

GREGORY J. VELICER
Curriculum Vitae- October 2003

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EDUCATION

- 1992-1997 Ph.D. - Genetics, February 1997
 Michigan State University
 Dr. Richard E. Lenski, advisor
- 1990-1995 M.A. – Philosophy, October 1995
 Michigan State University
 Dr. Fred Gifford, advisor
- 1985-1990 B.S. – Biology, Cornell University

MANUSCRIPTS: SUBMITTED OR IN PREPARATION

- Travisano, M. and G. J. Velicer. Strategies of microbial cheater control. Submitted.
- Hillesland, K. L. and G. J. Velicer. Nutrient sensitivity of *Myxococcus* social motility affects predatory performance. In preparation.

PUBLICATIONS

- Velicer, G. J. and Y. N. Yu. 2003. Evolution of novel cooperative swarming in the bacterium *Myxococcus xanthus*. *Nature* **425**, 75-78.
- Fiegna, F. and G. J. Velicer. 2003. Competitive fates of bacterial social parasites: persistence and self-induced extinction of *Myxococcus* cheaters. *Proceedings of the Royal Society, London B* **270**, 1527-1534.
- Velicer, G. J. 2003. Social strife in the microbial world. *Trends in Microbiology* **11**, 330-37.

PUBLICATIONS (cont.)

- Velicer, G. J. and K. L. Stredwick. 2002. Experimental social evolution with *Myxococcus xanthus*. *Antonie van Leeuwenhoek* **81**, 155-164.
- Velicer, G. J., R. E. Lenski, and L. Kroos. 2002. Rescue of social motility lost during evolution of *Myxococcus xanthus* in an asocial environment. *Journal of Bacteriology* **184**, 2719-2727.
- Hao, T., D. Biran, G. J. Velicer, and L. Kroos. 2002. Identification of the Ω 4514 regulatory region, a developmental promoter of *Myxococcus xanthus* that is transcribed in vitro by the major vegetative RNA polymerase. *Journal of Bacteriology* **184**, 3348-3359.
- Velicer, G. J., L. Kroos, and R. E. Lenski. 2000. Developmental cheating in the social bacterium *Myxococcus xanthus*. *Nature* **404**, 598-601.
- Lenski, R. E. and G. J. Velicer. 2000. Games microbes play. *Selection* **1**, 51-57.
- Velicer, G. J., T. Schmidt, and R. E. Lenski. 1999. Application of traditional and phylogenetically based comparative methods to test for a trade-off in bacterial growth rate at low versus high substrate concentration. *Microbial Ecology* **38**, 191-200.
- Velicer, G. J. and R. E. Lenski. 1999. Evolutionary tradeoffs under conditions of resource abundance and scarcity: experiments with bacteria. *Ecology* **80**, 1168-1179.
- Velicer, G. J. 1999. Pleiotropic effects of bacterial adaptation to a single carbon source for growth on alternative substrates. *Applied & Environmental Microbiology* **65**, 264-269
- Velicer, G. J., L. Kroos, and R. E. Lenski. 1998. Loss of social behaviors by *Myxococcus xanthus* during evolution in an unstructured habitat. *Proceedings of the National Academy of Sciences, USA* **95**, 12376-12380.
- Velicer, G. J. 1998. Book review of Shapiro, J. A., and M. Dworkin (1997), *Bacteria as multicellular organisms*, Oxford University Press, Oxford. *Quarterly Review of Biology* **73**, 352.
- Lenski, R. E., G. J. Velicer, and R. Korona. 1997. Experimental studies on the evolution of bacteria that degrade 2,4-dichlorophenoxyacetic acid. In K. Horikoshi, M. Fukuda, and T. Kudo, eds. *Microbial Diversity and Genetics of Biodegradation*. Japan Scientific Societies Press, Tokyo, pp. 83-95.
- Velicer, G. J. 1997. Comparative and experimental tests for a tradeoff in bacterial fitness at low and high substrate concentration. PhD dissertation, Michigan State University.

