

Susan L. Elrod, Ph.D.

Director, Center for Excellence in Science and Mathematics Education (CESaME)

Professor, Biological Sciences Department
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EXECUTIVE SUMMARY

Administrative and Leadership Achievements

- Extensive record of innovative, action-oriented higher education leadership and service that spans department, university and system-wide levels; collaborative, problem-based leadership approach with history of data-driven decision-making processes; expertise in programmatic and curricular development
- Over five years of experience as a campus faculty development leader and workshop facilitator, including experience planning, implementing and facilitating biology education conferences within the California State University system
- Prestigious national leadership development experiences - American Council on Education (ACE) Fellows program and the Harvard Management Development Program (MDP); focus on national issues in higher education: undergraduate STEM education reform, assessment & accountability, interdisciplinary and integrative undergraduate program models
- Advisory board leadership experience, both internal and external to Cal Poly

Academic and Professional Accomplishments

- Ten years of experience as a genetics and microbiology faculty member at a mid-sized, master's level university (California Polytechnic State University – San Luis Obispo) in one of the largest public university systems in the United States (the California State University system)
- Significant contract and grant funding history, including education-related grants; current National Science Foundation (NSF) funding for educational research project on development of a case-based, inquiry approach for teaching undergraduate genetics; participant in newly formed NSF-sponsored biology education research group
- Current genetics textbook author and reviewer and consultant on electronic media for undergraduate science textbooks to W.H. Freeman Publishers
- Biotechnology research experience, scientific patent inventor, manuscript and grant reviewer
- Peer-reviewed journal publications and conference presentations with undergraduate and master's students
- Ten years of participation in faculty development workshops and attendance at undergraduate education and science education conferences

EDUCATION

Ph.D., *Genetics*, University of California, Davis, 1995
Dissertation: *Mutational Analysis of CDC36 in Saccharomyces cerevisiae*

B.S., *Biological Sciences*; Minor, *Chemistry*, California State University, Chico 1986
Honors Research: *Ames Testing of Regional Farm Soils*

FACULTY EXPERIENCE

Full Professor	Biological Sciences Department, Cal Poly, San Luis Obispo	Fall 2008 – present
Associate Professor	Biological Sciences Department, Cal Poly, San Luis Obispo	Fall 2003 – present
Assistant Professor	Biological Sciences Department, Cal Poly, San Luis Obispo	Fall 1997 – 2003

Teaching Areas

Genetics, Molecular Biology, Microbial
Biotechnology, Bioinformatics

Research Areas

Science education, Fungal molecular ecology; Fungal
Heterologous gene expression/genetic engineering

PROFESSIONAL EXPERIENCE

Postdoctoral Fellow	Novozymes Biotech, Inc., Davis, CA	May 1995 – Aug 1997
Research Associate	Hematology & Oncology Laboratory, University of California Medical Center, Davis, CA	Feb 1988 – Aug 1990
Research Assistant	Biogen IDEC, Inc., Mountain View, CA	May 1987 – Jan 1988

ADMINISTRATIVE AND LEADERSHIP EXPERIENCE

Director, Center for Excellence in Science and Mathematics Education (CESaME)	Cal Poly, San Luis Obispo	August 2007 – present
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Primary Responsibilities:

- Lead *CESaME* in the next stage of its growth, including re-examining its vision and strategic plan
- Guide *CESaME* to a higher level of regional, statewide, and national recognition
- Guide, facilitate, and oversee University faculty from all colleges in their efforts
 - To create outstanding science and mathematics teacher preparation programs
 - To offer K-16 teacher professional development opportunities
 - To improve K-16 science, engineering and mathematics curriculum.
- Implement, evaluate and improve the STAR (Science Teacher and Researcher) summer research program for aspiring and early career science teachers
- Seek external funding for *CESaME* programs and support faculty applying for grants and contracts in science and mathematics education
- Play a leadership role in
 - The San Luis Obispo County Office of Education's K-16 Math/Science Task Force
 - The CSU Chancellor's Office mathematics and science initiatives
 - Statewide and national initiatives promoting STEM learning and teacher preparation

Co-Leader, Facilitating Interdisciplinary Learning	Project Kaleidoscope, Washington, DC	Jan 2008 - present
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Primary Responsibilities:

- Organize Keck Foundation-funded, national project as part of an executive leadership team; project aim is to facilitate and inform the advancement of undergraduate interdisciplinary STEM education: see, <http://www.pkal.org/activities/PVIIDST.cfm>
- Selected 31 participating campuses from across the nation
- Facilitate the advancement of participating campus progress toward meeting project objectives
- Plan, host and manage meetings and activities associated with the initiative (2/year)
- Evaluate initiative progress and success
- Co-author final reports and publications

Principal Investigator, Elementary School Science Teacher Preparation Study	CESaME with California Council on Science and Technology (CCST)	Sept 2008 - present
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Primary Responsibilities:

