

Beth L. Dumont, Ph.D.

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EDUCATION

University of Wisconsin Ph.D., Laboratory of Genetics	Madison, WI 2005-2010
Cornell University BA, <i>Summa Cum Laude</i> , Biology and Anthropology	Ithaca, NY 2001- 2005

ACADEMIC APPOINTMENTS

The Jackson Laboratory Assistant Professor	Bar Harbor, ME October 2016 -
North Carolina State University, Dept. of Biological Sciences Distinguished Postdoctoral Research Fellow	Raleigh, NC March 2013-July 2016
University of Washington, Dept. of Genome Sciences Senior Research Fellow in the Laboratory of Dr. Evan Eichler	Seattle, WA Dec. 2010-Dec. 2012

PUBLICATIONS

Roberts NB, Juntti SA, Coyle KP, **Dumont BL**, Stanley MK, Ryan AQ, Fernald RD, Roberts RB. Polygenic sex determination in the cichlid fish *Astatotilapia burtoni*. Under review at *BMC Genomics*.

Dumont BL. Defying the meiotic paradigm: Reduced X-Y pairing and recombination is not associated with increased sex chromosome aneuploidy in house mice. Under review at *Genetics*.

Dumont BL. Testing the meiotic requirement for recombination. Under review at *Genetics*.

Dumont BL, Devlin AA, Truempy DM, Miller JC, Singh ND. (2015) No evidence that infection alters global recombination rate in house mice. *PLoS ONE* **10**: e0142266.

Dumont BL. (2015) Interlocus gene conversion explains at least 2.7% of single nucleotide variants in human segmental duplications. *BMC Genomics* **16**: 456.

Dumont BL, Eichler EE. (2013) Signals of historical interlocus recombination in human segmental duplications. *PLoS ONE* **8**: e75949.

Campbell CD, Chong JX, Malig M, Ko A, **Dumont BL**, Han L, Vives L, O'Roak B, Sudmant P, Abney M, Ober C, Eichler EE. (2012) Estimating human mutation rate using autozygosity in a founder population. *Nat Genet* **44**:1277-1281.

White MA, Stubbings M, **Dumont BL**, Payseur BA. (2012) Genetics and evolution of hybrid male sterility in house mice. *Genetics* **191**:917-934.

Borodin PM, Basheva EA, Torgasheva AA, Dashkevich OA, Golenishchev FN, Kartavtseva IV, Mekada K, **Dumont BL**. (2012) Multiple independent evolutionary losses of XY pairing at meiosis in the grey voles. *Chromosome Res.* **20**:259-268.

Dumont BL, Payseur BA. (2011) Genetic analysis of genome-scale recombination rate in house mice. *PLoS Genetics* **7**(6): e1002116.

PUBLICATIONS (cont.)

Dumont BL, Payseur BA. (2011) Evolution of the genomic recombination rate in murid rodents. *Genetics* **187**:643-657.

Dumont BL, White MA, Steffy B, Wiltshire T, Payseur BA. (2011) Extensive recombination rate variation in the house mouse species complex inferred from genetic linkage maps. *Genome Res.* **21**:114-125.

Wong AK, Ruhe AL, **Dumont BL**, Robertson KR, Guerrero G, Shull SM, Ziegle JS, Millon LV, Broman KW, Payseur BA, Neff MW. (2010) A comprehensive linkage map of the dog genome. *Genetics* **184**:595-605.

Cox A, Ackert-Bicknell C, **Dumont BL**, Ding Y, Bell, JT, Brockmann GA, Wergedal JE, Bult C, Paigen B, Flint J, Tsaih S-W, Churchill GA, Broman KW. (2009) A new standard genetic map for the laboratory mouse. *Genetics* **182**: 1335-1344.

Dumont BL, Broman KW, Payseur BA. (2009) Variation in genomic recombination rates among heterogeneous stock mice. *Genetics* **182**: 1345-1349.

Dumont BL, Payseur BA. (2008) Evolution of the genomic rate of recombination in mammals. *Evolution* **62**: 276-294.

Fiumera AC, **Dumont BL**, Clark AG. (2007) Associations between sperm competition and natural variation in male reproductive genes on the third chromosome of *Drosophila melanogaster*. *Genetics* **176**: 1245-1260.

Fiumera AC, **Dumont BL**, Clark AG. (2006) Natural variation in male-induced 'cost-of-mating' and allele-specific association with male reproductive genes in *Drosophila melanogaster*. *Phil. Trans. R. Soc. B* **361**: 355-361.

Fiumera AC, **Dumont BL**, Clark AG. (2005) Sperm competitive ability in *Drosophila melanogaster* associated with variation in male reproductive proteins. *Genetics* **169**: 243-257.

