

Trevor C. Bozeman

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Department of BioEnergetics
The BioDesign Institute at Arizona State University
PO Box 875001
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Education

- 2008 – 2013 Ph.D., Chemistry
 Professor Sidney Hecht, Dissertation Advisor
Dissertation Title: *Bleomycin From Start to Finish; Total Synthesis of Novel Analogues to In Vitro Fluorescence Microscopy Imaging*
- 2005 – 2008 B.S., Chemistry; University of Southern Maine
 Professor Hank Tracy, Research Advisor
 Professor Mustafa Guvench, Research Advisor

Work Experience

- 2008 – Present Postdoctoral Research Associate
 The Center for BioEnergetics – The Biodesign Institute
 Arizona State University
Project Title: *Chiral HPLC Separation of the Natural Product; Pyrimidoblamic Acid*

Research/Laboratory Experience

- Designing and employing methods for separation of drug congeners and natural products by (chiral) HPLC
- Synthesis of organic and organometallic small molecules and relevant characterization (TLC, FTIR, NMR, GC/MS etc.)
- Incorporation of complicated amino acids into peptides by solid phase synthesis

- Cell culture and agarose gel assays
- Purchasing, maintaining and repairing instrumentation - HPLCs, fluorescence microscope, spectrophotometers, lyophilizer, parr-hydrogenator etc.

Administrative and Managerial Responsibilities

Appointed mentor/trainer for several beginning graduate students (and undergraduate research fellows); hands-on synthesis instruction, instrumental orientation and training on health/fire/radiation safety practices.

“Lab Manager” 2011 – 2013, responsibilities include but are not limited to; ordering and maintaining common lab materials on a balanced budget, writing and updating user handbooks and guides for instrumentation, cultivating and maintaining a professional relationship with technicians and commercial sales representatives, networking with other departments to ensure an uninterrupted research environment, and leading annual research project presentation updates.

Publications

2013 Yu, Z.; Schmaltz, R. M.; **Bozeman, T. C.**; Paul, R.; Rishel, M. J.; Tsosie, K. S.; Hecht, S. M. *J. Am. Chem. Soc.* **2013**, *135*, 2883-2886. “Selective Tumor Cell Targeting By the Disaccharide Moeity of Bleomycin”

2012 **Bozeman, T. C.**; Nanjunda, R.; Tang, C.; Lui, Y.; Segerman, Z. J.; Zaleski, P. A.; Wilson, W. D.; Hecht, S. M. *J. Am. Chem. Soc.* **2012**, *134*, 17842-17845. “Dynamics of Bleomycin Interaction with a Strongly Bound Hairpin DNA Substrate, and Implications for Cleavage of the Bound DNA”

2011 **Bozeman, T. C.**; Edwards, K. A.; Fecteau, K. M.; Verde, M. G.; Blanchard, A.; Woodall, D. W.; Benfaremo, N.; Ford, J. R.; Mullin, J. L.; Prudente, C. K.; Tracy, H. J. *J. Inorg. Organomet. Polym.* **2011**, *21*, 316-326. “Tolyl-Substituted Siloles: Synthesis, Substituent Effects, and Aggregation-Induced Emission”

Teaching

2008 – 2009 Graduate Teaching Assistant

2007 – 2008 Undergraduate Teaching Assistant

2006 – 2008 Private undergraduate chemistry tutoring; general and organic chemistry

Software Skills –

Microsoft Word, Excel and PowerPoint, PeopleSoft, eAdvisor, Gportal, BlackBoard, Chem/BioDraw, Spartan, ChemStations (Agilent HPLC), AxioVision (Zeiss Fluorescence microscopy) and DeepView.

Awards

- 2009 Arizona State University – Excellence as a Teaching Assistant Award
- 2008 American Institute of Chemists Senior Undergraduate Award
- 2007 University of Southern Maine Chemistry Department Outstanding Junior Award
- 2006 University of Southern Maine Summer Undergraduate Research Fellow

Posters

- March 2009 - 2013 Bozeman, T. “Bleomycin Start to Finish: From Total Synthesis to In Vitro Imaging” ASU Graduate Student Visitation Weekend Poster Sessions, Arizona State University, Tempe, AZ.
- March 2009 Bozeman, T.; Woodall, D.; Orlando, A.; Faller, C.; Booth, A.; Ford, J.; Prudenté, C.; Tracy, H.; Mullin, J.; Benfaremo, N. “Synthesis and Luminescence Characteristics of Toly-Substituted Siloles” at the 237th American Chemical Society National Meeting, Salt Lake City, UT.
- April 2008 Fecteau, K.; Bozeman, T.; Tracy, H.; Ford, J.; Mullin, J.; Benfaremo, N. “Preparation and Luminescence of Naphthylated Metalloles” at Thinking Matters, USM, Portland, ME.
- March 2008 Fecteau, K.; Bozeman, T.; Tracy, H.; Ford, J.; Mullin, J.; Benfaremo, N. “Novel Naphthyl-Substituted Siloles: Synthesis, Characterization, and Photoluminescent Properties” at the 235th American Chemical Society National Meeting, New Orleans, LA.
- March 2008 Bozeman, T.; Cote, S.; Fitch, E.; Ford, J.; Benedict, L.; Prudenté, C.; Crockett, D. “Targeted Outreach Modules: The USM Chemistry Club Takes Aim at the Maine State Learning Results” at the 235th American Chemical Society National Meeting, New Orleans, LA.
- August 2007 Bozeman, T.; Tracy, H. J.; Ford, J.; Benfaremo, N.; Mullin, J. L.; Woodall, D. L. “Novel Silole Derivatives; Synthesis, Characterization,

and Photoluminescence Properties” at the 234th American Chemical Society National Meeting, Boston, MA.

April 2007 Bozeman, T., Tracy, H. J. “New Siloles and Future Applications” Thinking Matters, USM, Portland, ME.

Community Service

2013 – Invited Presenter at *The Biodesign Institute Night of the Open Door*

2012 – 2013 – Volunteer Assistant for ASU DCB Graduate Student Recruitment Weekends

2010 – *Nano Days* A public education forum for science and nano-technology

2006 – 2008 *University of Southern Maine Chemistry Club* –
Educating K-12 students by chemistry demonstrations and hands-on workshops

(Extra-Curricular Activities)

Charity Running Events

Susan G. Komen Breast Cancer 5k Run, October 2009

Phoenix Mollen’s Domestic Violence 10k/5k Run, November 2009

Hope for Haiti 5k Run, April 2010

Susan G. Komen Breast Cancer 5k Run, October 2010

Susan G. Komen Breast Cancer 5k Run, October 2011

Susan G. Komen Breast Cancer 5k Run, October 2012

Intramural Soccer – Arizona State University, Winter/Spring 2010

Intramural Co-Ed Softball – Department of Chemistry and Biochemistry Team, Arizona State University, Spring 2010, Spring 2011, Spring 2012

1st Annual Biodesign Soccer Tournament – Arizona State University, Spring 2010
(Department of BioEnergetics Tournament Champions)

2nd Annual Biodesign Soccer Tournament – Arizona State University, Spring 2011