

## Katherine T. Barglow, Ph.D.

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### Education

The Scripps Research Institute, La Jolla, CA Ph.D. Program in Chemical Biology, awarded March 18, 2008	2002-2008
Stanford University, Stanford, CA B.S. in Chemistry with Honors, Minor in Biological Science GPA 3.73, in major 3.95	1998-2002

### Research Positions

Postdoctoral Fellow of the American Cancer Society University of California, Berkeley Advisor: Dr. Michael A. Marletta Department of Chemistry Project Title: <i>Biochemistry of thioredoxin-mediated protein S-nitrosation</i>	2008-present
Graduate Student, The Scripps Research Institute Advisor: Dr. Benjamin F. Cravatt Department of Chemistry and Department of Cell Biology Thesis Title: <i>Enzyme discovery and characterization via proteome reactivity profiling</i>	2002-2008
Research Associate, Stanford University Advisor: Dr. Thomas J. Wandless Department of Chemistry Project Title: <i>Selective detoxification of a bifunctional molecule</i>	2000-2002

### Publications

1. Barglow, K.T., Marletta M.A. "E3 ligases are targets of thioredoxin-dependent S-nitrosation." *Manuscript in preparation*.
2. Barglow, K.T., Knutson, C.G., Wishnok, J.S., Tannenbaum, S.R., Marletta, M.A. "Redox-controlled kinetics and site-specificity of thioredoxin S-nitrosation." *Submitted to PNAS, June 2011*.
3. Barglow, K.T., Saikatendu, K.S., Bracey, M.H., Huey, R., Morris, G.M., Olson, A.J., Stevens, R.C., Cravatt, B.F. "Functional proteomic and structural insights into molecular recognition in the nitrilase family enzymes." *Biochemistry*, **47** (51), 13514-13523, 2008
4. Barglow, K.T., Cravatt, B.F. "Activity-based protein profiling for the functional annotation of enzymes." *Nat. Methods*, **4** (10), 822-827, 2007

5. Barglow, K.T., Cravatt, B.F. "Substrate mimicry in an activity-based probe that targets the nitrilase family." *Angew. Chem., Int. Ed.*, **45** (44), 7408-7411, 2006
6. Barglow, K.T., Cravatt, B.F. "Discovering disease-associated enzymes by proteome reactivity profiling." *Chem. Biol.*, **11** (11), 1523-1531, 2004.
7. Braun, P.D., Barglow, K.T., Lin, Y.-M., Akompong, T., Briesewitz, R., Ray, G.T., Haldar, K., Wandless, T.J. "A bifunctional molecule that displays context-dependent cellular activity." *J. Am. Chem. Soc.*, **125** (25), 7575-7580, 2003.

### **Selected Oral Presentations**

1. Barglow, K.T., Saikatendu, K.S., Bracey, M.H., Stevens, R.C., Cravatt, B.F. "Activity-based proteomic and structural analysis of the nitrilase family of enzymes." Conference of the World Molecular Engineering Network, Los Cabos, Mexico, May 1-May 5, 2008.
2. Barglow, K.T., Cravatt, B.F. "Enzyme discovery and characterization via proteome reactivity profiling." Scripps Research Institute Graduate Program Annual Retreat, San Diego, CA, Sept. 8, 2006.
3. Barglow, K.T., Cravatt, B.F. "Enzyme discovery and characterization via proteome reactivity profiling." Conference of the World Molecular Engineering Network, Los Cabos, Mexico, April 30-May 4, 2006.
4. Barglow, K.T., Cravatt, B.F. "Activity-based protein profiling applied to the liver of obese mice." Invited lecture, American Association for the Study of Liver Diseases National Meeting, Warrenton, VA, June 14-16, 2005.
5. Barglow, K.T., Cravatt, B.F. "Discovering disease-associated enzymes by proteome reactivity profiling." HHMI Fellows Meeting, Chevy Chase, MD, Sept 17-19, 2005.
6. Barglow, K.T., Lin, Y-M, Braun, P.D., Wandless, T.J. "Selective detoxification of a bifunctional molecule." American Chemical Society National Meeting, Orlando, FL, April 2002.

### **Selected Poster Presentations**

1. Barglow, K.T., Knutson, C.G., Wishnok, J.S., Tannenbaum, S.R., Marletta, M.A. "Redox-controlled kinetics and site-specificity of thioredoxin S-nitrosation." Gordon Conference on Bioorganic Chemistry, Andover, NH, June 12-17, 2011.
2. Barglow, K.T., Cravatt, B.F. "Enzyme discovery and characterization via proteome reactivity profiling." Gordon Conference on Bioorganic Chemistry, Andover, NH, June 15-20, 2008.
3. Barglow, K.T., Saikatendu, K.S., Bracey, M.H., Stevens, R.C., Cravatt, B.F. "Activity-based proteomic and structural analysis of the nitrilase family of enzymes." Scripps Research Institute Graduate Program Annual Retreat, San Diego, CA, Sept. 7, 2007.
4. Barglow, K.T., Cravatt, B.F. "Discovering disease-associated enzymes by proteome reactivity profiling." Keystone Symposia on Proteomics, Keystone, CO, April 8-12, 2005.
5. Barglow, K.T., Cravatt, B.F. "Discovering disease-associated enzymes by proteome reactivity profiling." American Chemical Society National Meeting, Philadelphia, PA, August 21-24, 2004.
6. Barglow, K.T., Cravatt, B.F. "Discovering disease-associated enzymes by proteome reactivity profiling." Scripps Research Institute Graduate Program Annual Retreat, San Diego, CA, Sept., 2003-2005.

## Academic Honors and Affiliations

American Cancer Society Postdoctoral Fellow	2008
Ruth L. Kirchstein NRSA Postdoctoral Fellowship Award, NIH (declined)	2008
American Heart Association Postdoctoral Fellowship Award (declined)	2008
Presentation Award, Scripps Annual Retreat	2006
Howard Hughes Medical Institute Predoctoral Fellow	2003
National Science Foundation Predoctoral Fellowship Award (declined)	2003
Marsden Prize for Undergraduate Research, Stanford University	2002
Pfizer Undergraduate Research Fellow in Synthetic Organic Chemistry	2001
ACS Undergraduate Award in Analytical Chemistry	2001
Stanford University President's Scholar	1998-2000
American Chemical Society Member	1999-present

## Teaching and Service

Instructor, Biochemistry X115A, UC Berkeley Extension, Fall Semester	2009
Head Teacher, Proteomics Short Course, Indiana University	2009
Graduate Program Liaison to the Board of Directors, The Scripps Research Institute	2008
Director, Distinguished Lecture Series, The Scripps Research Institute	2005-2006
Member, Faculty Development Committee for Scripps Research Institute PhD Program Reaccreditation	2006
Instructor, Scripps High School Outreach Program	2005
Director, Stanford University Undergraduate Tutoring Program	2001-2002
Student Advisor and Student-Faculty Liaison, Chemistry Department, Stanford University	2001-2002
Member, Undergraduate Curriculum Committee, Stanford University	2001-2002
Resident Chemistry Tutor, Stanford University, Castano House	2000-2002
Teaching Assistant, Chemistry 134, Qualitative Analytical Chemistry, Stanford University	2000, 2001
Freshman Advising Associate, Stanford University	1999-2001

**References** available on request.