

Office Phone: 707-664-2331
Fax: 707-664-3012
E-mail: Jennifer.Whiles@sonoma.edu

Jennifer Whiles Lillig

EDUCATION

Ph.D., Chemistry, UC San Diego, La Jolla, CA, May 2001

Certification: Preparing Professional Faculty Program,

Center for Teaching Development, UC San Diego, La Jolla, CA, 2001

Participated in a series of seminars and activities designed to enhance the quality of undergraduate education at UC San Diego and to prepare new faculty for the classroom.

M.S., Chemistry, UC San Diego, La Jolla, CA, 1998

B.S., Chemistry, Harvey Mudd College, Claremont, CA, 1996

- Graduated with distinction overall
- Graduated with honors in chemistry
- Inducted into Sigma Xi

TEACHING EXPERIENCE

2003-current: **Assistant Professor of Chemistry**

Department of Chemistry, SSU

Responsible for the instruction of both lower and upper division lecture and laboratory courses. Also mentoring undergraduate students in individual research projects in my lab.

Courses taught at Sonoma State University:

Chemistry 105: Elements of General, Organic, and Biochemistry. Condensed this previously full-year course into one semester. Introduced case studies, group work, and writing assignments into the lecture component of the course.

Instituted a new course text and laboratory series. (4 WTUs for lecture and 2 WTUs for lab.)

Chemistry 115A: Lecture and Discussion. Taught the first semester general chemistry lecture and all discussion sections. Supervised the organization of the lab sections. (3 WTUs for lecture and 1 WTU for each discussion.)

Chemistry 115B Laboratory: Ran lab and coordinated all labs with the lecture component of second semester general chemistry. (2 WTUs)

Chemistry 397: Chemistry Practicum. Supervise lower-division research students and teaching assistants

Chemistry 445: Structural Biochemistry. Introduced group assignments and a writing component into this previously lecture-only course. (3 WTUs)

Chemistry 446: Metabolic Biochemistry. Introduced group assignments and a writing component into this previously lecture-only course. (3 WTUs)

Chemistry 441: Advanced Molecular Biochemistry Laboratory. Created new curriculum (using a CSUPERB award) for this course based on a course at

CSU Sacramento. This switched the course from weekly lab experiments to a semester-long research project culminating in written, visual, and oral presentations. (4 WTUs)

Chemistry 494: Research and Service Learning. Ongoing supervision of undergraduate research students on original research projects. (1/3 WTU per student.)

Chemistry 495: Special Studies. Supervise students involved in the preparation of manuscripts for publication and analysis of the chemical literature.

Chemistry 497: Chemistry Seminar. Organized chemistry seminar speakers with industrial and academic chemists and prepared students for their individual departmental seminars. (2 WTUs)

Chemistry 499: Internship. Ongoing supervision of undergraduate students involved in industrial internships. (1/3 WTU per student.)

Biology 598: Graduate practicum. Supervised a graduate student in the development and delivery of instructional materials in Chemistry 441. (1/3 WTU per student.)

Teaching History

Term	Course	Enrollment
Fall 2003	Chemistry 105	58
	Chemistry 105 Lab	30
	Chemistry 105 Lab	28
	Chemistry 445	25
	Chemistry 494	2
Spring 2004	Chemistry 446	35
	Chemistry 441	14
	Chemistry 494	3
Fall 2004	Chemistry 105	69
	Chemistry 105 Lab	24
	Chemistry 105 Lab	24
	Chemistry 445	29
	Chemistry 494	3
Spring 2005	Chemistry 446	18
	Chemistry 441	7
	Chemistry 494	4
	Chemistry 115B Lab	24
	Chemistry 115B Lab	24
	Biology 598	1
Fall 2005	Chemistry 105	60
	Chemistry 105 Lab	23
	Chemistry 105 Lab	13
	Chemistry 445	29
	Chemistry 494	4
	Chemistry 499	2
Spring 2006	Chemistry 441	12
	Chemistry 446	9
	Chemistry 494	6
	Chemistry 497	16
	Chemistry 499	1
Fall 2006	Chemistry 115A Lecture	120
	Chemistry 115A Discussion (5 sections)	120
	Chemistry 445	30
	Chemistry 494	6
Spring 2007	Chemistry 115B Lab/ Lab Coord.(4 sections)	24/87

	Chemistry 446	15
	Chemistry 441	11
	Chemistry 494	8
Fall 2007	Chemistry 115A Lecture	125
	Chemistry 115A Lab/Discussion	27
	Chemistry 397	3
	Chemistry 445	30
	Chemistry 494	8
	Chemistry 495	2

2001-2003: **Faculty Fellow**

Department of Chemistry and Biochemistry, UC San Diego

Responsible for the instruction of one chemistry course per quarter in addition to performing post-doctoral research as a faculty fellow researcher. Courses range from large general chemistry lecture courses to small upper-division biochemistry labs. Duties also involve supervision of multiple teaching assistants.

