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**DEGREES**

Ph.D. in Biophysics, Harvard University, 2002  
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

A.B., Physics, Harvard College, 1993

**POSITIONS**

Santa Fe Institute 2005 –  
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, J. F. & Úbeda, F. [in review] Diseases associated with imprinting (Book chapter).
- Wilkins, J. F. 2010 Genomic imprinting and conflict-induced decanalization. *Evolution*, in press. [DOI: 10.1111/j.1558-5646.2010.00147.x]
- Wilkins, J. F. 2009 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, J. F. 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, J. F. 2006 Competitive signal discrimination, methylation reprogramming and genomic imprinting. *J. Theor. Biol.* **242**, 643-651. [DOI: 10.1016/j.jtbi.2006.04.015]
- Wilkins, J. F. 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, J. F. 2005 DNA methylation and imprinting: epigenetic canalization and conflict. *Trends Genet.* **21**, 356-365. [DOI: 10.1016/j.tig.2005.04.005]
- Wilkins, J. F. & 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, J. F. & Haig, D. 2003 Inbreeding, maternal care and genomic imprinting. *J. Theor. Biol.* **221**, 559-564. [DOI: 10.1016/j.jtbi.2003.3206]
- Wilkins, J. F. & 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, J. F. & Haig, D. 2001 Genomic imprinting at two antagonistic loci. *Proc. R. Soc. Lond. B* **268**, 1861-1867.
- Haig, D. & Wilkins, J. F. 2000 Genomic imprinting, sibling solidarity and the logic of collective action. *Phil. Trans. R. Soc. Lond. B* **355**, 1593-1597.

### COALESCENT THEORY / GEOGRAPHIC STRUCTURE

- Jesus, F. F., Wilkins, J. F., Solferini, V. N & Wakeley, J. 2006 Expected coalescence times and segregating sites in a model of repeated glacial cycles. *Genet. Mol. Res.* **5**, 466-474.
- Wilkins, J. F. 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, J. F. & 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, J. F. 2004 Gene genealogies in a continuous habitat: a separation of timescales approach. *Genetics* **168**, 2227-2244. [DOI: 10.1534/genetics.103.022830]

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

#### MISCELLANEOUS

Úbeda, F. & Wilkins, J. F. 2010 Red Queen dynamics and the recombination hotspot paradox. *Journal of Evolutionary Biology*, in press

Wilkins, J. F. & 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*, in press.

Wilkins, J. F. & Thurner, S. 2010 The Jerusalem game: cultural evolution of the golden rule. *Advances in Complex Systems*, **13**, 635-61.

Wilkins, J. F. & 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, J. F. 2008 Adaptationism. In *A Companion to the Philosophy of Biology*. eds. Sarkar, S. & Plutynski, A. Blackwell Publishing, Malden, MA.

Wilkins, J. F. 2008 Epigenetic Variation in Humans. In: *Encyclopedia of Life Sciences*. John Wiley & Sons, Ltd: Chichester. [DOI: 10.1002/9780470015902.a0020811]

Wilkins, J. F. 2007 Maternal Influence. *McGraw-Hill Encyclopedia of Science & Technology*.

#### BIOCHEMISTRY

Willardson, B. M., Wilkins, J. F., Rand, T. A., Schupp, J. M., Hill, K. K., Keim, P. & Jackson, P. J. 1998 Development and testing of a bacterial biosensor for toluene-based environmental contaminants. *Appl. Env. Microbiol.* **64**, 1006-1012.

Wilkins, J. F., Bitensky, M. W. & Willardson, B. M. 1996 Regulation of the Kinetics of Phosducin Phosphorylation in Retinal Rods. *J. Biol. Chem.* **271**, 19232-19237.

Willardson, B. M., Wilkins, J. F., Yoshida, T. & Bitensky, M. W. 1996 Regulation of phosducin phosphorylation in retinal rods by Ca<sup>2+</sup>/calmodulin-dependent adenylyl cyclase. *Proc. Natl. Acad. Sci. USA* **93**, 1475-1479.

Yoshida, T., Willardson, B. M., Wilkins, J. F., Jensen, G. J., Thornton, B. D. & Bitensky, M. W. 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, J. F., editor. 2008 *Genomic Imprinting*. Springer, New York and Landes Bioscience, Austin, TX. URL: [http://www.landesbioscience.com/books/intelligence\\_unit/id/945](http://www.landesbioscience.com/books/intelligence_unit/id/945)

#### MANUSCRIPTS IN PREPARATION

Moreno, S., Wilkins, J. F., & Bowles, S. Cosmopolitan ancestors: Genetic evidence that prehistoric populations were not small and isolated.

Wilkins, J. F. & Prohaska, S. J. Epigenetics and evolution.

Wilkins, J. F. & Bhattacharya, T. Bet-hedging under genomic imprinting: intragenomic conflict over risk preferences.

Wilkins, J. F. Dispersal rates in linear habitats: Demographic Inference by Maximum Partial Likelihood Estimation.

Wilkins, J. F. What, exactly, is the “cost of imprinting”?

Wilkins, J. F. A pain in the torus, revisited: Isolation by distance in the absence of local population density regulation.

#### RESEARCH SUPPORT

William H. Milton Fund, Harvard University 2003-2005. PI Jon F. Wilkins. \$35,000.

NSF HSD, award number 0624351. DHB: Financial markets as an empirical laboratory to study and evolving ecology of human decision making. PI J. Dooyne Farmer, Co-PIs Andrew W. Lo, Rosario Mantegna, and Jon F. Wilkins. \$755,464. 9/15/06-8/81/10.

#### 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).

## **RECENT AND SELECTED PRESENTATIONS**

SMBE meeting, Lyon, France. Genomic imprinting and conflict-induced decanalization. Contributed talk, 6 July 2010.

Evolution meeting, Portland, Oregon. A pain in the torus, revisited: isolation by distance in the absence of local density regulation. Contributed talk, 28 June 2010.

Oxford, Statistics. Genomic imprinting and the origin of maladaptive phenotypes. Invited seminar, 1 June 2010.

Albert Einstein College of Medicine, Systems and Computational Biology. Genomic imprinting and conflict-induced decanalization. Invited seminar, 28 April 2010.

University of Arizona, Ecology and Evolutionary Biology. Genomic imprinting and the evolutionary origins of maladaptive behavior. Invited seminar, 19 April 2010.

Michigan Ecology and Evolutionary Biology, Intragenomic conflict and the evolutionary origins of maladaptive behaviors. Invited seminar, 8 Feb 2010.

Evolution meeting, Moscow, Idaho. Genomic imprinting, pleiotropy, and decanalization: the evolutionary origins of maladaptive behaviors. Contributed talk, 16 June 2009.

Keystone Symposium: "Epigenetic Basis of Neurodevelopmental Disorders." Imprinted genes, risk preferences, and delay discounting. Contributed talk, 8 March 2009.

Santa Fe Institute Public Lecture. Devil or Angel: Genetic conflicts in brain and behavior. Public lecture, 19 March 2008.

Genomic Imprinting, Development and Disease meeting, Oxford, UK. Genetic conflict in the evolution of imprinting: beyond maternal versus paternal. Invited Keynote Lecture, 14 April 2005.