

Biographical Sketch
Carol S. Giometti, Ph.D.

EDUCATION

- Ph.D. Biochemistry, University of Illinois at Chicago, 1978
Medical Technologist Certification, Rush University, 1973
B.A. Biology, Knox College, 1972

EXPERIENCE

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| Senior Biochemist , Argonne National Laboratory | 2001-present |
| Division Director , Biosciences Division, Argonne National Laboratory | 2007-2012 |
| Biochemist , Argonne National Laboratory | 1987-2000 |
| Assistant Biochemist , Argonne National Laboratory | 1981-1987 |
| Post Doctoral Appointee , Argonne National Laboratory | 1978-1981 |

Selected Publications (selected out of 89 total)

- Giometti, C.S.**, M.A. Gemmell, S.L. Tollaksen, and J. Taylor. 1991. Quantitation of human leukocyte proteins after silver-staining: A study with two-dimensional Electrophoresis. *Electrophoresis* 12:536-543.
- Giometti, C.S.**, M.A. Gemmell, J. Taylor, S.L. Tollaksen, R. Angeletti, and S. Gluecksohn-Waelsch. 1992. Evidence for regulatory genes on mouse chromosome 7 that affect the quantitative expression of proteins in fetal and newborn liver. *Proc. Natl. Acad. Sci. USA* 89:2448-2452.
- Giometti, C.S.**, S.L. Tollaksen, X. Liang, and M.L. Cunningham. 1998. A comparison of liver protein changes in mice and hamsters treated with the peroxisome proliferator Wy-14, 643. *Electrophoresis*, 19:2498-2505.
- Giometti, C.S.**, C.I. Reich, S.L. Tollaksen, G. Babnigg, H. Lim, J.R. Yates, III, and G.J. Olsen. 2001. Structural modifications of *Methanococcus jannaschii* flagellin proteins revealed by proteome analysis. *Europ. J. Mass Spectrom.* 7:195-205.
- Thompson D.K., A.S. Beliaev, **C.S. Giometti**, S.L. Tollaksen, T. Khare, D.P. Lies, K.H. Neilson, H. Lim, J. Yates 3rd, C.C. Brandt, J.M. Tiedje, and J. 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.R. Yates III, K.H. Neilson, J.M. Tiedje, and J. Zhou. 2002. Gene Expression and Protein Profiles of *Shewanella oneidensis* during anaerobic growth with different electron acceptors. *Omics* 6: 39-60.
- Giometti, C.S.**, C.I. Reich, S.L. Tollaksen, G. Babnigg, H. Lim, J.R. Yates, III, and G.J. Olsen. 2003. Global Analysis of a "Simple" Proteome: *Methanococcus jannaschii*. *J. Chrom. B* 782: 227-243.
- Babnigg, G. and **C.S. Giometti**. 2003. ProteomeWeb: A Web-Based Interface for the Display and Interrogation of Proteomes. *Proteomics* 3: 584-600.
- Giometti, C.S.**, T. Khare, S. L. Tollaksen, A. Tsapin, W. Zhu, J.R. Yates III and K.H. Neilson. 2003. Analysis of the *Shewanella oneidensis* Proteome by Two-Dimensional Gel electrophoresis under Non-denaturing Conditions. *Proteomics* 3: 777-785.
- Giometti, C.S.** 2006. Proteomics and Bioinformatics. In: Advances in Protein Chemistry, R.D. Smith and T.D. Veenstra (Eds.), Elsevier Science, San Diego, CA, pp. 353-369.
- Zhu, W., C.I. Reich, , G.J. Olsen, **C.S. Giometti**, , J.R. Yates 3rd. 2004. Shotgun proteomics of *Methanococcus jannaschii* and insights into methanogenesis. *J Proteome Res.* 3: 538-548.
- Babnigg, G. and **C.S. Giometti**. 2004. GELBANK: a database of annotated two-dimensional gel electrophoresis patterns of biological systems with completed genomes. *Nucleic Acids Res.*, 32: D582-585.