1997-1998: **Master Teaching Assistant**

Department of Chemistry and Biochemistry, UC San Diego

Chosen as the department's lead TA to assist in the training and observation of all new teaching assistants and to consult with existing teaching assistants having difficulty in the classroom.

RESEARCH EXPERIENCE

2003-current: **Assistant Professor of Chemistry**

Department of Chemistry, SSU

- Projects: Investigation of key molecular features in the anti-*Listerial* activity of membrane-active bacteriocins
- SSU Supervised Research Students (Chemistry 494):
 - Aaron Nelson (biology, CSU Humboldt, Sep 2007 – current)
 - Amrit Dosanjh (biochemistry, Sep 2007 – current)
 - Milena Price (biology, UC San Diego, summer 2007)
 - Cuyler Goodwin (biology, Jan 2007 – May 2007)
 - Jered Houseworth (biochemistry, Jan 2007 – current)
 - Kaitlin Fisher (biochemistry, Jan 2007 – current)
 - Vanessa Fuller (psychology, Jan 2007 – current)
 - Kristina Herrmann (biology, Sep 2006 – current)
 - Russell Smithson (kinesiology, Sep 2006 – Dec 2006)
 - Elizabeth Anderson (chemistry, CSU Chico, summer 2006)
 - Vanessa Abercrombie (chemistry, summer 2006 – May 2007; attend grad school in forensic chemistry at George Washington Univ.)
 - Leon Savinov (biology volunteer, Jan 2006 – summer 2006)
 - Daniel Laird (biology, Jan 2006 – current)
 - Nicole Fry (chemistry, Jan 2006 – May 2006; attend. grad school UC Santa Cruz)
 - Patrick McCalpin (pre-nursing, Jan 2006 – May 2006; attend. nursing school at SSU)
 - Brandon Crouse (biology, Jan 2006 – May 2006; industry)
 - Jennifer Oschner (chemistry, Aug 2005-May 2006; industry)
 - Sharon Winans (biology, Aug 2005-May 2006; industry)
 - Alene Seward (post-bac, Jun 2005-current)
 - Melinda Mulvill (chemistry, Jan 2005-May 2006; attend grad school UC San Diego)
 - Amy Nadel (chemistry, September 2004 – May 2005)
 - Nicole Alfaro (biology, Aug 2004-May 2005; industry)

- Angela Cucci (chemistry, Jan 2004-May 2005; Sep 2006 – current; industry)
- Justin Foust (chemistry, Sep 2003-Jan 2004; attend. grad school UC Davis)
- Terry Morgan (chemistry, Sep 2003-May 2005; industry)
- SSU Supervised Internship students (Chemistry 499):
 - Nate Gillespie
 - Nicole Lombardi

2001-2003: **Post-doctoral Researcher**

Department of Chemistry and Biochemistry, UC San Diego

Advisor: Dr. Partho Ghosh

- Project: Implementation of directed evolution techniques for the expression and characterization of soluble and stable proteins involved in bacterial pathogenesis and HIV.
- Technical skills developed include recombinant DNA methodologies and protein expression techniques.

1996-2001: **Doctoral Studies**

Department of Chemistry and Biochemistry, UC San Diego

Advisors: Dr. Regitze R. Vold, Dr. Elizabeth A. Komives, Dr. Edward A. Dennis

- Dissertation: "*Bicelles: A Novel Membrane Mimetic for the Characterization of Membrane Associated Peptides and Proteins*"
- Technical skills developed include peptide synthesis and purification, model membrane techniques using phospholipids, and biophysical characterization methods such as solution and solid-state NMR, fluorescence spectroscopy, and circular dichroism.

1994-1996: **Undergraduate Research**

Department of Chemistry, Harvey Mudd College

Advisor: Dr. Kerry K. Karukstis

Thesis: "Spectroscopic examination of the partitioning of daunomycin in AOT reverse micelles."

