MARK R. RILEY

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Professional preparation

University of Iowa	Post Doc.	1997	Biochem. Engin. /Analytical Chemistry
Rutgers University	Ph.D.	1995	Chemical and Biochemical Engineering
Rutgers University	M.S.	1994	Chemical and Biochemical Engineering
University of Michigan	B.S.E.	1990	Chemical Engineering

Appointments

July 2003 - present, Associate Professor, Department of Agricultural and Biosystems Engineering, Biomedical Engineering, Chemical and Environmental Engineering (2004-present), Materials Science and Engineering (2005-present), and Bio5 Institute (2005-present), **University of Arizona.**

April 1997 – June 2003, Assistant Professor, Department of Agricultural and Biosystems Engineering and Program in Biomedical Engineering, **University of Arizona**.

August 1995 - March 1997, Post-doctoral researcher, Department of Chemical and Biochemical Engineering and Department of Chemistry, **University of Iowa**.

Refereed Publications (out of 30 total)

Garcia, R.A., **M.R. Riley**, "Optimization of pre-treatments for use of lipase enzymes in non-aqueous media," accepted for publication in *Applied Biotechnology and Bioengineering*, June 2005.

Riley, M.R., D.E. Boesewetter, R. A. Turner, A. M. Kim, J. M. Collier, and A. Hamilton, "Comparison of the sensitivity of three lung derived cell lines to metals from combustion derived particulate matter," *Toxicology in Vitro*, 19, 3, 411-419 (2005).

Lucas, P., **M. R. Riley**, M. A. Solis, C. Juncker, J. Collier, D. E. Boesewetter, "Hydrophobic chalcogenide fibers for cell-based bio-optical sensors," in Optical Fibers and Sensors for Medical Applications. *Proceedings of SPIE,* 5691, 104-114 (2005).

Lucas, P., D. Le Coq, J. M. Collier, D. E. Boesewetter, C. Boussard-Pledel, B. Bureau, **M. R. Riley**, "Evaluation of toxic agent effects on lung cells by Fiber Evanescent Wave Spectroscopy (FEWS)," *Applied Spectroscopy*, 59, 1, 1-9 (2005).

Garcia, R.A., **M.R. Riley**, "Relative effectiveness of different pretreatments on the performance of *Rhizomucor miehei* lipase in non-polar reaction media," *Applied Biochemistry and Biotechnology*, 120, 2, 081-096 (2005).

B. Bureau, X. H. Zhang, F. Smektala, J.-L. Adam, J. Troles, H.-l. Ma, C. Boussard-Pledel, J. Lucas, P. Lucas, D. Le Coq, **M. R. Riley**, J. H. Simmons, "Recent advances in chalcogenide glasses," *Journal of Non-Crystalline Solids,* 345&346, 276 –283 (2004).

Okeson, C.D., **M.R. Riley**, E. Riley-Saxton, "In-vitro Alveolar Cytotoxicity of Soluble Components of Airborne Particulate Matter: Effects of Serum on Toxicity of Transition Metals" *Toxicology In Vitro*, 18, 673-680 (2004).

Riley, M.R., K. A. Jordan, M. L. Cox, "Development of a cell-based biosensor to evaluate the toxicity of inhaled materials," *Biochemical Engineering Journal*, Volume 19, Issue 2, 95-99 (2004).

Riley, M.R., D.E. Boesewetter, A.M. Kim, F.P. Sirvent, "Effects of metals Cu, Fe, Ni, V, and Zn on rat lung epithelial cells," *Toxicology*, 190, 171-185 (2003).

Boonmung, S., **M.R. Riley**, "Quantitative Analysis of Added Ammonium and Nitrate in Silica Sand Using Diffuse Reflectance Infrared Spectroscopy," *Spectroscopy Letters*, 251-274, 36, 3, (2003).

Okeson, C.D., **M. R. Riley**, A. Fernandez, J.O.L. Wendt, "Impact of the composition of combustion generated fine particles on epithelial cell toxicity: influences of metals and metabolism," *Chemosphere*, 51, 10, 1121-1128 (2003).

Canaves, L.C., **M.R. Riley**, "FT-NIR spectroscopic analysis of nitrogen in cotton leaves," *Applied Spectroscopy*, 56 (11), 1484-1489, (2002).

Okeson, C.D. and **M.R. Riley**, "Glutamine replenishment and ammonia removal in hybridoma cell cultures via immobilized glutamine synthetase," *Biochemical Engineering Journal*, 9, 2, 125-133 (2001).

Riley, M.R., H.M Crider, M.E. Nite, R.A. Garcia, J. Woo, R. M. Wegge, "Simultaneous measurement of 19 components in animal cell culture media by near infrared spectroscopy," *Biotechnology Progress*, 17, 2, 376-378, (2001).

Honors

University of Arizona Dean of Students Faculty Fellow (2001-present)
National Association of Colleges and Teachers of Agriculture, Teaching Award of Merit, University of Arizona, College of Agriculture and Life Sciences, 2002.
Alpha Epsilon, Agricultural Engineering Honor Society (1998-present).
Merck Excellence Fellowship (1993-1995).
NIH Biotechnology Pre-doctoral Fellowship (1990-1993).
B. S. E. *Cum Laude*, University of Michigan (1990).
Dean's List - University of Michigan (1988, 1989).

Professional Associations

ACS (American Chemical Society; 1996 - present).
Membership chair for ACS Biochemical Technology (BIOT) Division (1998-2002).
AIChE (American Institute of Chemical Engineers; 1992 - present).
ASAE (American Society of Agricultural Engineering, 1997 - present)
Chair of the Biological Engineering Division (7/99 - 6/2000).
ASEE (American Society of Engineering Education, 2000 – present)
BMES (Biomedical Engineering Society; 1994 - present).
IBE (Institute of Biological Engineering, 1997- present)
IBE Councilor (2000 – 2002; 2003-2004).

Scholarly activities

Associate Editor for *Transactions of ASAE* (Jan. 2005 – present).
Editor for Patents and Literature Reviews for *Applied Biochemistry and Biotechnology* (1998-present).
Biological Engineering Representative to the Resource Magazine Editorial Board (2004-2006).

Chapters in books

M.R. Riley, "Instrumentation and Process Control," chapter in Cell Culture Technology Marcel Dekker Pub., New York, NY. To appear in 2005, 54 pages.

M.R. Riley, "Techniques for screening toxins," submitted for review for the Encyclopedia of Agricultural, and Food, and Biological Engineering Marcel Dekker Pub., New York, NY, 18 pages (2004).

M.R. Riley, "Enzyme Kinetics," Encyclopedia of Agricultural, and Food, and Biological Engineering Marcel Dekker Pub., New York, NY, 261-263 (2003).

M.R. Riley, "Monitoring of animal cell cultivations by near-infrared spectroscopy," Recent Research Developments in Biotechnology & Bioengineering, Research Signpost Pub., Trivandrum, India, **3**, 143-166 (2000).