

Dwayne A. Elias

Scientist

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Education and Training

- 2008 University of Oklahoma, Norman, Microbiology, Ph.D.
1997 University of Manitoba, Winnipeg, Canada, Microbiology, M.S.
1994 University of Manitoba, Winnipeg, Canada, Biology, B.S.

Research and Professional Experience

- 2009-Present Staff Scientist, Biosciences Division, Microbial Ecology and Physiology Group. Oak Ridge National Laboratory, Environmental Sciences Division, Oak Ridge, TN.
2005-2009 Assistant Research Professor, Department of Biochemistry, University of Missouri, Columbus.
2002-2005 Postdoctoral fellow, William R. Wiley Environmental Molecular Sciences Laboratory. Pacific Northwest National Laboratory, Richland, WA.

Publications

1. Brown, S.D., J.D. Wall, A.M. Kucken, C.C. Gilmour, C.C. Brandt, M. Podar, H. Teshima, J.C. Detter, C.S. Han, M.L. Land, A.V. Palumbo, D.A. Elias. (2011) Genome sequence of mercury-methylating and pleomorphic *Desulfovibrio africanus* strain Walvis Bay. *J. Bacteriol.* 193(15):4037-4038.
2. Brown, S.D. M.B. Begemann, M.R. Mormile, J.D. Wall, C. Han, L.A. Goodwin, S. Pitluck, M.L. Land, L.J. Hauser, D.A. Elias. (2011) Complete genome sequence of the haloalkaliphilic, hydrogen producing *Halanaerobium hydrogenoformans*. *J. Bacteriol.* 193(14):3682-3683.
3. C.C. Gilmour, D.A. Elias, A.M. Kucken, S.D. Brown, A.V. Palumbo, C.W. Schadt, J.D. Wall. (2011) The sulfate-reducing bacterium *Desulfovibrio desulfuricans* ND132 as a model for understanding bacterial mercury methylation. *Appl. Environ. Microbiol.* 77(12):3938- 3951.
4. Brown, S.D., C.C. Gilmour, A.M. Kucken, J.D. Wall, D.A. Elias, M. Podar, O. Chertkov, B. Held, D.C. Bruce, J.C. Detter, R. Tapia, C.S. Han, L.A. Goodwin, J. 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 Mercury-Methylating *Desulfovibrio desulfuricans* ND132. *J. Bacteriol.* 193(8):2078-2079.
5. Vishnivetskaya T.A., J.J. Mosher, A.V. Palumbo, Z.K. Yang, M. Podar, S.D. Brown, S.C. Brooks, B. 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. *Appl. Environ. Microbiol.* 77(1):302-311.
6. Elias D.A., M.W. Fields. (2011) Chapter 12: Transcriptome analysis of metal-reducing bacteria, p. 211-244. In: J. Stoltz & R. Oremland (eds.), *Microbial metal and metalloid metabolism: advances and applications*. ASM Press, Washington, D.C.
7. Elias D.A., G.M. Zane, M. 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*? *Proc. of Goldschmidt 2010: Earth, Energy, and the Environment.* GCA 74(12):A263.
8. 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. of Goldschmidt 2010: Earth, Energy, and the Environment.* GCA 74(12):A333.

9. Elias D.A., A. Mukhopadhyay, M. Joachimiak, A.M. Redding, H.B. Yen, M.W. Fields, T.C. Hazen, A.P. Arkin, J.D. Keasling, J.D. Wall. (2009) Expression profiling of hypothetical genes in *Desulfovibrio vulgaris* leads to improved functional annotation. *Nucl. Acids Res.* 37(9):2926-2939.
10. 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. *Arc. Microbiol.* 189(4):313-324.
11. Elias, D.A., F. Yang, H.M. Mottaz, A.S. Belieav, M.S. Lipton. (2007) Enrichment of functional redox reactive proteins and identification by mass spectrometry results in several terminal Fe (III)-reducing candidate proteins in *Shewanella oneidensis* MR-1. *J. Microbiol. Meth.* 68(2):367-375.

Synergistic Activities

Adhoc reviewer for: *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.*