PUBLICATIONS

1. **Whiles Lillig, J.** "Changing the Focus of the Standard Term-Paper to Encourage Critical Data Analysis in the Upper-Division Chemistry Classroom" *Submitted for publication to J. Chem. Education*, (July 2007).
2. Sandoval, C., Geierstanger, B., Fujimura, S., Balatbat, C., Williams, T., de Unamuno, J., **Whiles-Lillig, J.**, Ellerby, L., Ellerby, H., Jennings, P., and Plesniak, L. "Structural evaluation of a novel pro-apoptotic peptide coupled to CNGRC tumor homing sequence by NMR." *Chem Biol Drug Des.* **67**, 417-24 (2006).
3. Plesniak, L., Parducho, J., Ziebart, A. Geierstanger, B., **Whiles, J.**, Melacini, G., and Jennings, P. "Orientation and helical conformation of a tissue-specific hunter-killer peptide in micelles." *Protein Science* **13**, 1988-1996 (2004).
4. **J. Whiles**, K. Glover, R.R. Vold, and E. Komives. "Methods for studying transmembrane peptides in bicelles: Consequences of hydrophobic mismatch and peptide sequence." *J. Mag. Res.* **158**, 149-156 (2002).
5. **J. Whiles**, R. Deems, R.R. Vold, and E. Dennis. "Bicelles in structure-function studies of membrane associated proteins." *Biorg. Chem.* **30**, 431-442 (2002).
6. K. Glover, **J. Whiles**, R.R. Vold, and G. Melacini. "Position of residues in transmembrane peptides with respect to the lipid bilayer: A combined lipid NOEs and water chemical exchange approach in bicelles." *J. Biomol. NMR* **22**, 57-64 (2002).

7. K. Glover, **J. Whiles**, M. Wood, G. Melacini, E. Komives, and R.R. Vold. "Conformational dimorphism and transmembrane orientation of prion protein residues 110-136 in bicelles." *Biochem.* **40**, 13137-13142 (2001).
8. K. Glover*, **J. Whiles***, G. Wu, R. Deems, J. Struppe, R. Stark, E. Komives, and R.R. Vold. "Solution-state bicelles for the study of membrane-associated biomolecules." *Biophys. J.* **81**, 2163-2171 (2001). *Both authors contributed equally to this work.
9. **J. Whiles**, R. Brasseur, K. Glover, G. Melacini, E. Komives, and R.R. Vold. "The orientation and effects of mastoparan X on phospholipid bicelles." *Biophys. J.* **80**, 280-293 (2001).
10. J. Struppe, **J. Whiles**, and R.R. Vold. "Acidic phospholipid bicelles: A versatile model membrane system." *Biophys. J.* **78**, 281-289 (2000).
11. K. Karukstis, E. Thompson, **J. Whiles**, and R. Rosenfeld. "Deciphering the fluorescence signature of daunomycin and doxorubicin." *Biophys. Chem.* **73**, 249-263 (1998).
12. K. Karukstis, A. Frazier, S. Martula, and **J. Whiles**. "Characterization of the microenvironments in AOT reverse micelles using multidimensional spectral analysis." *J. Phys. Chem.* **100**, 11133-11138 (1996).
13. K. Karukstis, S. Suljak, P. Waller, **J. Whiles**, and E. Thompson. "Fluorescence Analysis of single and mixed micelle systems of SDS and DTAB." *J. Phys. Chem.* **100**, 11123-11132 (1996).

PROFESSIONAL AFFILIATIONS

2003-current: Member, American Chemical Society

PRESENTATIONS IN TEACHING AND SCHOLARSHIP AND PUBLISHED ABSTRACTS

1. Invited presentation on my teaching methods to engage students in large lecture courses. Sonoma State University Faculty Retreat, January 2007.
2. Invited seminar entitled "Reading, Writing, and Chemistry: Incorporating General Education Pedagogy into a Single Semester GOB Course." Abstract published in the Book of Abstracts, 232nd National Meeting of the American Chemical Society, San Francisco, CA, September 2006.
3. Invited seminar entitled "Structure-Function Relationships in the Membrane Activity of Pathogenic Peptides." University of Laverne, Laverne, CA, April 19, 2006.
4. Poster entitled "Structure-Function Relationships in the Membrane Activity of Pathogenic Peptides." SSU Faculty Exposition for Scholarship and Sponsored Research. Sonoma State University, April 12, 2006. My poster was presented by student Jennifer Oschner.
5. Invited seminar entitled "Characterization of Key Molecular Features in the Membrane Activity of Anti-Listerial Bacteriocins." 18th Annual CSUPERB Biotechnology Symposium: *The Brain and the Future*. San Jose, CA, January 2006.
6. Invited seminar entitled "Characterization of Key Molecular Features in the Membrane Activity of anti-Listerial Bacteriocins." Department of Chemistry, CSU Chico, October 14, 2005.