Ad hoc referee for:

American Naturalist
BioEssays
Evolution
Genetics
Journal of Evolutionary Biology
Microbiology
Molecular Ecology
NSF Division of Environmental Biology
Nature
Proceedings of the Royal Society- Biological Sciences
Quarterly Review of Biology
Trends in Microbiology

POSITIONS

2000-present	Independent Group Leader, Department of Evolutionary Biology, Max-Planck-Institute for Developmental Biology, Tübingen, Germany
2000-present	Adjunct Assistant Professor, Center for Microbial Ecology, Michigan State University
1999-2000	Research Assistant Professor, Center for Microbial Ecology, Michigan State University
1997-1999	Postdoctoral Research Associate, laboratory of Lee Kroos, Department of Biochemistry, and laboratory of Richard Lenski, Center for Microbial Ecology, Michigan State University.
1992-1997	Graduate Assistant, laboratory of Richard Lenski, NSF Center for Microbial Ecology, Michigan State University

RESEARCH SUPPORT

2000-present	Internal funding from the Max-Planck Institute for Developmental Biology.
1999-2000	Grant from the Michigan State University Intramural Research Grant Program (IRGP): "Experimental evolution of myxobacterial social behaviors" (\$75,000).

1997 Grant from the Michigan State University Biotechnology Research Center: "Experimental evolution of *Myxococcus xanthus* social behaviors" (\$15,000).

1994 - 1997 NSF Center for Microbial Ecology Graduate Fellowship

SEMINARS AND CONFERENCES

2003 Invited speaker- European Science Foundation Symposium on Mutualisms and Cheating, Montpellier, France.

Invited speaker- Symposium on "Experimental microbial evolution", European Society for Evolutionary Biology meeting, Leeds, UK.

2002 Invited speaker- Centre for the Study of Evolution seminar, University of Sussex, Brighton UK.

Invited speaker- Symposium on "Altruism", International Conference on Complex Systems, Nashua, NH.

Co-organizer and speaker- Colloquium on "Behavioral Ecology & Evolution of Microorganisms", American Society for Microbiology Annual Meeting, Salt Lake City, Utah.

Invited speaker- Symposium "Frontiers in Microbiology: Ecophysiology and Environmental Genomics", Max-Planck Institute for Terrestrial Microbiology, Marburg, Germany.

2001 Invited speaker- EMBL PhD Student Symposium on Evolution. Heidelberg, Germany.

Invited speaker- European Science Foundation Workshop on Experimental Evolution with Microorganisms, Aussois, France.

Invited keynote speaker- International Society for Microbial Ecology, 9th International Symposium, session on Experimental Evolution, Amsterdam

Gordon Conference on Microbial Population Biology, poster.

Speaker, 28th Conference on the Biology of the Myxobacteria, Warwick University

Invited speaker- Université de Lausanne, Institut d'Ecologie seminar.

- 1999 Invited speaker- University of Paris.
 Invited speaker- Gordon Conference on Microbial Population Biology.
 Speaker, 26th Conference on the Biology of the Myxobacteria
- 1998 Speaker, annual meeting of The Society for the Study of Evolution
- 1997 Speaker, 24th Conference on the Biology of the Myxobacteria.

TEACHING/ADVISING

- February 2002 - PhD advisor for Michiel Vos, University of Tübingen/ Max-Planck
 Institute for Developmental Biology, Tübingen
- November 2001- PhD advisor for Supriya Kadam, University of Tübingen / Max-Planck
 Institute for Developmental Biology, Tübingen
- April 2001- PhD advisor for Francesca Fiegna, University of Tübingen / Max-
 Planck Institute for Developmental Biology, Tübingen
- April 2000 Invited lecturer for Frontiers of Microbiology (introductory course).
- June 1999- PhD co-advisor (with Richard E. Lenski) for Kristina Stredwick,
 Department of Microbiology, Michigan State Univ.
- October 1998 Invited lecturer for two sessions of Advanced Microbial Ecology.
- 1998 - 1999 Undergraduate research supervisor for Matthew Peterson.

 Graduate rotation supervisor for Kristina Stredwick.
- Spring 1998 Undergraduate research supervisor for Elizabeth Smalley.
Spring 1998 Co-instructor of the graduate course “The Nature and Practice of
 Science” with Dr. James R. Miller and Dr. Gerd Kortemeyer.
- Summer 1995 Undergraduate summer intern supervisor for Shenandoah Oden.
- Spring 1995 Teaching assistant to Dr. Barbara Sears for upper-level Genetics.
- Fall 1994 Teaching assistant to Dr. Thomas Friedman for upper-level Genetics.