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EDUCATION AND TRAINING

| Institution and Location | Degree | Year | Field of Study |
|--|--------|------|----------------|
| University of Oklahoma, Norman, Oklahoma | PhD | 2002 | Microbiology |
| University of Manitoba, Winnipeg, Canada | MS | 1997 | Microbiology |
| University of Manitoba, Winnipeg, Canada | BS | 1994 | Biology |

RESEARCH AND PROFESSIONAL EXPERIENCE

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|-------------|---|
| 2011 – Pres | Assistant Professor, University of Tennessee, Biochemistry Department. |
| 2009 – Pres | Staff Scientist, Biosciences Division, Microbial Ecology and Physiology Group, Oak Ridge National Laboratory (ORNL), Oak Ridge, TN |
| 2008 – 2009 | Instructor, Advanced Biochemistry I/II, University of Missouri, Columbia, MI |
| 2005 – 2009 | Assistant Research Professor, Department of Biochemistry, University of Missouri, Columbia, MI |
| 2002 – 2005 | Post-doctorate fellow, William R. Wiley Environmental Molecular Sciences Laboratory, Pacific Northwest National Laboratory (PNNL), Richland, WA |
| 2003 – 2005 | Laboratory Designer and Instructor, University of Oklahoma, Norman, OK |
| 1997 – 2002 | PhD Graduate Student, Department of Botany/Microbiology, University of Oklahoma, Norman, OK |
| 1997 – 2001 | Laboratory Instructor, Department of Botany/Microbiology, Oklahoma, Norman, OK |
| 1994 – 1997 | MS Graduate Student, Department of Microbiology, University of Manitoba, Winnipeg, Canada |
| 1994 – 1997 | Teaching Assistant, General Microbiology, Department of Microbiology, University of Manitoba, Winnipeg, Canada |
| 1995 – 1996 | Teaching Assistant, Microbial Ecology, Department of Microbiology, University of Manitoba, Winnipeg, Canada |
| 1993 – 1994 | BS Research Student, University of Manitoba, Winnipeg, Canada |

PATENTS AND INVENTION DISCLOSURES:

Invention Disclosures

- 2011** Genome sequence completion strategy for recalcitrant regions causing segmented data; R.A. Hurt and D.A. Elias.
- 2011** Recovery of Nucleic acid from Iron Oxide Complexed Clay Environments; R.A. Hurt and D.A. Elias.
- 2010** Attaining Elusive Toxicant Remediating Microbial Cultures from Environmental Samples; D.A. Elias, J.J. Mosher, T.J. Phelps.
- 2010** Non-Enzymatic Coupled-(a)biotic Contaminants Reduction During Microbial Metabolism; J.W. Moon, T.J. Phelps, D.A. Elias.

Patents

2009 (Licenced) Fossil Fuel Free Process of Ligno-cellulosic Pretreatment with Biological Hydrogen Production; D.A. Elias, M.R. Mormile, M.B. Begemann, J.D. Wall. US Patent No. 8,034,592 through Green Technology Pilot Program.

PROFESSIONAL SERVICE, AFFILIATIONS, AND HONORS

Editor: 2011-present; Associate Editor *Frontiers in Microbiology*

Member: American Geophysical Union; American Society for Microbiology

Reviewer: *Environmental Science and Technology*; *Applied and Environmental Microbiology*; *Current Microbiology*; *Microbial Ecology*; *Environmental Microbiology*; *Biotechnology Advances*; *Chemosphere*; *Germicrobiology Journal*; *Geophysical Research Letters*; *Canadian Journal of Microbiology*.

Honors: Invited Plenary Lecture, Session 16K, Goldschmidt Conference; Invited Speaker, 5th Annual DOE ERSP PI Meeting; Invited Speaker and Symposium, Co-Convener, 109th ASM General Meeting; Invited Speaker,

American Geophysical Union Chapman Conference on Biogeophysics; Certified Windows SharePoint Administrator; Nominated to the U.S. National Society of Collegiate Scholars.

CURRENT COLLABORATORS AND CO-EDITORS

Yuri Gorby (USC), Ljiliana Pasa-Tolic (PNNL), Matthew Fields (MSU), Judy Wall (UM), Tamar Barkay (Rutgers), Adam Arkin (LBNL), Terry Hazen (ORNL/UT), Trent Northern (LBNL), Lee Kerkhof (Rutgers), Jizong Zhou (OU), Eric Alm (MIT), Mike Adams (UG).