7. Invited seminar describing my experiences with the incorporation of digital content and applications provided by a textbook publisher. Sonoma State University WebCT Faculty Showcase, November 18, 2004.
8. Poster entitled "Characterization of Key Molecular Features Involved in Killing by anti-*Listerial* Bacteriocins." SSU Faculty Exposition for Scholarship and Sponsored Research. Sonoma State University, April 21, 2004.
9. Invited seminar entitled "Structure-Function Relationships in the Membrane Activity of Pathogenic Peptides." Sonoma State University Department of Biology Colloquium, December 11, 2003.
10. Invited seminar entitled "Bicelles and Directed Evolution: Systems for Studying Membrane-Associated Proteins." Department of Chemistry, Sonoma State University, February 2003.
11. Invited seminar entitled "Bicelles and Directed Evolution: Systems for Studying Membrane-Associated Proteins." Department of Chemistry, Harvey Mudd College, November 2002.
12. Poster entitled "Phospholipid Bicelles for Solution State Studies of Membrane Associated Biomolecules. Do They Really Exist?" presented at the Keystone Symposium: Frontiers in NMR in Molecular Biology VII, January 2001, Big Sky, Montana.
13. Poster entitled "The Orientation and Effects of Mastoparan X on Phospholipid Bicelles" presented at the 44th Annual Meeting of the Biophysical Society, February 2000, New Orleans, Louisiana.
14. Poster entitled "Bicelles vs. Micelles: Structural Analysis of Membrane Associated Peptides" presented at the 40th Annual Experimental NMR Conference, February 2000, Orlando, Florida.
15. Poster entitled "Partitioning of daunomycin and doxorubicin in AOT reverse micelles." Karukstis, Kerry K.; Thompson, Elizabeth H. Z.; Whiles, Jennifer A.; Rosenfeld, Robin J. Abstract published in the Book of Abstracts, 215th ACS National Meeting, Dallas, March 29-April 2 (1998).
16. Poster entitled "Spectroscopic examination of the partitioning of daunomycin in AOT reverse micelles." Whiles, Jennifer A.; Karukstis, Kerry K. Abstract published in the Book of Abstracts, 211th ACS National Meeting, New Orleans, LA, March 24-28 (1996).

GRANTS

Funded

1. Co-Principal Investigator, Major Research Instrumentation Grant. National Science Foundation. "Acquisition of an isothermal titration calorimeter and differential scanning calorimeter." \$183,488. Joint instrument acquisition with CSU San Jose, CSU San Francisco, and Santa Clara University. (2007)
2. Principal Investigator, Research, Scholarship, and Creative Activity Program. Sonoma State University. "Characterization of key amino acids in the membrane activity of the anti-*Listerial* bacteriocins piscicocin V1a and V1b." \$3743. (2005)
3. Principal Investigator, Cottrell College Science Award. Research Corporation. "Characterization of key amino acids in the membrane activity of anti-*Listerial* bacteriocins." \$34,895. (2005 - current)

4. Investigator, "Acquisition of a MALDI-TOF MS System for the College of Natural Sciences and Mathematics, California State University Long Beach." Keck Foundation, \$724,131. (2005)
5. Principal Investigator, Faculty Seed Grant for Student Research, CSUPERB. "Characterization of key amino acids in the membrane activity of anti-*Listerial* bacteriocins." \$10,000. (2005)
6. Co-Principal Investigator, Biotechnology Programmatic Development Grant, Curriculum and Infrastructure Development, CSUPERB. "Development of a Biochemistry Concentration." \$15,000. (2003)

Submitted

1. Principal Investigator, Course, Curriculum, and Laboratory Improvement. National Science Foundation. "Development of general chemistry instructional modules for desegregation of the lecture and lab course components." \$149,902. *Submitted May 2006.*
2. Co-Principal Investigator, Merck AAAS Undergraduate Science Research Program. "Development of a Program in Chemical Biology" \$59,934. November 2005.
3. Co-Principal Investigator, Merck AAAS Undergraduate Science Research Program. "Interdisciplinary Projects in Chemistry and Biology" \$59,934. November 2004.
4. Principal Investigator, Petroleum Research Fund, American Chemical Society. "Characterization of Key Molecular Features in the Membrane Activity of anti-*Listerial* Bacteriocins." \$35,000. October 2003.
5. Principal Investigator, Cottrell College Science Award. Research Corporation. "Characterization of key amino acids in the membrane activity of anti-*Listerial* bacteriocins." \$35,000. October 2003.