- Abboud, R., R. Popa, V. Souza-Egipsy, **C.S. Giometti**, S. Tollaksen, J. J. Mosher, R.H. Findlay, and K.H. Nealson. 2005. Low temperature growth of *Shewanella oneidensis* MR-1. *Appl. Environ. Microbiol.* 71, 811-816.
- Zhu, W., J. Venable, **C.S. Giometti**, T. Khare, S. Tollaksen, A.J. Ahrendt, and J.R. Yates 3rd. 2005. Large-scale muLC-MS/MS for silver and Coomassie blue-stained polyacrylamide gels. *Electrophoresis* 26: 4495-4507.
- Khare, T., A. Esteve-Núñez, K.P. Nevin, W. Zhu, J.R. Yates III, D. Lovley and **C.S. Giometti**. 2006. Differential protein expression in the metal-reducing bacterium *Geobacter sulfurreducens* PCA grown with fumarate or ferric citrate. *Proteomics* 6: 632-40.
- Gao, W., Y. Liu, **C.S. Giometti**, S. Tollaksen, T. Khare, L. Wu, M.W. Fields, and J. Zhou. 2006. Knock-out of a prohibitin-like protein results in alteration of iron metabolism, increased spontaneous mutation and hydrogen peroxide sensitivity in bacterium *Shewanella oneidensis*. *BMC Genomics*, in press.
- Khare, T. and **C.S. Giometti**. 2006. Differential recovery of biotinylated microbial proteins using monomeric or polymeric avidin. *Biotechniques* 40:584-588.
- Giometti, C.S.** 2006. A tale of two metal reducers: Comparative Proteome Analysis of *Geobacter sulfurreducens* PCA and *Shewanella oneidensis* MR-1. In Microbial Proteomics – Functional biology of whole organisms. Editors: Ian Humphery-Smith & Michael Hecker, Publisher: Wiley and Sons Inc., New York. In press.
- Nunez, C., Esteve-Nunez, A., **Giometti, C.**, Tollaksen, S., Khare, T., Lin, W., Lovley, D.R., Methe, B.A. 2006. DNA Microarray and Proteomic Analyses of the RpoS Regulon in *Geobacter sulfurreducens*. *J. Bacte.* 188:2792–2800.
- Edirisinghe, P.D., Moore, J.F., Skinner-Nemec, K.A., Lindberg, C., **Giometti, C.S.**, Veryovkin, I.V., Hunt, J.E., Pellin, M.J., Hanley, L. 2007. Detection of In-Situ Derivatized Peptides in Microbial Biofilms by Laser Desorption 7.87 eV Postionizaton Mass Spectrometry. *Anal Chem.* 79:508-514.
- Ahrendt, A.J., Tollaksen, S.L., Lindberg, C., Zhu, W., Yates, J.R. 3rd, Nevin, K.P., Babnigg, G., Lovley, D.R., **Giometti, C.S.** 2007. Steady state protein levels in *Geobacter metallireducens* grown with Fe(III) citrate or nitrate as terminal electron acceptor. *Proteomics* 22: 4148-4157.
- Elias, D.A., Tollaksen, S.L., Kennedy, D.W., Mottaz, H.M., **Giometti, C.S.**, McLean, J.S., Hill, E.A., Pinchuk, G.E., Lipton, M.S., Fredrickson, J.K., Gorby, Y.A. 2008. The influence of cultivation methods on *Shewanella oneidensis* physiology and proteome expression. *Arch Microbiol.* 189: 313-324.
- Konstantinidis KT, Serrest MH, Romine MF, Rodriques JL, Auchtung J, McCue LA, Lipton MS, Obratzsova A, **Giometti CS**, Nealson KH, Fredrickson JK, Tiedje JM. 2009. Comparative systems biology across an evolutionary gradient within the *Shewanella* genus. *Proc Natl Acad Sci USA* 106: 15090-14.
- Henne KL, Turse JE, Nicora CD, Lipton MS, Tollaksen SL, Lindberg C, Babnigg G, **Giometti CS**, Nakatsu CH, Thompson DK, Konopka AE. 2009. Global proteomic analysis of the chromate response in *Arthrobacter* sp. Strain FB24. *J Proteome Res* 8: 1704-1716.
- Finney L, Chishti Y, Khare T, **Giometti C**, Levina A, Lay PA, Vogt S. 2010. Imaging Metals in Proteins by Combining Electrophoresis with Rapid X-ray Fluorescence Mapping. *ACS Chem. Biol.* 5: 577-87.