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EDUCATION

Ph.D. in Biophysics, Harvard University, 2002
Advisors: John Wakeley and David Haig
Dissertation: *Coalescent Theory and Demographic Inference in a Continuous Population and Extensions to the Kinship Theory of Imprinting*
M.S., Biochemistry, University of Wisconsin, 1998
Advisor: Ronald Raines
A.B., Physics, Harvard College, 1993

POSITIONS

Ronin Institute 2011 –
President, Research Scholar
Santa Fe Institute 2011 –
External Professor
Rutgers University 2011 –
Department of Genetics
Visiting Scholar / Adjunct Assistant Professor
Santa Fe Institute 2005 – 2011
Professor
Harvard University 2002 – 2005
Harvard Society of Fellows
Visiting Researcher, Bauer Center for Genomics Research
Harvard University 1998 – 2002
Graduate Student, Biophysics
University of Wisconsin 1996 – 1998
Graduate Student, Biochemistry
Los Alamos National Laboratory 1993 – 1996
Graduate Research Assistant
Los Alamos National Laboratory 1990 – 1991
Undergraduate Research Assistant

PUBLICATIONS

GENOMIC IMPRINTING

- Wilkins JF, Úbeda F, & Van Cleve J (2016) The evolving landscape of imprinted genes in humans and mice: Conflict among alleles, genes, tissues, and kin. *BioEssays* **38**: 482-489. [DOI: 10.1002/bies.201500198]
- Wilkins JF (2014) Costs and Consequences of the Conflict over Infant Sleep. *Evolution, Medicine, and Public Health* **2014**: 63-64. [DOI: 10.1093/emph/eou012]
- Wilkins JF (2014) Genomic Imprinting of Grb10: Coadaptation or Conflict? *PLOS Biology* **12**: e1001800. [DOI: 10.1371/journal.pbio.1001800]
- Wilkins JF (2013) Phenotypic plasticity, pleiotropy, and the growth-first theory of imprinting. In *Environmental Epigenomics in Health and Disease*. Eds. Jirtle, R. & Tyson F., pp. 57-72.
- Wilkins JF & Úbeda F (2011) Diseases associated with genomic imprinting. *Prog. Mol. Biol. Transl. Sci.* **101**: 401-445. [DOI: 10.1016/B978-0-12-387685-0.00013-5]
- Brandvain Y, Van Cleve J, Úbeda F, Wilkins JF (2011) Demography, kinship, and the evolving theory of genomic imprinting. *Trends Genet.* **27**: 251-257. [DOI: 10.1016/j.tig.2011.04.005]
- Wilkins JF (2010) Genomic imprinting and conflict-induced decanalization. *Evolution* **65**: 537-553 [DOI: 10.1111/j.1558-5646.2010.01147.x]
- Wilkins JF (2010) Antagonistic coevolution of two imprinted loci with pleiotropic effects. *Evolution.* **64**: 142-151. [DOI: 10.1111/j.1558-5646.2009.00826.x]
- Úbeda F & Wilkins JF (2008) Imprinted genes and human disease: An evolutionary perspective. *Adv. Exp. Med. Biol.* **626**: 101-115. In: Wilkins, J. F., ed. *Genomic Imprinting*, Springer, New York & Landes Bioscience, Austin, TX.
- Wilkins JF (2006) Competitive signal discrimination, methylation reprogramming and genomic imprinting. *J. Theor. Biol.* **242**: 643-651. [DOI: 10.1016/j.jtbi.2006.04.015]
- Wilkins JF (2006) Tissue-specific reactivation of gene expression at an imprinted locus. *J. Theor. Biol.* **240**: 277-287. [DOI: 10.1016/j.jtbi.2005.09.007]
- Wilkins JF (2005) DNA methylation and imprinting: epigenetic canalization and conflict. *Trends Genet.* **21**: 356-365. [DOI: 10.1016/j.tig.2005.04.005]
- Wilkins JF & Haig D (2003) What good is genomic imprinting: The function of parent-specific gene expression. *Nat. Rev. Genet.* **4**: 359-368. [DOI: 10.1038/nrg1062]
- Wilkins JF & Haig D (2003) Inbreeding, maternal care and genomic imprinting. *J. Theor. Biol.* **221**: 559-564. [DOI: 10.1016/j.jtbi.2003.3206]
- Wilkins JF & Haig D (2002) Parental modifiers, antisense transcripts and loss of imprinting. *Proc. R. Soc. Lond. B* **269**: 1841-1846. [DOI: 10.1098/rspb.2002.2096]

Wilkins JF & Haig D (2001) Genomic imprinting at two antagonistic loci. *Proc. R. Soc. Lond. B* **268**: 1861-1867.

Haig D & Wilkins JF (2000) Genomic imprinting, sibling solidarity and the logic of collective action. *Phil. Trans. R. Soc. Lond. B* **355**: 1593-1597.

POPULATION GENETICS

Wilkins JF, McHale PT, Gervin J, & Lander AD (2016) Survival of the Curviest: Noise-Driven Selection for Synergistic Epistasis. *PLoS Genetics* **12**: e1006003. [DOI: 10.1371/journal.pgen.1006003]

Úbeda F & Wilkins JF (2011) The Red Queen theory of recombination hotspots. *J. Evol. Biol.* **24**: 541-553. [DOI: 10.1111/j.1420-9101.2010.02187.x]

Jesus FF, Wilkins JF, Solferini VN, & Wakeley J (2006) Expected coalescence times and segregating sites in a model of repeated glacial cycles. *Genet. Mol. Res.* **5**: 466-474.