AWARDS/RECOGNITIONS

- 2007: UC San Diego Mentor Recognition Award (nominated by SSU alumnus Melinda Mulvihill). Award in recognition of my commitment, dedication, and ability to inspire and mentor students in their preparation for graduate study
- 2006: SSU 1st Annual PI Recognition Lunch. Honorary luncheon for campus principal investigators who have received significant grant awards.
- 2005: Honored by the SSU Order of Omega for dedication to and mentoring of students
- 2001-2003: University of California Faculty Fellow
- 1997-2001: La Jolla Interfaces in Science Fellow, University of California, San Diego.
- 1997-1998: Selected for the National Institute of Health Molecular Biophysics Training Grant, University of California, San Diego.

ADDITIONAL SCHOLARSHIP ACTIVITIES

- 2007: **Organizing Committee:** 19th Annual American Chemical Society Undergraduate Research Symposium (Northern California), held May 5 at Sonoma State University.

- 2007: **Reviewer.** “Lipid Specific Binding of the Calcium-Dependent Antibiotic Daptomycin Leads to Changes in Lipid Polymorphism of Model Membranes” and “Effect of Divalent Cations on the Structure of the Antibiotic Daptomycin” dual papers for publication in *Biochemistry*, American Chemical Society.
- 2007: **Panel-member:** “Nourishing Your Scholarship: Grant Writing and Research at SSU” sponsored by the SSU Professional Development Subcommittee, April 20, 2007.
- 2006: **Reviewer.** “Behavior of the N-Terminal Helices of the Diphtheria Toxin T-Domain During the Successive Steps of Membrane Interaction” for publication in *Biochemistry*, American Chemical Society.
- 2006: **Reviewer:** “General, Organic, and Biochemistry” textbook for Thomson Brooks/Cole Publishing.
- 2006: **Curriculum developer for W.H. Freeman and Company Publishers.** Developed 26 conceptual quizzes to accompany *General, Organic, and Biochemistry* by Blei and Odein, 2nd Ed for use as in-class question with the “clicker” system.
- 2006: **Reviewer.** Research Corporation Cottrell College Science Award grant proposal.
- 2005: **Reviewer.** Reviewed a tenure dossier in my scientific field for the University of Dallas.
- 2005: **Reviewer.** 2005 Faculty-Student Collaborative Research Grant Program, California State University Program for Education and Research in Biotechnology.
- 2005: **Curriculum developer for W.H. Freeman and Company Publishers.** Developed 26 on-line quizzes to accompany *General, Organic, and Biochemistry* by Blei and Odein, 2nd Ed.
- 2005: **Curriculum co-developer for a Content Academy course through Arizona State University.** Developed 15 lesson plans (3 hours each), complete with PowerPoint presentations, inquiry-based activities, and assessment methods to teach 5th-8th grade science teachers the chemistry, physics, and energy concepts they would need to know in order to meet the Arizona State Physical Science teaching standards and to model good teaching pedagogy for their classrooms.
- 2004: **Reviewer.** “Investigating the Structural and Dynamics Properties of Phospholamban Incorporated into Phospholipid Bilayers Utilizing ²H and ¹⁵N Solid-State NMR Spectroscopy” for publication in *Biochemistry*, American Chemical Society.
- 2004: **Reviewer.** “General, Organic, and Biochemistry” textbook by Ira Blei and George Odian. W.H. Freeman and Company Publishers.
- 2004: **Reviewer.** 2004 Faculty-Student Collaborative Research Grant Program, California State University Program for Education and Research in Biotechnology.
- 2004: **Reviewer.** “Experimental Biochemistry Lab Manual” textbook by Charles Hardin and James Knopp. Oxford University Press.
- 2003-2005: **Test site.** Revised and implemented a series of general chemistry case studies in chemistry 105 as part of an NSF-sponsored program to develop the applications for general usage. (NSF Grant awarded to Kerry K. Karukstis, Harvey Mudd College.)

