

DARYL K. EGGERS

Office: 408-924-4960
Rm. 604, Duncan Hall
Web: www.chemistry.sjsu.edu/deggers/homepage.htm
E-mail: deggers@science.sjsu.edu

Department of Chemistry
San José State University
One Washington Square
San José, CA 95192-0101

Education

B.S. Chemical Engineering, Rose-Hulman Inst. Technol., Terre Haute, IN 1977 - 1981

M.S. Chemical Engineering, University of California, Berkeley 1984 - 1987

Thesis: *Extractive Catalysis: Enzymatic Production of Tryptophan in Two-Phase Systems*

Advisor: Harvey W. Blanch, Department of Chemical Engineering

Ph.D. Pharmacology, University of California, San Francisco 1990 - 1997

Thesis: *Characterization of Nascent Polypeptides and their Molecular Chaperones in Mammalian Cells*

Chair: William J. Welch, Lung Biology Center, San Francisco General Hospital

Committee: Irwin D. Kuntz and Vishwanath R. Lingappa

Postdoctoral Fellow University of California, Los Angeles 1997 - 2002

Research: Use of Sol-Gel Encapsulation to Mimic Molecular Crowding

Mentor: Joan S. Valentine, Department of Chemistry and Biochemistry

Positions and Honors

Employment

2008 - Associate Professor, Department of Chemistry, San Jose State University

2002 - 2008 Assistant Professor, Department of Chemistry, San Jose State University

1998 & 1999 Summer Lecturer, Biochemistry, UCLA

1997 - 2002 Postdoctoral Research Fellow, UCLA

1987 - 1990 Chemist II, Syntex Research, Palo Alto, CA

1981 - 1984 Associate Engineer, M.W. Kellogg Company, Houston, TX

Honors

2008 Early Career Investigator Award, SJSU Research Foundation

2000 Award of Excellence, Chem & Biochem Advances in Research Forum, UCLA

1999 - 2002 Fellow of the American Cancer Society

Professional Memberships

2004 - Member, The Protein Society

1999 - Member, Biophysical Society

1996 - Member, AAAS

1990 - Member, American Chemical Society

Recent Publications

8. Mena, B., Torres, C., Herrero, M., Rives, V., Gilbert, A.R.W., and D.K. Eggers: Protein adsorption onto organically-modified silica glass leads to a different structure than sol-gel encapsulation. *Biophysical J.*, 95 (2008), PMID: 18676642
7. Mena, B., Herrero, M., Rives, V., Lavrenko, M., and D.K. Eggers: Favourable influence of hydrophobic surfaces on protein structure in porous organically-modified silica glasses. *Biomaterials* 29:2710-2718 (2008)
6. Rocha, V.A., and D.K. Eggers: Hydrophobic, organically-modified silica gels enhance the secondary structure of encapsulated apomyoglobin. *ChemComm* 1266-68 (2007)
5. Rodriguez, J.A., B.F. Shaw, A. Durazo, S.H. Sohn, P. Doucette, A.M. Nersissian, K.F. Faull, D.K. Eggers, A. Tiwari, L.J. Hayward, J.S. Valentine: Destabilization of apoprotein is insufficient to explain Cu,Zn-superoxide dismutase-linked ALS pathogenesis. *PNAS* 102:10516-21 (2005)
4. Rodriguez, J.A., J.S. Valentine, D.K. Eggers, J.A. Roe, A. Tiwari, R.H. Brown, L.J. Hayward: Familial ALS-associated mutations decrease the thermal stability of distinctly metallated species of human copper/zinc superoxide dismutase. *J. Biol. Chem.* 277:15932-37 (2002)
3. Eggers, D.K., and J.S. Valentine: Crowding and hydration effects on protein conformation: a study with sol-gel encapsulated proteins. *J. Mol. Biol.* 314:911-922 (2001)
2. Eggers, D.K., and J.S. Valentine: Molecular confinement influences protein structure and enhances thermal protein stability. *Protein Science* 10:250-261 (2001)
1. Liu, H., H. Zhu, D.K. Eggers, A.M. Nersissian, K.F. Faull, J.J. Goto, J. Ai, J. Sanders-Loehr, E.B. Gralla, J.S. Valentine: Copper(2+) binding to the surface residue cysteine 111 of His46Arg human copper-zinc superoxide dismutase, a familial amyotrophic lateral sclerosis mutant. *Biochemistry* 39:8125-32 (2000)

Recent Presentations

Invited Seminars:	26 Mar 2009	USA/Mexico Workshop in Biological Chemistry, Cinvestav, Mexico City
	02 Dec 2008	University of the Pacific, Chemistry Department
	20 Mar 2008	Sonoma State University, Chemistry Department
	23 Mar 2006	Albert Einstein College of Medicine, Dept of Physiology and Biophysics
	10 Mar 2006	San Francisco State University, Chemistry & Biochemistry Department
	24 Feb 2006	Santa Clara University, Chemistry Department
	13 Nov 2005	Banbury Center Discussion on "The Intracellular Molecular Environment," Cold Spring Harbor, NY

Major Research Support

CHE-0723278, Eggers (PI) 08/01/07 - 07/31/10
 Co-PI's: Collins (SJSU), Gassner (SFSU), Subramaniam (Santa Clara), Whiles-Lillig (Sonoma St.)
 NSF, CHE
 MRI: Acquisition of an Isothermal Titration Calorimeter and a Differential Scanning Calorimeter.
The calorimeters will be used by five different faculty from four different universities.

S06 GM008192-24A1, Project #1, Eggers (PI) 01/01/06 - 12/31/09
 NIH, NIGMS
 Intermediate States of Aggregation-prone Polypeptides
This work examines the pathways and thermodynamics of protein aggregation.