

CURRICULUM VITAE

David F. Gilmore, Assistant Professor of Environmental Biology

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Education

University of Massachusetts, Amherst, MA; 1989-1992. Postdoctoral Research Associate.

The University of Connecticut, Storrs, CT; 1984 to 1989. Ph.D. in Microbiology, 1989.

Indiana University, Bloomington, IN; 1982 to 1984. M.A. in Microbiology, August 1984.

University of Iowa, Iowa City, IA; 1976 to 1977. one year of graduate study in biochemistry.

University of Maine, Orono, ME; 1972 to 1976. B.S. in Biochemistry, May 1976.

Teaching Experience

1992 to present, Arkansas State University, Assistant Professor, teaching Microbiology, Nursing Microbiology, Environmental Microbiology, Virology, Genetics, and Biological Science.

1984-1987, The University of Connecticut, as a teaching assistant in General Microbiology and Pathogenic Microbiology.

1982-1984, Indiana University, as a teaching assistant General Microbiology Laboratory and Cell Physiology Laboratory.

Honors and Professional Activities and Responsibilities

University Radiation Safety Officer (1995-1999)

American Society for Microbiology
Bio/Environment Polymer Society
Sigma Xi Scientific Research Society, Secretary/Treasurer ASU Chapter, 2001-2002.

Funded Grants

Extramural:

“Determination of Mechanisms of Igepon Degradation in Gray Water”, Arkansas Space Grant Consortium Collaborative Grant, with 2 renewals (March 1, 2001 - Feb.29, 2004. \$15,000 /yr)

"Determination of Mechanisms of Igepon Degradation in Gray Water", Arkansas Space Grant Consortium Collaborative Grant, March 1, 2001 - Feb.28, 2002. \$15,000

"Development of a Novel Detection Method for Cytophaga-like Bacterial Fish Pathogens", Arkansas Science and Technology Authority, 1994-1995. \$39,011

University-associated:

"Ecological Consequences of Endocrine-Disrupting Compounds", Faculty Research Grant, Arkansas State University, 2000-2001

"Identification of Plastic-Producing Bacterial Isolates for Bioregenerative Systems", Faculty research Grant, Arkansas State University, 1998-1999

"Use of Bacterial plastics for Bioregenerative Systems", Arkansas Space Grant Consortium, 1998-1999.

Publications

Lee, Kwang-Min, and D. F. Gilmore. 2005. Fungal Degradation of the Bioplastic PHB (Poly-3-hydroxybutyric acid). *J. Polym. Environ.* 13(2): in press.

Lee, Kwang-Min, and D. F. Gilmore. 2004. Formulation and process modeling of biopolymer (polyhydroxyalkanoates: PHAs) production from industrial wastes by novel crossed experimental design. *Proc. Biochem.* 40: in press.

Nordeen, R., T. Mon, and D. Gilmore. 2001. Plasmid Analysis of Bacteria that Metabolize the Detergent Igepon. *J. Ark. Acad. Sci.* 55: 185-187.

Timmins, M..R., D. F. Gilmore, N. Lotti, M. Scandola, R.C. Fuller, and R.W. Lenz. 1997. A Spectrophotometric method for detection of enzymatic degradation of thin polymer films. *J. Environ. Polym. Degrad.* 5(1):1-16.

Gilmore, D.F., N. Lotti, B. Schneider, M. Scandola, R.W. Lenz, and R.C. Fuller. 1994. Biodegradability of blends of poly(3-hydroxybutyrate-co-3-hydroxyvalerate) with cellulose acetate esters in activated sludge. *J. Environ. Polym. Degrad.* 2:49-57

Gilmore, D.F., S. Antoun, R.W. Lenz, and R.C. Fuller. 1993. Degradation of poly(beta-hydroxyalkanoates) and polyolefin blends in a municipal wastewater treatment facility. *J. Environ. Polym. Degrad.* 1:269-274

Timmins, M., D.F. Gilmore, R.C. Fuller, and R.W. Lenz. 1993. Bacterial Polyesters and their Biodegradation, pp 119-131, in Fundamentals in Biodegradable Materials and Packaging, eds: D. Kaplan, E. Thomas, and C. Ching. Technomic Publishing Co. Inc, Lancaster, PA.

Gilmore, D.F., N. Lotti, R.W. Lenz, R.C. Fuller, and M. Scandola. 1992. Biodegradability of blends of poly(3-hydroxybutyrate-co-3-hydroxyvalerate) with ester-substituted celluloses, pp

251-254, in Biodegradable Polymers and Plastics, eds: M. Vert et al. Royal Society of Chemistry, Cambridge.

Gilmore, D.F., S. Antoun, R.W. Lenz, S. Goodwin, R. Austin, and R.C. Fuller. 1992. The fate of 'biodegradable' plastics in municipal leaf compost. *J. Indust. Microbiol.* 10:199-206.

Gilmore, D.F., R.W. Lenz, and R.C. Fuller. 1990. Biodegradation of poly(beta-hydroxyalkanoates). in Degradable Materials: Perspectives, Issues, and Opportunities. eds: S.A. Barenberg, J.L. Brash, R. Narayan, and A.E. Redpath. CRC Press, Boca Raton, FL.

Gilmore, D.F., W. Godchaux, and E.R. Leadbetter. 1989. Regulation of sulfate assimilation in *Cytophaga johnsonae*. *Arch. Microbiol.* 152: 387-392.

Gilmore, D.F., W. Godchaux, and E.R. Leadbetter. 1989. Cysteine is not an obligatory intermediate in the biosynthesis of cysteate by *Cytophaga johnsonae*. *Biochem. Biophys. Res. Comm.* 160:535-539.

Womack, B.J., D.F. Gilmore, and D. White. 1989. Calcium requirement for gliding motility in myxobacteria. *J. Bacteriol.* 171: 6093-6096.

Gilmore, D. F. and D. White. 1985. Cell cohesion in myxobacteria. *J. Bacteriol.* 161:113-117.

Recent Presentations

Twelfth Annual Arkansas Space Grant Symposium, April 30, 2004, Lyon College, Batesville, AR. Gilmore, D.F., T. Holifield, and T. Abramova. "Bacterial Degradation of a Detergent."

Arkansas Academy of Sciences Annual Meeting, April 2-3, 2004, Jonesboro, AR. Abramova, T. and D.F. Gilmore, "Bacterial Degradation of Low Molecular Weight Sulfonates" poster presentation.

Arkansas Academy of Sciences Annual Meeting, April 2-3, 2004, Jonesboro, AR. Gilmore, D.F. and K. Halcom, "UV Radiation Resistance of Paint-contaminating Bacteria"

103rd General Meeting of the American Society for Microbiology, May 20, 2003, Washington, D.C., Gilmore, DF, H. Trauth, B. Murphy, H. Davis, "Isolation and Characterization of Detergent-Degrading, Plastic-Producing Bacteria"

Eleventh Annual Arkansas Space Grant Symposium, April 25, 2003, Conway, AR. Abramova, T., D.F. Gilmore, K. Halcom, J. Greeno, B. Hogue, and H. Davis, "Studies on the Bacterial Degradation of the Detergent Igepon"

Tenth Annual Arkansas Space Grant Symposium, April 26, 2002, Jonesboro, AR. Davis, H., B. Murphy, and D.F. Gilmore, "PHB Production by a Detergent-degrading Bacterium"