AWARDS, CO-PRESENTATIONS, AND PUBLISHED ABSTRACTS BY SSU UNDERGRADS FOR WORK IN MY RESEARCH LAB OR UNDER MY MENTORSHIP

- 2007: Poster entitled "Characteristics of surface adsorption of leucine enkephalin on fused silica." 233rd Presented by Nicole Litzie. Collaboration with Meng-Chi Su. Abstract published in the Book of Abstracts, 233rd National Meeting of the American Chemical Society, Chicago, IL, March 2007.
- 2007: Talk entitled "Isolation and Purification of Human Salivary Peroxidase." Presented by F. Duncan MacDonald. 19th Annual Northern California American Chemical Society Undergraduate Research Symposium. Rohnert Park, CA, May 5, 2007.
- 2007: Talk entitled "Purification and Characterization of Pectinesterase from Lemon Fruit." Presented by Amanda Burnett. 19th Annual Northern California American Chemical Society Undergraduate Research Symposium. Rohnert Park, CA, May 5, 2007.
- 2007: Talk entitled "Secondary Structure Characterization of Membrane Bound Peptides Using CD and IR Spectroscopy." Presented by Daniel Laird. 19th Annual Northern California American Chemical Society Undergraduate Research Symposium. Rohnert Park, CA, May 5, 2007.
- 2007: Talk entitled "The Use of Fluorescence Spectroscopy for the Examination of Binding and Lysis of Membrane Active Molecules." Presented by Vanessa Abercrombie. 19th Annual Northern California American Chemical Society Undergraduate Research Symposium. Rohnert Park, CA, May 5, 2007.
- 2007: Talk entitled "Expression and Purification of Carnobacteriocin B2 as an Intein Fusion Protein." Presented by Kristina Herrmann. 19th Annual Northern California American Chemical Society Undergraduate Research Symposium. Rohnert Park, CA, May 5, 2007.
- 2007: Poster entitled "Expression and Purification of Carnobacteriocin B2 as an Intein Fusion Protein." Presented by Cuyler Goodwin. 19th Annual Northern California American Chemical Society Undergraduate Research Symposium. Rohnert Park, CA, May 5, 2007.
- 2007: Poster entitled "The Use of Fluorescence Spectroscopy for the Examination of Binding and Lysis of Membrane Active Molecules." Presented by Alene Seward. 19th Annual Northern California American Chemical Society Undergraduate Research Symposium. Rohnert Park, CA, May 5, 2007.
- 2007: Poster entitled "Secondary Structure Characterization of Membrane Bound Peptides Using CD and IR Spectroscopy." Presented by Daniel Laird at the 19th Annual CSUPERB Biotechnology Symposium: "*Microbes and Human Disease: The New Connections.*" Los Angeles, CA, January 2007.
- 2007: Poster entitled "The Use of Fluorescence Spectroscopy for the Examination of Binding and Lysis by Membrane Active Molecules." Presented by Vanessa Abercrombie and Alene Seward and at the 19th Annual CSUPERB Biotechnology Symposium: "*Microbes and Human Disease: The New Connections.*" Los Angeles, CA, January 2007.
- 2007: Poster entitled "Expression of MBP as an Intein Fusion Protein by IPTG Induction." Presented by Elizabeth Anderson (CSU Chico) at the 19th Annual CSUPERB Biotechnology Symposium: "*Microbes and Human Disease: The New Connections.*" Los Angeles, CA, January 2007.
- 2006: Poster entitled "Chemistry day outreach program for elementary school students." K. Prescott (presenter), **J.W. Lillig**, K.J. Banker, M. Mulvihill, A. Cucci, R.L. Peterson, J. Foust, C.F. Works, and E. Sterns. Abstract published in the Book of Abstracts, 232nd National Meeting of the American Chemical Society, San Francisco, CA, September 2006.
- 2006: Poster entitled "Comparison of Structure:Function Relationships in the Membrane Activity of Piscicocins V1a and V1b." Presented by Daniel Laird. Abstract published in the Book

of Abstracts, 232nd National Meeting of the American Chemical Society, San Francisco, CA, September 2006.

- 2006: Talk entitled "Synthesis and Characterization of Class IIa Bacteriocins: Analysis by Infrared Spectroscopy." Presented by Melinda Mulvihill. 18th Annual Northern California American Chemical Society Undergraduate Research Symposium. San Jose, CA, May 6, 2006.
- 2006: Synopsis presentation by Melinda Mulvihill on her research at the Doris A. Howell Foundation Health Education Series Luncheon, La Jolla, CA, April 12, 2006.
- 2006: Poster entitled "Synthesis and Characterization of Class IIa Bacteriocins" Presented by Melinda Mulvihill and Jennifer Oschner. 18th Annual CSUPERB Biotechnology Symposium: "*The Brain and the Future.*" San Jose, CA, January 2006.
- 2006: Poster entitled "Cloning and Expression of Carnobacteriocin B2 from *Carnobacterium piscicola.*" Presented by Alene Seward and Sharon Winans. (Additional student authors: Nicole Alfaro and Jennifer Harr.) 18th Annual CSUPERB Biotechnology Symposium: "*The Brain and the Future.*" San Jose, CA, January 2006.
- 2006: CSUPERB Howell Fellowship (\$2500) awarded to Melinda Mulvihill.
- 2005: Poster entitled "Characterization of key molecular features in the membrane activity of anti-*Listerial* bacteriocins" Presented by Amy Nadel. Abstract published in the Book of Abstracts, 229th National Meeting of the American Chemical Society, San Diego, CA, March 2005.
- 2005: CSUPERB Student Travel Award presented to Amy Nadel for attendance at the 229th National Meeting of the American Chemical Society, San Diego, CA, March 2005.
- 2005: Poster entitled "Isolation and purification of carnobacteriocin B2 from *Carnobacterium piscicola.*" Presented by Angelina Cucci. 17th Annual CSUPERB Biotechnology Symposium: "*Molecular and Cellular Systems Biology: Pathways to Understanding Human Complexity and New Routes to Drug Development.*" Los Angeles, CA, January 2005.
- 2005: Poster entitled "Expression and purification of Carnobacteriocin B2 from *E. coli.*" Presented by Nicole Alfaro. 17th Annual CSUPERB Biotechnology Symposium: "*Molecular and Cellular Systems Biology: Pathways to Understanding Human Complexity and New Routes to Drug Development.*" Los Angeles, CA, January 2005.
- 2004: CSUPERB Howell Fellowships (\$2500) awarded to Justin Foust and Terry Morgan.
- 2004: Poster entitled "Characterization of key amino acids in the membrane activity of anti-*Listerial* bacteriocins: A Comparison of Piscicocins VIa and VIb" Presented by Terry Morgan and Justin Foust. 16th annual CSUPERB Biotechnology Symposium: "*Proteomics and Plumbing the Proteome: Innovations and Solutions in the Molecular Life Sciences and Medicine.*" San Jose, CA, January 2004.

