spontaneous behavior in *Drosophila melanogaster*: the possible role of the social environment

on creating persistent patterns of group activity. *Evolution*, 59(7): 1529-1539.

24) M. Telonis-Scott†, L. M. McIntyre, and M. L. Wayne 2005. Genetic architecture of two fitness-related traits in *Drosophila melanogaster*: ovariole number and body size. *Genetica*, 125(2-3): 211-222.

25) D. E. Janes§ and M. L. Wayne 2006. Quantitative genetic variation in sex-determining response to incubation temperature in the leopard gecko, *Eublepharis macularius*. *Herpetologica*, 62(1): 56-62.

26) M. L. Wayne and M. M. Miyamoto 2006. "Genetic Variation", invited book chapter in Evolutionary Genetics: Concepts and Case Studies, J. Wolfe and C. Fox, editors, Oxford University Press, 14-31.

27) M. L. Wayne, U. Soundararajan, and L. G. Harshman 2006. Environmental stress and reproduction in *Drosophila melanogaster*: starvation resistance, ovariole numbers and early age egg production. *BMC Evolutionary Biology* 6:57.

28) L. M. McIntyre, L. M. Bono, A. Genissel, R. Westerman, D. Junk, M. Telonis-Scott†, L. Harshman, M. L. Wayne, A. Kopp, and S. V. Nuzhdin 2006. Sex-specific expression of alternative transcripts in *Drosophila*. *Genome Biology* 7:R79.
The above article has been designated as "highly accessed".

29) D. E. Janes§, D.S. Bermudez, L.J. Guillette, and M.L. Wayne 2007. Estrogens induced male production at a female-producing temperature in a reptile (Leopard Gecko, *Eublepharis macularius*) with temperature-dependent sex determination. *Journal of Herpetology* 41: 9-15.

30) C. M. Miles§, M. G. Hadfield, and M. L. Wayne 2007. Estimates of heritability for egg size in the serpulid polychaete *Hydroides elegans*. *Marine Ecology Progress Series* 340: 155-162.

31) M. L. Wayne, M. Telonis-Scott†, L. Bono, L. Harshman, A. Kopp, S. V. Nuzhdin and L. M. McIntyre 2007. Simpler mode of inheritance of transcriptional variation in male *Drosophila melanogaster*. *PNAS* 104: 18577-18582.
The above article was featured in a News & Commentary in Heredity 100: 543–544.

32) A. M. Genissel, L. M. McIntyre, M. L. Wayne, and S. V. Nuzhdin 2008. *Cis* and *trans* regulatory effects contribute to the natural variation of gene expression profile in *Drosophila melanogaster*. *Molecular Biology and Evolution* 25: 101-110.

33) C. M. Miles§ and M. L. Wayne 2009. Life history trade-offs and response to selection for increased egg size in the polychaete worm *Hydroides elegans*. *Genetica* 135(3): 289-298.

34) C. M. Miles§ and M. L. Wayne 2008 (invited contribution). Quantitative trait locus (QTL) analysis. *Nature Education* 1(1). <http://www.nature.com/scitable/topicpage/Quantitative-Trait-Loci-QTL-Analysis-53904>

35) M. Telonis-Scott†, A. Kopp, M. L. Wayne, S. V. Nuzhdin and L. M. McIntyre 2009. Sex-specific splicing in *Drosophila*: Widespread occurrence, tissue-specificity, and evolutionary conservation. *Genetics* 181: 421-434.

36) L. T. Crummett§ and M. L. Wayne 2009. Comparing fecundity in parthenogenetic versus

sexual populations of the freshwater snail *Campeloma limum*: is there a two-fold cost of sex? *Invertebrate Biology* (p 1-8) DOI: 10.1111/j.1744-7410.2008.00150.x

37) S. V. Nuzhdin, J. A. Brisson, A. Pickering, M. L. Wayne, L. G. Harshman and L. M. McIntyre 2009. Natural genetic variation in transcriptome reflects network structure inferred with major effect mutations: insulin / TOR and associated phenotypes in *Drosophila melanogaster*. *BMC Genomics* 2009, 10:124.

38) R. M. Graze†, L. M. McIntyre, B. J. Main, M. L. Wayne, and S. V. Nuzhdin 2009. Regulatory divergence in *Drosophila melanogaster* and *D. simulans*, a genome-wide analysis of allele-specific expression, *Genetics* 183: 547-561.

39) A. Carmon, M. Larson, M. Wayne, and R. MacIntyre 2010. The rate of unequal crossing over in the *dumpy* gene from *Drosophila melanogaster*. *Journal of Molecular Evolution*, 70: 260-265.

40) M. L. Wayne, J. Pienaar, M. Telonis-Scott†, L. S. Sylvestre*, S. V. Nuzhdin, and L. M. McIntyre 2010. Expression of defense genes in *Drosophila* evolves under a different selective regime from expression of other genes. *Evolution* 65(4): 1068–1078.

