

Catherine Leigh Higgins

Education

- 1995-1999 B.S. Chemistry, music minor, The College of William and Mary, Williamsburg, VA. (advisor David Kranbuehl – polymer science)
- 2000 Graduate course in education, University of Virginia, Roanoke, VA.
- 2000- Doctoral Program, Department of Chemistry, Tulane University, New Orleans, LA. (advisor Pernilla Wittung-Stafshede – protein folding) Completed courses: Introduction to Biochemistry, Intermediate Biochemistry, Inorganic Structure and Bonding, Advanced Organic - General Principles, Organometallic Chemistry of Transition Elements, Structure and Function of Biomolecules, Polymer Organic Chemistry, Independent Studies – Thermostable Proteins, Seminars.

Teaching

- 1999-2000 Chemistry Teacher, Jefferson Forest High School, Forest, VA.
- 2000 Chemistry Magic Teacher, Roanoke County Public Schools Gifted and Talented Program, Roanoke, VA.
- 2000-2001 Volunteer Teacher, “Look Out Einstein!” Orleans Parish After School Program, New Orleans, LA.
- 2001 Volunteer Teacher, Chemistry Institute, Benjamin Franklin Elementary School, New Orleans, LA.
- 2001-2003 Chemistry Tutor for 12 Tulane University undergraduate students and 10 area high school students
- 2002 Teacher, “Protein Structure, Folding and Function” Tulane Student Scholars Program, New Orleans, LA.
- 2002-2003 Volunteer Teacher in Curriculum Development, Audubon English/ French School, New Orleans, LA.
- 2003 Guest lecturer for Pernilla Wittung-Stafshede (February 24, 26, 28), Physical Chemistry II (CHEM312), Chemistry Department, Tulane University, New Orleans, LA.

Presentations

Oral Presentations

- * “Acetylcholinesterase: Developing its Inhibitors,” Tulane University Chemistry Department Seminar Series, New Orleans, LA, January 2002.
- * “Exceptional Stability of [2Fe-2S] Ferredoxins from Hyperthermophilic Bacterium *Aquifex aeolicus*,” New Orleans Protein Folding Intergroup, New Orleans, LA, July 18, 2002.
- * “Unfolding and Stability Properties of [2Fe-2S] Ferredoxins from the Hyperthermophilic Bacterium *Aquifex aeolicus*,” Prospectus Defense, Tulane University, New Orleans, LA, November 8, 2002.
- * “Proteins Fold? A Triptik Study of Protein Folding and Ferredoxins,” Roanoke Valley Governor’s School for Science and Technology, Roanoke, VA, March 21, 2003.

Poster Presentations

- * “High Stability for [2Fe-2S] Ferredoxin from Hyperthermophilic *Aquifex aeolicus* Bacterium,” Tulane University Molecular and Cellular Biology Graduate Program Scientific Retreat, Gulf Park Conference Center, Long Beach, MS, October 27-28, 2001.
- * “High Stability for [2Fe-2S] Ferredoxin from Hyperthermophilic *Aquifex aeolicus* Bacterium,” Experimental Biology 2002, Morial Convention Center, New Orleans, LA, April 19-24, 2002.
- * “Exceptional Stability of a [2Fe-2S] Ferredoxin from Hyperthermophilic Bacterium *Aquifex aeolicus*,” 16th Symposium of the Protein Society, San Diego Marriott Hotel & Marina, San Diego, CA, August 17-21, 2002.
- * “Unfolding and Stability Properties of [2Fe-2S] Ferredoxins from the Hyperthermophilic Bacterium *Aquifex aeolicus*,” The Seventh Johns Hopkins Folding Meeting, Coolfont Conference Center, Berkeley Springs, WV, March 22-25, 2003.

Publications

- * “A Hyperthermophilic Plant-Type [2Fe-2S] Ferredoxin from *Aquifex aeolicus* Is Stabilized by a Disulfide Bond,” Jacques Meyer, Michael D. Clay, Michael K. Johnson, Audria Stubna, Eckard Münck, Catherine Higgins, and Pernilla Wittung-Stafshede, *Biochemistry* **2002** 41(9): 3096-3108.
- * “Exceptional Stability of a [2Fe-2S] Ferredoxin from Hyperthermophilic Bacterium *Aquifex aeolicus*,” Catherine L. Higgins, Jacques Meyer, and Pernilla Wittung-Stafshede, *Biochimica Biophysica Acta* **2002** 1599(1-2): 82-89.

* “An Isc-type Extremely Thermostable [2Fe-2S] Ferredoxin from *Aquifex aeolicus*. Biochemical, Spectroscopic, and Unfolding Studies,” Géraldine Mitou, Catherine Higgins, Pernilla Wittung-Stafshede, Richard C. Conover, Archer D. Smith, Michael K. Johnson, Jacques Gaillard, Audria Stubna, Eckard Münck, and Jacques Meyer, *Biochemistry* **2003** 42(5): 1354-1364.

Awards and Honors

2000-2004 Louisiana Board of Regents Research Fellowship
2000-2003 Tulane University Graduate School Student Association Representative
2000-2003 Tulane University Graduate and Professional Student Association Representative
2002-2003 Chemistry Department Graduate Student Association Treasurer
2002 American Chemical Society Women Chemists Committee Travel Award
2002 Omicron Delta Kappa
2003 Who's Who Among Students in American Universities and Colleges
2003-2004 Omicron Delta Kappa Vice President of Membership
2003-2004 Tulane University Graduate and Professional Student Association Executive Vice President

Activities

American Chemical Society Member
New Orleans Protein Folding Intergroup Member
PITTCON 2001 (New Orleans) Student Aide: Security
PITTCON 2002 (New Orleans) Student Aide: Program