PROFESSIONAL DEVELOPMENT

- Attended and moderated a talk session at the 19th Annual Northern California American Chemical Society Undergraduate Research Symposium. Rohnert Park, CA, May 5, 2007.
- Attended the 19th annual CSUPERB Biotechnology Symposium: "*Microbes and Human Disease: The New Connections.*" Los Angeles, CA, January 2007.

Attended and presented at the 232nd National Meeting of the American Chemical Society. San Francisco, CA, September.

Attended and moderated a talk session at the 18th Annual Northern California American Chemical Society Undergraduate Research Symposium. San Jose, CA, May 6, 2006.

Attended the 18th annual CSUPERB Biotechnology Symposium: "*The Brain and the Future.*" San Jose, CA, January 2006.

Attended the 17th annual CSUPERB Biotechnology Symposium: "*Molecular and Cellular Systems Biology: Pathways to Understanding Human Complexity and New Routes to Drug Development.*" Los Angeles, CA, January 2005.

Attended the 16th annual CSUPERB Biotechnology Symposium: "*Proteomics and Plumbing the Proteome: Innovations and Solutions in the Molecular Life Sciences and Medicine.*" San Jose, CA, January 16-18, 2004.

Participated in the *Teaching General Chemistry Conference*. Sponsored by the CSU Office of the Chancellor and the Center for the Enhancement of Teaching and Learning. CSU Fresno, March 11-12, 2004.

UNIVERSITY SERVICE

- 2007: **Committee member, Department of Chemistry Search Committees.**
Search Committees for tenure-track analytical and organic chemistry positions.
- 2007: **Committee, SST Health Professions Advisory Committee**
Participate in advising, mock interviews, and writing letters of recommendation for students pursuing a health profession.
- 2007: **Lead Advisor, SSU Department of Chemistry**
Appointed by the department chair to organize and facilitate advising processes for current and new chemistry majors.
- 2007: **Participant, Department of Chemistry Retreat for ACS Re-Accreditation and Program Review**
June 18-22, Rohnert Park, CA.
- 2007: **Chair, SSU Sub-Committee on Academic Advising**
Assumed duties of chair for the 2007-2008 academic year.
- 2007: **Advisor, SSU Chess Club**
- 2007: **Participant, Department of Chemistry Strategic Planning Retreat**
January 23-24, Santa Rosa, CA.
- 2006-current: **Appointed SSU representative, Faculty Consensus Group, California State University Program for Education and Research in Biotechnology (CSUPERB)**
Department of Chemistry representative to the system-wide committee in charge of distributing funding and organizing annual meetings for CSUPERB.
- 2006: **Committee member, Department of Chemistry Search Committee.** Search Committee for tenure-track analytical chemistry position.
- 2006: **Seminar organizer, Department of Chemistry**
Brought in external speakers to present public chemistry seminars in conjunction with the Chemistry 497 course.