RESEARCH GRANTS AND FELLOWSHIPS

K99/R00 Pathway to Independence Award 2014-2016
National Institute of General Medical Sciences, National Institutes of Health GM110332
Mechanisms of Recurrent, Parallel Loss of X/Y Pairing and Recombination at Meiosis in Voles
Estimated Total Award Amount: \$914,427 (\$164,395 awarded in K99-phase)

University of Washington Genome Sciences Training Grant Postdoctoral Fellowship
National Human Genome Research Institute, National Institutes of Health 2011-2012

Doctoral Dissertation Improvement Grant, Co-PI 2009-2010
National Science Foundation DEB 0909779
The Genetic Basis of Recombination Rate Variation in House Mice
Total Award Amount: \$15,000

Graduate Research Fellowship 2007-2010
National Science Foundation

University of Wisconsin Genome Science Training Program Pre-doctoral Fellowship
National Human Genome Research Institute, National Institutes of Health (*declined*) 2007

HONORS AND AWARDS

Conference Travel Awards

- The Allied Genetics Conference, the Genetics Society of America, Orlando, FL 2016
- Meeting of the Society for Molecular Biology and Evolution, Chicago, IL 2013
- Annual President's Symposium for the American Genetics Association, Iowa City, IA 2009

Phi Beta Kappa 2005-current

The Jackson Laboratory Summer Student Program 2002
Mentored by Dr. Malcolm Lyons in Dr. Beverly Paigen's Laboratory

Cornell University Dean's List, all semesters 2001-2005

LEADERSHIP AND SERVICE

Review Panels

- National Science Foundation, Graduate Research Fellowship Program, Genetics and Proteomics Panel 2016

Ad hoc Grant Reviewer

- National Science Foundation 2015
- Israeli Science Foundation 2010

Peer Reviewer 2008-current

Genome Research, PLoS Genetics, American Journal of Human Genetics, Genetics, Evolution, Proceedings of the Royal Society of London, PLoS ONE, BMC Genomics, BMC Evolutionary Biology, Journal of Heredity, Chromosoma

Evolution Coordinating Committee Member, University of Wisconsin 2008- 2010

Professional Society Member

- American Genetic Association 2011-current
- Society for the Study of Evolution 2006-current
- Society for Molecular Biology and Evolution 2007-current

TEACHING AND MENTORING

Guest Lecturer

- Human and Biomedical Genetics (GEN 441/541), North Carolina State University
Cytogenetics Fall 2015
- General Genetics (GEN 466), University of Wisconsin
Evolutionary Genetics Fall 2006

Course Instructor, Creative Retirement Institute, Edmonds Community College 2012
Recent Headlines in Genetics Research

Undergraduate Research Mentor

- Dana Truempy, North Carolina State University 2014-2016
- Wesley Sayres, North Carolina State University 2013
- Erin O'Flanagan, University of Wisconsin 2009-2010
- Maxine Lam, University of Wisconsin 2008-2009

Public outreach lecture, University of Wisconsin October 2008
Genetic Recombination, Meiosis, and Aneuploidy

Teaching Assistant, *General Genetics*, University of Wisconsin

Fall 2006

Volunteer tutor

- Heredity (GEN 160), University of Wisconsin
- Pre-calculus, Prefreshman Summer Program, Cornell University

Fall 2006-Spring 2007
Summer 2003

PRESENTATIONS

Invited Seminars

Gene Conversion and DNA Diversity across Duplications in the Human Genome. Invited seminar to the Department of Biology, University of North Carolina Greensboro, Greensboro, North Carolina, 2015.

Contributed Presentations

X Chromosome Control of Global Crossover Rates in Male and Female House Mice. Genetics Society of America. The Allied Genetics Conference: Marriott World Center, Orlando, FL, 2016.

Defying the Meiotic Paradigm: sex chromosome pairing, recombination and segregation in mammals. American Genetics Association Annual Symposium. Chromosome Evolution: Islandwood Conference Center, Bainbridge Island, Washington, 2015.

Testing the Meiotic Requirement for Crossing-over. Annual Meeting of the Society for the Study of Evolution. Raleigh Convention Center, Raleigh, North Carolina, 2014.

Gene Conversion and DNA Diversity across Segmental Duplications in the Human Genome. Annual Meeting of the Society for Molecular Biology and Evolution. Chicago, Illinois, 2013.

A Next-Generation Recombination Map of the Human Genome. American Genetics Association Annual Symposium. Recombination: Molecular mechanisms and evolutionary consequences. Durham Convention Center, Durham, North Carolina, 2012.

A QTL Map of Intersubspecific Recombination Rate Divergence. Annual Meeting of the Society for Molecular Biology and Evolution. Lyon, France, 2010.

Polymorphism and Divergence in Recombination Rate among House Mice. Evolution of Sex and Recombination: In Theory and Practice. University of Iowa, Iowa City, 2009.

A Comparative Analysis of Recombination Rate Evolution. Annual Meeting of the Society for Molecular Biology and Evolution. Dalhousie University, Halifax, Nova Scotia, Canada, 2007.

The Evolution of Mammalian Recombination Rates. Annual Meeting of the Society for the Study of Evolution. State University of New York, Stony Brook, New York, 2006.