CRAIG C. BRANDT

Biosciences Division
Oak Ridge National Laboratory
P.O. Box 2008 MS6038
Oak Ridge, TN 37831-6038

Research Scientist
Phone: (865) 574-1921
FAX: (865) 576-8646
E-mail: brandtcc@ornl.gov

EDUCATION

1988	University of Tennessee	M.S.	Statistics
1976	Michigan State University	B.S.	Biochemistry

PROFESSIONAL POSITIONS

2006 – Present	Research Scientist, Microbial Ecology and Physiology, Biosciences Division, Oak Ridge National Laboratory (ORNL).
1996 – 2006	Research Scientist, Environmental Sciences Division, ORNL.
1988 – 1996	Research Scientist, Computer Sciences and Mathematics Division, ORNL.
1984 – 1988	Staff Scientist, Science Applications International Corporation, Oak Ridge, TN.

PROFESSIONAL SERVICE, AFFILIATIONS, AND HONORS

Reviewer for several agencies and journals.
Member: American Statistical Association, Biometrics Society.

SELECT RECENT PUBLICATIONS (from >30)

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, and 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. Aquat. Microb. Ecol. 66:271-282.

Moberly, J.G., C.L. Miller, S.D. Brown, A. Biswas, C.C. Brandt, A.V. Palumbo, and D.A. Elias. 2012. Role of physiology and gene expression in *Desulfovibrio africanus* strain Walvis Bay mercury methylation. Environ. Sci. Tech. 46:4926-4932.

Gihring, T.M., G. Zhang, C.C. Brandt, S.C. Brooks, J.H. Campbell, S. Carroll, C.S. Criddle, S.J. Green, P. Jardine, J.E. Kostka, K. Lowe, T.L. Mehlhorn, W. Overholt, D.B. Watson, Z. Yang, W.-M. Wu, and C.W. Schadt. 2011. A limited microbial consortium is responsible for extended bioreduction of uranium in a contaminated aquifer. Appl. Environ. Microbiol. 77:5955-5965.

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, and D.A. Elias. 2011. Genome sequence of mercury-methylating and pleomorphic *Desulfovibrio africanus* strain Walvis Bay. J. Bacteriol. 193:4037-4038.

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, and A.V. Palumbo. 2011. Genome sequence of the mercury-methylating strain *Desulfovibrio desulfuricans* ND132. J. Bacteriol. 193:2078-2079.

Vishnivetskaya, T.A., J.J. Mosher, A.V. Palumbo, M. Podar, S.D. Brown, S.C. Brooks, B. Gu, G.R. Southworth, M.M. Drake, C.C. Brandt, and D.A. Elias. 2011. Mercury and other heavy metals influence bacterial community structure in contaminated Tennessee streams. Appl. Environ. Microbiol. 77:302-311.

Porat, I., T.A. Vishnivetskaya, J.J. Mosher, C.C. Brandt, Z.K. Yang, S.C. Brooks, L. Liang, M.M. Drake, M. Podar, S.D. Brown, and A.V. Palumbo. 2010. Characterization of Archaeal community in contaminated and uncontaminated surface stream sediments. Microb. Ecol. 60:784-795.

Jager, H.I., L.M. Baskaran, C.C. Brandt, E.B. Davis, C.A. Gunderson, and S.D. Wullschleger. 2010. Empirical geographic modeling of switchgrass yields in the United States. Glob. Change Biol. Bioen. 2:248-257.

Vishnivetskaya, T.A., C.C. Brandt, A.S. Madden, M.M. Drake, J.E. Kostka, D.M. Akob, K. Küsel, and A.V. Palumbo. 2010. Microbial community changes in response to ethanol or methanol amendments for U(VI) reduction. Appl. Environ. Microbiol. 76:5728-5735.

West, T.O., C.C. Brandt, L.M. Baskaran, C.M. Hellwinckel, R. Mueller, C.J. Bernacchi, V.P. Bandaru, B. Yang, B.S. Wilson, G. Marland, R.G. Nelson, D.G. De La Torre Ugarte, and W.M. Post. 2010. Cropland carbon fluxes in the United States: increasing geospatial resolution of inventory-based carbon accounting. Ecol. Appl. 20:1074-1086.