- 2005: **Committee member, Department of Chemistry Search Committees.**
Committees for tenure-track physical chemistry, tenure-track organic chemistry, and part-time instructors.
- 2005: **SSU representative to the summit for system-wide strategic planning to support implementation of LMS.** (San Francisco, CA, September 29-30)
- 2004-2005: **Co-Developer, B.S. Biochemistry Degree for the SSU Department of Chemistry**
- 2005-current: **Committee Member, SSU Sub-Committee on Academic Advising**
Committee charged with improving and standardizing academic advising procedures.
- 2004-2006: **Committee Member, School of Science Darwin Transition and Group II Expenditures Committees**
Committee responsible for organizing the transition of faculty, equipment, and supplies and disbursing the Group II funds during the Darwin remodel.
- 2205 (spring): **Proxy Committee Member, Faculty Standards and Affairs Committee**
Committee responsible for evaluation and developing faculty-related SSU policies.
- 2005 (spring): **Committee Member, School of Science and Technology Strategic Planning Committee**
Committee responsible for evaluating the current role and mission of SST in the SSU community and determining areas and methods for improvement.
- 2004-2005: **Committee Member, Department of Chemistry Search Committee**
Committee for tenure-track physical chemistry search.
- 2003-current: **Committee Member, School of Science and Technology Travel Committee**
Committee responsible for reviewing and acting on faculty travel requests.
- 2003-2006: **Advisor, Chemistry Club, SSU**
Responsible for advising the chemistry club members in activity and financial planning.
- 2003-current: **Advisor, chemistry majors, SSU**
Aid chemistry majors in planning their academic schedules.
- 2003-current: **Co-coordinator, SSU chemistry department scholarship allocations**
Facilitate awarding of chemistry department scholarships.
- 2000: **Co-Chair, 1st Annual UCSD All-Grad Symposium**
Created and organized an all-day conference to encourage inter-disciplinary exchange between graduate students.

COMMUNITY SERVICE

- 2007-current: **Volunteer Chemistry Tutor**
Tutor for local high school students in AP High School Biochemistry/Chemistry.
- 2007: **Workshop Leader, Sonoma County Expanding Your Horizons Conference**

Lead 2 workshops entitled "Watch Out For Those Bath Bombs!" to teach 7th and 8th grader girls the acid/base chemistry of household bath products. (SRJC, March, 2007)

- 2006: **Co-host with SSU Chemistry Club, National Chemistry Week Outreach Day**
Supervised the Chemistry Club as they hosted approximately 70 2nd and 3rd grade students from Valley Vista Elementary School (Petaluma, CA) for a series of chemistry demonstrations and hands-on experiments for National Chemistry Week.
- 2006: **Workshop Co-Leader, Sonoma County Expanding Your Horizons Conference**
Lead 2 workshops entitled "I Screen, You Screen, We All Screen for Phenolics" and 1 workshop entitled "Watch Out For Those Bath Bombs!" to teach 7th and 8th grade girls about screening techniques used in forensic chemistry for molecule identification and the acid/base chemistry of household bath products. (SSU, March 18, 2006)
- 2005: **Faculty presenter, 20th Forum for Diversity in Graduate Education**
(Sacramento State University, CA, October 29)
- 2005: **Co-host with SSU Chemistry Club, National Chemistry Week Outreach Day**
Supervised the Chemistry Club as they hosted approximately 70 2nd and 3rd grade students from Petaluma for a series of chemistry demonstrations and hands-on experiments for National Chemistry Week.
- 2005: **Workshop Co-Leader, Sonoma County Expanding Your Horizons Conference**
Lead 3 workshops entitled "Watch Out For Those Bath Bombs!" to teach 7th and 8th grader girls the acid/base chemistry of household bath products. (SRJC, March 5, 2005)
- 2004: **Volunteer, Sonoma Country Expanding Your Horizons Conference**
Helped find equipment and directed students during a conference designed to encourage 7th and 8th grade girls in the sciences. (SSU, March 27, 2004)
- 2004: **Co-host Girl Scout Troop #156 Laboratory Day**
Organized and hosted a laboratory day entitled "Chemistry of Foods and Cleaners- Is it an acid or is it a base?" designed to introduce the troop to the chemistry of household products. (SSU, April 17, 2004)
- 2003-2006: **Reviewer, Project Censored**
Review scientific content and validity of news stories for possible inclusion in the yearly publication *Project Censored*.
- 2003 - current: **Member, SSU Expert's Guide**
Available to answer questions from the community concerning peptide:membrane interactions and peptide synthesis and purification.
- 2002: **Invited guest speaker, Early Academic Outreach Program, UC San Diego**
Spoke to minority high school students on the connections between scientific research, science in the classroom, and science in society.
- 2000: **Event Captain, San Diego County Science Olympiad**
Assembled a scientific activity and organized a team of volunteers to manage the event.

2000:

Judge, Greater San Diego Science and Engineering Fair
Judge for elementary and high school biochemistry projects.