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EDUCATION

2005 University of Toledo, Toledo, OH	Ph.D.	Macromolecular Crystallography
1999 Heidelberg University, Tiffin, OH	B.S.	Chemistry

PROFESSIONAL POSITIONS

2010 – Present Postdoctoral Research Associate, Environmental Sciences Division, ORNL.
2008 – 2010 Postdoctoral Research Associate, Neutron Scattering Sciences Division, ORNL.
2005 – 2008 Postdoctoral Research Associate, University of Toledo, Department of Chemistry.

PROFESSIONAL SERVICE, AFFILIATIONS, AND HONORS

Member: American Crystallographic Association

Honors: American Crystallographic Association, Annual Meeting Travel Grant Award, 2006.

American Heart Association Ohio Valley Affiliate Predoctoral Fellowship recipient (#AHA0315774B). Crystallographic Studies of the Crenarchaeal *Aeropyrum pernix* Flap Endonuclease-1 (FEN-1), Funded 2003-2005.

American Institute of Chemists Award, Heidelberg University, 1999.

First Team All-Academic Ohio Athletic Conference (OAC) Football Team, Heidelberg University, 1997 and 1998.

PUBLICATIONS

- Tomanicek, S.J., K.L. Weiss, K.K. Wang, M.P. Blakeley, J. Cooper, Y. Chen, and L. Coates. 2011. The active site protonation states of perdeuterated Toho-1 β -lactamase determined by neutron diffraction support a role for Glu166 as the general base in acylation. *FEBS Lett.* 585:364-368.
- Tomanicek, S.J., R.C. Hughes, J.D. Ng, and L. Coates. 2010. X-ray crystal structure of the endonuclease IV homologue from *Thermotoga maritima* in the presence of active site divalent metal ions. *Acta Crystallogr. F* 66:1003-1012.
- Tomanicek, S.J., M.P. Blakeley, J. Cooper, Y. Chen, P.V. Afonine, and L. Coates. 2010. Neutron diffraction studies of a class A β -lactamase Toho-1 E166A/R274N/R276N triple mutant. *J. Mol. Biol.* 396:1070-1080.
- Blum, M-M., S.J. Tomanicek, H. John, B.L. Hanson, H. Rüterjans, B.P. Schoenborn, P. Langan, and J.C.-H Chen. 2010. X-ray structure of perdeuterated diisopropyl fluorophosphatase (DFPase): perdeuteration of proteins for neutron diffraction. *Acta Crystallogr. F* 66:379-385.
- Pierce, J., D.G. Crabb, S.J. Tomanicek, N. Demarse, J. Maxwell, J. Mulholland, and J.K. Zhao. 2010. Dynamically polarized sample at the Spallation Neutron Source. *J. Phys.: Conf. Ser.* 251, 012088. doi: 10.1088/1742-6596/251/1/012088
- Hughes, R.C., S.J. Tomanicek, J.D. Ng, and L. Coates. 2009. Purification, crystallization and preliminary crystallographic analysis of a thermostable endonuclease IV from *Thermotoga maritima*. *Acta Crystallogr. F* 65:1317-1319.
- Coates, L., H.H. Tuan, S.J. Tomanicek, A. Kovalevsky, M. Mustyakimov, P.T. Erskine, and J. Cooper. 2008. The catalytic mechanism of an aspartic proteinase explored with neutron and X-ray diffraction. *JACS* 130:7235-7237.
- Devos, J.M., S.J. Tomanicek, C.E. Jones, N.G. Nossal, and T.C. Mueser. 2007. Crystal structure of bacteriophage T4 5' nuclease in complex with a branched DNA reveals how flap endonuclease-1 family nucleases bind their substrates. *J Biol Chem.* 282:31713-24.

Collins, B.K., S.J. Tomanicek, N. Lyamicheva, M.W. Kaiser, and T.C. Mueser. 2004. A preliminary solubility screen used to improve crystallization trials: crystallization and preliminary X-ray structure determination of *Aeropyrum pernix* flap endonuclease-1. Acta Crystallogr. D 60:1674-1678.

COLLABORATORS

Anne O. Summers, University of Georgia, Athens; Susan M. Miller, University of California, San Francisco; Kevin Weiss, Neutron Scattering Sciences Division, ORNL; Leighton Coates, Neutron Scattering Sciences Division, ORNL; Joseph D. Ng, University of Alabama in Huntsville, Huntsville; Timothy Mueser, University of Toledo, Toledo; Leif Hanson, University of Toledo, Toledo.