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ACADEMIC POSITIONS

- 2003- Assistant Professor, Integrative Biology, University of Texas at Austin
Member, Center for Computational Biology and Bioinformatics, UT
Member, Environmental Science Institute, UT
Member, Institute for Cellular and Molecular Biology, UT
- 2003-2006 External Faculty Member, Santa Fe Institute, Santa Fe, New Mexico
- 2000-2002 *National Science Foundation (NSF) Postdoctoral Fellow:*
Emory University, Atlanta, Georgia, Advisor: Bruce Levin
Santa Fe Institute, Santa Fe, New Mexico
University of Houston, Houston, Texas, Advisor: Michael Travisano

EDUCATION

- 1996-2000 *Stanford University:* Ph.D. in Biological Sciences, Advisor: Professor Marcus W. Feldman
- 1991-1996 *Harvard University:* B.A., Magna cum laude, Mathematics & Philosophy

AWARDS & FELLOWSHIPS

- 2005-2006 Institute for Cellular and Molecular Biology Fellowship, University of Texas at Austin
- 2005 College of Natural Sciences Teaching Excellence Award, University of Texas at Austin
- 2004 Technology Review TR100: Named as one of 100 Top Global Innovators Under 35
- 2004 Business Success Center 'Rookie of the Year' Award for Technological Innovation
- 2000-2002 National Science Foundation Postdoctoral Fellowship in Biological Informatics
- 2000-2002 Santa Fe Institute Postdoctoral Fellowship
- 2000 Samuel Karlin Prize for Ph.D Thesis in Mathematical Biology
- 1999 Steinmetz Fellowship, Santa Fe Institute
- 1996-1999 National Defense Science & Engineering Graduate Fellowship
- 1991-1996 U.S. Congressional National Science Scholar
- 1991 USA TODAY Newspaper Academic All-Star: Named one of top 20 high school graduates in the US

PUBLICATIONS

Meyers, L.A., F. Ancel, M. Lachmann (*in press*) Evolution of genetic potential. *PloS Computational Biology*.

Cowperthwaite, M., J.J. Bull, L.A. Meyers (2005) Distributions of beneficial fitness effects in RNA. *Genetics* **170**.

Pourbohloul, B., L.A. Meyers¹, Krajden, M., Patrick, D.M., Brunham, R.C. (2005) A quantitative comparison of control strategies for respiratory-borne pathogens. *Emerging Infectious Diseases* **11**.

Meyers, L.A. (2005) Constraints on variation from genotype through phenotype to fitness, in "Variation: A Hierarchical Examination of a Central Concept in Biology" (B. Hallgrímsson and B. Hall, Eds.), Academic Press.

Meyers, L.A. and W. Fontana (2005) Evolutionary lock-in and the origin of modularity in RNA structure, in "Modularity – Understanding the Development and Evolution of Complex Natural Systems" (W. Callebaut and D. Rasskin-Gutman, Eds.), MIT Press.

Meyers, L.A., B. Pourbohloul¹, M.E.J. Newman, D.M. Skowronski, R.C. Brunham (2005) Network theory and SARS: Predicting outbreak diversity. *Journal of Theoretical Biology* **232**: 71-81.

Meyers, L.A. (2004) Book review of Gerhard Schlosser and Günter Wagner (Eds.), "Modularity in Development and Evolution" *Science* **306**: 814-815.

Meyers, L.A. (2004) Book review of Bruce H. Weber and David J. Depew (Eds.), "Evolution and Learning: The Baldwin Effect Reconsidered" *American Journal of Human Biology* **16**: 495-496.

Meyers, L.A., J.F. Lee, M. Cowperthwaite, A.D. Ellington (2004) The robustness of naturally and artificially selected nucleic acid secondary structures. *Journal of Molecular Evolution* **58**: 681-691.

Lee, J.F., J.R. Hesselberth, L.A. Meyers, and A.D. Ellington (2004) Aptamer database. *Nucleic Acids Research*, **32**. D95-D100.

Meyers, L.A., B.R. Levin, A.R. Richardson and I. Stojilkovic (2003) Epidemiology, hypermutation, within-host evolution and the virulence of *Neisseria meningitidis*. Proceedings of the Royal Society of London: Biological Sciences **270**, 1667-1677.

Meyers, L.A., M.E.J. Newman, M. Martin and S. Schrag (2003) Applying network theory to epidemics: Control measures for *Mycoplasma pneumoniae* outbreaks. *Emerging Infectious Diseases* **9**, 204-210.

De Visser, J.A.G.M., J. Hermisson, G.P. Wagner, L.A. Meyers, et al. (2003) Perspective: Evolution and Detection of Genetic Robustness. *Evolution* **57**, 1959-1972.

Meyers, L.A. and J.J. Bull (2002) Fighting change with change: adaptive variation in an uncertain world. *Trends in Ecology and Evolution* **17**, 551-557.

¹ First two authors contributed equally.

PUBLICATIONS² (Continued)

Ancel, L.W. and W. Fontana (2000) Plasticity, evolvability and modularity in RNA. *Journal of Experimental Zoology (Molecular and Developmental Evolution)* **288**, 242-283.

Ancel, L.W. (2000) Undermining the Baldwin expediting effect: How phenotypic plasticity influences the rate of evolution. *Theoretical Population Biology*, **58**, 307-319.

Ancel, L.W. (1999) A quantitative model of the Simpson-Baldwin effect. *Journal of Theoretical Biology* **196**, 197-209.

Ancel, L.W. and M. W. Hero (1998) One-way intervals of circle maps. *Proceedings of the American Mathematical Society* **126**, 1191-1197.