41) M. L. Wayne, G. M. Blohm§, M. E. Brooks, K. L. Regan*, B. Y. Brown*, M. Barfield, R. D. Holt, and B. M. Bolker 2011. The prevalence and persistence of sigma virus, a biparentally transmitted parasite of *Drosophila melanogaster*. *Evolutionary Ecology Research*, 13: 323-345.

42) Y. Yang, R. M. Graze†, B. M. Walts, C. M. Lopez, H. V. Baker, M. L. Wayne, S. V. Nuzhdin, and L. M. McIntyre 2011. Partitioning transcript variation in *Drosophila*: Abundance, Isoforms, and Alleles. *G3*, 1: 427-436.

43) F. A. Bouchard§, S. L. Lewis*, C. B. Marcus*, G. M. McBride*, and M. L. Wayne 2011. Using *Drosophila melanogaster* to test the effect of multiple introductions on a non-native population's ability to adapt to novel environments. *Evolutionary Ecology Research*, 13: 637–646.

44) K. Wolfe, M. L. Wayne, K. Makova, T. Y. Steen, M. Uyenoyama, and N. Takahata 2012. SMBE Proposal to the Government of Japan. *Molecular Biology & Evolution*, 29: 441.

45) D. W. Hall and M. L. Wayne 2013. Ohno's "peril of hemizyosity" revisited: gene loss, dosage compensation, and mutation. *Genome Biology & Evolution*, 5:1-15.

46) L. T. Crummett§, B. F. Sears*, D. C. LaFon*, and M. L. Wayne 2013. Parthenogenetic populations of the freshwater snail *Campeloma limum* occupy habitats with fewer environmental stressors than their sexual counterparts. *Freshwater Biology*, 58(4): 655-663.

47) C. C. Rittschoff§, S. Pattanaik*, L. Johnson*, L. F. Matos†, J. Brusini†, and M. L. Wayne 2013. Sigma virus and male reproductive success in *Drosophila melanogaster*. *Behavioral Ecology & Sociobiology*, 67(4): 529-540.

48) T. Y. Steen, M. L. Wayne 2013. Fukushima: 'Ecolab' branding insensitive. *Nature*, 500(7463): 400.

49) J. Brusini†, Y. Wang*, L. F. Matos, L.-S. Sylvestre*, B. M. Bolker, and M. L. Wayne 2014. Virulence evolution in a host-parasite system in the absence of viral evolution. *Evolutionary*

Ecology Research, 15(8): 883-901.

50) R. M. Graze†, L. M. McIntyre, A. M. Morse, B. M. Boyd*, S. V. Nuzhdin, and M. L. Wayne 2014. What the X has to do with it: differences in regulatory variability between the sexes in *Drosophila simulans*. *Genome Biology and Evolution*, 6: 818-829.

51) M. L. Wayne and B. M. Bolker 2015. Infectious Disease: A Very Short Introduction. Oxford University Press.

52) A. J. Mongue, M. V. Tsai, M. L. Wayne, and J. C. de Roode 2016. Inbreeding depression in monarch butterflies. *Journal of Insect Conservation*, 20(3): 477-483.

53) H. Piontkivska, L. F. Matos§, S. Paul, B. Scharfenberg, W. G. Farmerie, M. M. Miyamoto, and M. L. Wayne 2016. Role of host-driven mutagenesis in determining genome evolution of sigma virus (DMelSV; Rhabdoviridae) in *Drosophila melanogaster*. *Genome Biology & Evolution*, 8 (9): 2952-2963.

54) M. L. Bentz§, E. M. Humphrey*, L. G. Harshman, and M. L. Wayne 2017. Sigma Virus (DMelSV) Incidence in Lines of *Drosophila melanogaster* Selected for Survival Following Infection with *Bacillus cereus*. *Psyche*, Article ID 3593509, 6 pages, doi:10.1155/2017/3593509.

55) L. S. Soares§, A. B. Bolten, M. L. Wayne, S. T. Vilaça, F. R. Santos, M. A. G. dei Marcovaldi, and K. A. Bjorndal 2017. Comparison of reproductive output of hybrid sea turtles and parental species. *Marine Biology*, 164(1): 9 (10 pages).

55) J. Brusini†, M. L. Wayne, A. Franc, and C. Robin 2017. The impact of parasitism on resources allocation in a fungal host: the case of *Cryphonectria parasitica* and its mycovirus, *Cryphonectria Hypovirus 1*. *Ecology & Evolution*, in press.

56) H. Piontkivska, M. Frederick, M. M. Miyamoto, and M. L. Wayne 2017. RNA editing by the host ADAR system affects the molecular evolution of the Zika virus. *Ecology & Evolution* 7(12): 4475-4485.