SELECT PUBLICATIONS (Articles: 36, Book chapters:2; Presentations: 108)

- Parks, J.M., A. Johs, M. Podar, R. Bridou, R. A. Hurt, S.D. Smith, S.J. Tomanicek, Y. Qian, S.D. Brown, C.C. Brandt, A.V. Palumbo, J.C. Smith, J.D. Wall, D.A. Elias, L. Liang. 2013. The genetic basis for bacterial mercury methylation. *Science*, In press
- Mosher J.J., T.A. Vishnivetskaya, D.A. Elias, M. Podar, S.C. Brooks, S.D. Brown, C.C. Brandt and A.V. Palumbo. 2012. Characterization of the Deltaproteobacteria in contaminated and uncontaminated stream sediments and identification of potential mercury methylators. *Aquatic Microbial Ecology*. In press.
- Mosher J.J., T.J. Phelps, M.M. Drake, J.H. Campbell, J.G. Moberly, C.W. Schadt, M. Podar, S.D. Brown, T.C. Hazen, A.P. Arkin, A.V. Palumbo, B.A. Faybishenko, D.A. Elias. 2012. Microbial community succession during lactate amendment of chromium contaminated groundwater reveals a predominance of *Pelosinus* spp. *Applied and Environmental Microbiology* 78:2082-2091.
- Brown, S.D., M.B. Begemann, M.R. Mormile, J.D. Wall, C.S. Han, L.A. Goodwin, S. Pitluck, M.L. Land, L.J. Hauser, D.A. Elias. 2011. Complete genome sequence of the haloalkaliphilic, hydrogen-producing bacterium *Halanaerobium hydrogeniformans*. *Journal of Bacteriology* 193: 3682-3683.
- Brown, S.D., C.C. Gilmour, A.M. Kucken, J.D. Wall, D.A. Elias, C.C. Brandt, M. Podar, O. Chertkov, B. Held, D.C. Bruce, J.C. Detter, R. Tapia, C.S. Han, L.A. Goodwin, J.F. Cheng, S. Pitluck, T. Woyke, N. Mikhailova, N.N. Ivanova, J. Han, S. Lucas, A.L. Lapidus, M.L. Land, L.J. Hauser, A.V. Palumbo. 2011. Genome sequence of the mercury-methylating strain *Desulfovibrio desulfuricans* ND132. *Journal of Bacteriology* 193: 2078-2079.
- Brown, S.D., J.D. Wall, A.M. Kucken, C.C. Gilmour, M. Podar, C.C. Brandt, H. Teshima, J.C. Detter, C.S. Han, M.L. Land, S. Lucas, J. Han, L. Pennacchio, M. Nolan, S. Pitluck, T. Woyke, L. Goodwin, A.V. Palumbo, D.A. Elias. 2011. Genome Sequence of the Mercury-Methylating and Pleomorphic *Desulfovibrio africanus* strain Walvis Bay. *Journal of Bacteriology* 193:4037-4038.
- Gilmour, C.C., D.A. Elias, A.M. Kucken, S.D. Brown, A.V. Palumbo, C.W. Schadt, J.D. Wall. 2011. Sulfate-reducing bacterium *Desulfovibrio desulfuricans* ND132 as a model for understanding bacterial mercury methylation. *Applied and Environmental Microbiology* 77: 3938-3951.
- Vishnivetskaya, T.A., J.J. Mosher, A.V. Palumbo, Z.K. Yang, M. Podar, S.D. Brown, S.C. Brooks, B.H. Gu, G.R. Southworth, M.M. Drake, C.C. Brandt, D.A. Elias. 2011. Mercury and other heavy metals influence bacterial community structure in contaminated Tennessee streams. *Applied and Environmental Microbiology* 77:302-311.
- Elias D.A., M.W. Fields. 2011. Chapter 12: Transcriptome analysis of metal-reducing bacteria, p. 211-244. In: J. Stolz & R. Oremland (eds), *Microbial metal and metalloid metabolism: advances and applications*. ASM Press, Washington, DC.
- Elias, D.A., G.M. Zane, M.A. Auer, M.W. Fields, J.D. Wall, Y.A. Gorby. 2010. Can direct extracellular electron transfer occur in the absence of outer membrane cytochromes in *Desulfovibrio vulgaris*? *Geochimica et Cosmochimica Acta* 74:A263-A263.
- Gilmour, C.C., D. A. Elias, A. Kucken, S.D. Brown, A.V. Palumbo, J.D. Wall. 2010. The sulfate-reducing bacterium *Desulfovibrio desulfuricans* ND132 as a model for understanding bacterial mercury methylation. *Geochimica et Cosmochimica Acta* 74:A333-A333.
- Elias, D.A., S.L. Tollaksen, D.W. Kennedy, H.M. Mottaz, C.S. Giometti, J.S. McLean, E.A. Hill, G.E. Pinchuk, M.S. Lipton, J.K. Fredrickson, Y.A. Gorby. 2008. The influence of cultivation methods on *Shewanella oneidensis* physiology and proteome expression. *Archives of Microbiology* 189:313-324.
- Gilmour C.C., D.A. Elias, A.M. Kucken, S.D. Brown, A.V. Palumbo, J.D. Wall. 2010. The sulfate-reducing bacterium *Desulfovibrio desulfuricans* ND132 as a model for understanding bacterial mercury methylation. *Proc Goldschmidt 2010: Earth, Energy, and the Environment*. GCA 74:A333.
- Elias, D.A., S.L. Tollaksen, D.W. Kennedy, H.M. Mottaz, C.S. Giometti, J.S. McLean, E.A. Hill, G.E. Pinchuk, M.S. Lipton, J.K. Fredrickson, Y.A. Gorby. 2008. The influence of cultivation methods on *Shewanella oneidensis* physiology and proteome expression. *Archives of Microbiology* 189:313-324.