Wilkins JF (2006) Unraveling male and female histories from human genetic data. *Curr. Opin. Genet. Dev.* **16**: 611-617. [DOI: 10.1016/j.gde.2006.10.004]

Wilkins JF & Marlowe F (2006) Sex-biased migration in humans: what should we expect from genetic data? *BioEssays* **28**: 290-300. [DOI: 10.1002/bies.20378]

Wilkins JF (2004) A Separation-of-Timescales Approach to the Coalescent in a Continuous Population. *Genetics* **168**: 2227-2244. [DOI: 10.1534/genetics.103.022830]

Wilkins JF & Wakeley J (2002) The coalescent in a continuous, finite, linear population. *Genetics* **161**: 873-888.

MISCELLANEOUS

Youn H, Sutton L, Smith E, Moore C, Wilkins JF, Maddieson I, Croft W, & Bhattacharya T (2016) On the universal structure of human lexical semantics. *Proc Natl Acad Sci USA* **113**: 1766-1771. [DOI: 10.1073/pnas.1520752113] (preprint available at arXiv:1504.07843)

Hruschka DJ, Branford S, Smith DE, Wilkins J, Meade A, Pagel M, Bhattacharya T (2015) Detecting regular sound changes in linguistics as events of concerted evolution. *Curr. Biol.* **25**: 1-9. [DOI: 10.1016/j.cub.10.064]

Balch C, Arias-Pulido H, Banerjee S, Lancaster AK, Clark KB, Perilstein M, Hawkins B, Rhodes J, Sliz P, Wilkins J, Chittenden TW (2014) Science and technology consortia in U. S. biomedical research: A paradigm shift in response to unsustainable academic growth. *BioEssays* **37**: 119-122. [DOI: 10.1002/bies.201400167]

- Wilkins JF & Thurner S (2010) The Jerusalem game: cultural evolution of the golden rule. *Advances in Complex Systems* **13**: 635-641. [DOI: 10.1142/S0219525910002785]
- Wilkins JF & Godfrey-Smith P (2010) Comment on “The Domain of the Replicators: Selection, Neutrality, and Cultural Evolution” by Stephen Lansing and Murray J. Cox. *Current Anthropology* **52**: 105-125. [DOI: 10.1086/657643]
- Wilkins JF & Godfrey-Smith P (2009) Adaptationism and the adaptive landscape. *Biol. Philos.* **24**: 199-214. [DOI: 10.1007/s10539-008-9147-5]
- Godfrey-Smith P & Wilkins JF (2008) Adaptationism. In *A Companion to the Philosophy of Biology*. eds. Sarkar S & Plutynski A, Blackwell Publishing, Malden, MA.
- Wilkins JF (2008) Epigenetic Variation in Humans. In: *Encyclopedia of Life Sciences*. John Wiley & Sons, Ltd: Chichester. [DOI: 10.1002/9780470015902.a0020811]
- Wilkins JF (2007) Maternal Influence. *McGraw-Hill Encyclopedia of Science & Technology*.

BIOCHEMISTRY

- Willardson BM, Wilkins JF, Rand TA, Schupp JM, Hill KK, Keim P & Jackson PJ (1998) Development and testing of a bacterial biosensor for toluene-based environmental contaminants. *Appl. Env. Microbiol.* **64**: 1006-1012.
- Wilkins JF, Bitensky MW & Willardson BM (1996) Regulation of the Kinetics of Phosducin Phosphorylation in Retinal Rods. *J. Biol. Chem.* **271**: 19232-19237.
- Willardson BM, Wilkins JF, Yoshida T & Bitensky MW (1996) Regulation of phosducin phosphorylation in retinal rods by Ca²⁺/calmodulin-dependent adenylyl cyclase. *Proc. Natl. Acad. Sci. USA* **93**: 1475-1479.
- Yoshida T, Willardson BM, Wilkins, JF, Jensen GJ, Thornton BD & Bitensky MW (1994) The phosphorylation state of phosducin determines its ability to block transducin subunit interactions and inhibit transducin binding to activated rhodopsin. *J. Biol. Chem.* **269**: 24050-24057

BOOK

- Wilkins JF, editor. (2008) *Genomic Imprinting*. Springer, New York and Landes Bioscience, Austin, TX. URL: http://www.landesbioscience.com/books/intelligence_unit/id/945

SOFTWARE

MUTANT TRACKER

Program for simulating genealogical processes in a geographically structured habitat. Implements a variety of past demographic scenarios, mutation models, and output formats.

DIMPLE

Demographic Inference by Maximum Partial Likelihood Estimation.

Program for estimating dispersal distances from genetic data sampled from a one-dimensional habitat (such as a coastline).

PROFESSIONAL SERVICE

Associate Editor, *Evolution* 2012-2014

Reviewer for *American Naturalist*, *BioEssays*, *Current Anthropology*, *Evolution*, *Genetics*, *Journal of Theoretical Biology*, *Molecular Biology and Evolution*, *Molecular Ecology*, *PLoS Biology*, *PLoS Genetics*, *PloS One*, *Proceedings of the Royal Society of London, Series B*, *Science*, *Theoretical Population Biology*.

Editorial Board, *Primers in Complex Systems*, Princeton University Press, 2008 –
Science Steering Committee, Institute for Complex Adaptive Matter, 2010 –