Ancel, L.W. (1992,94) National Security Agency Cryptologic Mathematics Papers: Three classified internal publications.

INVITED PRESENTATIONS

Keynote Address, First Bytes at the Honors Colloquium (Outreach Program for Women), University of Texas (July 2005)

3rd Annual Ecology & Evolution of Infectious Disease Conference, Colorado State University (May 2005)

University of Minnesota, Ecology, Evolution, and Behavior Department (May 2005)

University of Texas, Non-linear Dynamics Seminar, Department of Physics (April 2005)

Lecture, Network Science: Implications for Biology and Medicine Symposium, Peter Wall Institute for Advanced Studies (January 2005)

Co-organizer (with Tim Keitt) and presenter, Working Group on Network Robustness to Evolving Agents, Santa Fe Institute (January 10-14, 2005)

University of Michigan Center for the Study of Complex Systems (November 2004)

MIT Technology Review Emerging Technologies Conference (September 2004)

Los Alamos National Labs, Los Alamos, New Mexico (May 2004)

Introduction to Mathematical Research Seminar, University of Texas (April 2004)

Mathematical Sciences Research Institutes (MSRI), Annual Meeting of Academic Sponsors (March 2004)

Brown University, Department of Ecology and Evolutionary Biology (February 2004)

University of Texas LAMP (February 2004)

University of Texas Dean's Scholars Seminar (November 2003)

Santa Fe Institute, Business Network and Board of Trustees Annual Meeting (November 2003)

² Papers prior to May 2002 are published under my maiden name, Lauren W. Ancel.

Texas Department of Health (October 2003)

Gordon Research Conference on Evolutionary and Ecological Functional Genomics (August 2003)

Complex Systems Summer School, Santa Fe Institute, Presented lecture series: "Modeling Evolution: Integrating Computation, Experimentation and Theory" (June 2002)

National Center for Genome Resources (NCGR) Santa Fe, New Mexico (May 2002)

Workshop on the Evolution and Measurement of Robustness in Organisms, Santa Fe Institute, Organizer: Günter Wagner (April 2002)

Department Seminar, Ecology and Evolutionary Biology Department, University of Arizona (January 2002)

Evolvability and Robustness in Molecules and Microbes, Organized and directed international workshop with Christopher Voigt and Frances Arnold, Santa Fe Institute, Santa Fe, New Mexico (February 2002)

Modularity: Understanding the Development and Evolution of Complex Natural Systems, Konrad Lorenz Institute for Evolution and Cognition Research, Austria (October 2000)

Institute for Advanced Studies, Princeton, New Jersey (1999)

INTERVIEWS AND MEDIA EVENTS

Interviewed by Erika Jonietz for MIT Technology Review article (October 2004)

Research Featured in Austin American Statesman (September 2004)

Interviewed by Max Rauner for Die Zeit article (February 2004)

Interviewed by Fred Guterl for Newsweek article, *The Battle Against Bugs Gets Serious* (January 2004)

Television interview by Dan Robertson on KXAN 36 News (November 2003)

Research featured in UT banner article, *Predicting the Path of Infectious Diseases* (October 2003)

Research featured by Kevin Laland in *Nature* book review as "the best theoretical analysis of the Baldwin Effect" (September 2003)

Interviewed by Clark Boyd for NPR's *The World* (June 2003)

Radio interview by Anita Anand on BBC's *Five Live* (June 2003)

Interviewed by Kristen Philipkowski for WIRED, *Behind the Six Degrees of SARS*, (May 2003)

TEACHING AND OUTREACH

BIO 318M (Undergraduate), *Biostatistics*, UT (Fall 2003, Spring 2005)

BIO384K (Graduate), *Evolution in Complex Biological Systems*, UT (Fall 2004)

BIO384K (Graduate), *Evolutionary Model Systems*, UT (Spring 2004)

Crazy Science Extravaganza, UT: Developed an epidemiology learning activity for interactive elementary school science fair (2003, 2004)

Research Science Institute, M.I.T., Presented lecture series: "Mathematical Modeling in Evolution, Ecology and Epidemiology" (Summer 2002)

EDITORIAL AND REFEREE ACTIVITIES

Associate Editor, *Journal of Molecular Evolution* (2004-present)

Editorial Board Member, *Directed and Applied Evolution* (2001-2003)

Referee for *Am J Epid*, *Am Nat*, *Biosystems*, *Complex Systems*, *Evolution*, *Genetics*, *J Mol Evol*, *J Theor Biol*, *Nature*, *OIKOS*, *PLOS*, *Proc Roy Soc London B* (1999-present)

Grant Reviewer for NIH, NSF, Mardsen Fund, MITACS (2002-present)

GRANT SUPPORT

Current Support

NSF, DEB-0445351, "Evolution, Conflict and Cooperation in Mixed-species Bacterial Communities." \$449,903, 3/1/05-2/29/08 (PI)

Canadian Institutes of Health Research (CIHR), The spread and evolution of SARS coronaviruses through contact networks: Prediction, recognition & Control, CAD\$250,000, 7/1/04-12/31/05 (Co-PI)

National Science Foundation, *ITR: Collaborative Research: Building the Tree of Life: A National Resource for Phylogenetic and Computational Phylogenetics*, \$1,371,218, 9/01/03-8/31/08 (Co-PI)

Past Support

National Science Foundation, *Evolving Better Biofilms: The Dynamics of Community-Level Natural Selection in Bacteria*, \$50,000, 2/1/03-1/31/05 (PI)

Canadian Institutes of Health Research (CIHR), *SARS: A Scientific Collaborative to Support Public Health Response through Vaccination*, CAD\$500,000, 5/15/03-3/31/04 (Co-I)