Madden A.S., A.V. Palumbo, B. Ravel, T.A. Vishnivetskaya, T.J. Phelps, C.S. Schadt, and C.C. Brandt. 2009. Donor-dependent extent of uranium reduction for bioremediation of contaminated sediment microcosms. J. Environ. Qual. 38:53-60.

Palumbo, A.V., J.C. Schryver, S.M. Pfiffner, T. Marsh, and C.C. Brandt. 2008. Relating microbial community structure to a dominant environmental variable in a complex environment: an example from a chromium contaminated site. pp. 61-67. IN: Proceedings of the 2008 International Conference on Bioinformatics and Computational Biology (Biocomp 2008) Volume I, Arabnia, H.R., M.Q. Yang, and J.Y. Yang (eds.). CSREA Press, USA.

West, T.O., C.C. Brandt, B.S. Wilson, C.M. Hellwinckel, D.D. Tyler, G. Marland, D.G. De La Torre Ugarte, J.A. Larson, and R.G. Nelson. 2008. Estimating regional changes in soil carbon with high spatial resolution. Soil Sci. Soc. Amer. J. 72:285-294.

English, B.C., K. Jensen, J. Menard, M.E. Walsh, C.C. Brandt, J. Van Dyke, and S. Hadley. 2007. Economic impacts of carbon taxes and biomass feedstock usage in southeastern United States coal utilities. J. Agri. Appl. Econ. 39:103-119.

Fields, M.W., J.C. Schryver, C.C. Brandt, T. Yan, J. Zhou, and A.V. Palumbo. 2006. Confidence intervals for similarity values achieved from direct sequence determination of cloned 16S rRNA genes from environmental samples. J. Microbiol. Meth. 65:144-152.

Schryver, J.C., C.C. Brandt, S.M. Pfiffner, A.V. Palumbo, A.D. Peacock, D.C. White, J.P. McKinley, and P.E. Long. 2006. Application of nonlinear analysis methods for identifying relationships between microbial community structure and groundwater geochemistry. Microb. Ecol. 51:177-188.

Heuscher, S.A., C.C. Brandt, and P.M. Jardine. 2005. Using soil physical and chemical properties to estimate bulk density. Soil Sci. Soc. Amer. J. 69:51-56.

Palumbo, A.V., J.C. Schryver, M.W. Fields, C.E. Bagwell, J. Zhou, T. Yan, X. Liu, and C.C. Brandt. 2004. Coupling functional gene diversity and geochemical data from environmental samples. Appl. Environ. Microbiol. 70:6525-6534.

Stewart M.A., P.M. Jardine, C.C. Brandt, M.O. Barnett, S.E. Fendorf, L.D. McKay, T.L. Mehlhorn, and K. Paul. 2003. Effects of contaminant concentration, aging, and soil properties on the bioaccessibility of Cr(III) and Cr(VI) in soil. Soil Sed. Contam. 12:1-21.

Thompson, D.K, A.S. Beliaev, C.S. Giometti, S.L. Tollaksen, T. Khare, D.P. Lies, K.H. Nealson, H. Lim, J. Yates III, C.C. Brandt, J.M. Tiedje, and J.-Z Zhou. 2002. Transcriptional and proteomic analysis of a ferric uptake regulator (Fur) mutant of *Shewanella oneidensis*: possible involvement of Fur in energy metabolism, transcriptional regulation, and oxidative stress. Appl. Environ. Microbiol. 68:881-892.

Beliaev, A.S., D.K. Thompson, T. Khare, H. Lim, C.C. Brandt, G. Li, A.E. Murray, J.F. Heidelberg, C.S. Giometti, J. Yates III, K.H. Nealson, J.M. Tiedje, and J.-Z. Zhou. 2002. Gene and protein expression profiles of *Shewanella oneidensis* during anaerobic growth with different electron acceptors. Omics 6:39-60.

Jager, H.I., W.W. Hargrove, C.C. Brandt, A.W. King, R.J. Olson, J.M.O. Scurlock, and K.A. Rose. 2000. Contrasting climate responses of models with those of field data at a regional scale. Ecosystems 3:396-411.