- Organize and facilitate Bechtel Foundation-funded investigation into the preparation of elementary school teachers to teach science in California
- Work with CCST staff and consultants to organize and facilitate focus groups, interviews, survey preparation and analysis to carry out investigation
- Co-author final reports and publications

Chair, Western Association of Schools and Colleges (WASC) re-accreditation	Cal Poly, San Luis Obispo	Mar 2007 – Dec 2007
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Primary Responsibilities:

- Co-wrote successful institutional self-study proposal
- Facilitated campus-wide effort to create an institutional self-study proposal

American Council on Education (ACE) Fellow, The Colorado College Aug 2006 – May 2007

- Involved in President's cabinet-level evaluation of Colorado College's strategic plan
- Reviewed Colorado College's North Central Association of Schools and Colleges re-accreditation report, including participation in analysis of assessment and accountability measures such as the National Survey of Student Engagement (NSSE) and the Collegiate Learning Assessment (CLA)
- Studied the scope, structure and function of Colorado College's interdisciplinary programs; conducting focus group interviews regarding interdisciplinary programs at other institutions
- Facilitated internal data gathering and external review of the Crown faculty development center
- Papers in preparation: *Undergraduate STEM Education Reform: Why So Slow?*, *Undergraduate Interdisciplinary Programs: Institutional Issues and Solutions*

Special Assistant to the Provost Cal Poly, San Luis Obispo Jun 2005 – Jun 2006

Primary Responsibilities:

- Organize and facilitate campus-wide effort to create university-wide learning objectives and revised mission statement
- Organize and facilitate operational review of Academic Programs Office

Major accomplishments:

- Led working groups of faculty and staff to create university-wide objectives and revised mission statement; helped to develop plan for soliciting greater campus input and Academic Senate approval on objectives and mission statement
- Developed plan for review of Academic Programs Office, including milestones and timeline; assisted Vice Provost in drafting revised Academic Programs Office mission statement and campus constituent focus group questions, formulated and facilitated constituent focus groups for review; wrote review report that was distributed to Provost, Vice Provost, Academic Programs Manager and staff, assisted Vice Provost in development of action plan for improvement of Academic Programs Office

Associate Chair Biological Sciences Department, Cal Poly, San Luis Obispo
2003 – 2005

Primary responsibilities:

- Serve as Director of Curriculum and Scheduling Committee
- Create and manage the department class, faculty and laboratory facility schedules (~40 different courses per quarter with most consisting of lecture and laboratory components, an average of 10,000 student credit units taught each quarter by 30 tenured/tenure-track faculty and 20 part-time faculty); schedule and track use of departmental laboratory classroom use
- Manage part-time faculty budget (~\$180,000 per year)
- Serve as a liaison to service departments and colleges and coordinate course schedules with service departments
- Advise students with special issues (e.g., academic probation)
- Supervise educational technology staff activities

Major accomplishments:

- Facilitated a major effort to revise introductory course series for majors; coordinated implementation efforts for new courses; secured student fee funds for new course development; negotiated major book adoption contract for new introductory course series
- Streamlined scheduling of independent study courses
- Developed data-driven methods for scheduling of core major courses
- Effectively managed part-time faculty budget at target
- Co-coordinated initial phases of department program review
- Initiated and completed two staff reclassifications
- Initiated meetings with students on academic probation and developed science study tip sheet for students on academic probation
- Coordinated departmental advising events for incoming students and freshmen

Harvard Institute for Higher Education, Management Development Program (MDP)

Jul 2004

- Participated in intensive two-week, in-residence higher education leadership workshop
- Wrote a mini case study on curricular change in Cal Poly's Biological Sciences Department
- Learned from case studies, other readings and workshop discussions on a variety of issues in higher education including, leadership, strategic planning & budgeting, financial management, diversity & community, fostering innovation and change, and institutional values and integrity

Faculty Associate

Center for Teaching and Learning (CTL), Cal Poly, San Luis Obispo
Dec 2003 – Jun 2006

- Co-taught 10-week Effective Teaching and Learning course;
- Facilitated 2-3 workshops per year on various topics related to teaching and learning (e.g., Active Learning, Classroom Assessment Techniques, How People Learn)
- Reviewed CTL faculty development grant proposals and mentored recipients of CTL faculty development grants through workshops

Assistant Director

Center for Teaching and Learning (CTL), Cal Poly, San Luis Obispo
Jan 2002 – Dec 2003

Primary responsibilities:

- Coordinate faculty development workshop program, including new faculty orientation, Effective Teaching and Learning course and weekly workshops
- Co-teach Effective Teaching and Learning course 1-2 quarters per year and facilitate 3-5 workshops per year on various topics related to teaching and learning (e.g., Active Learning, Classroom Assessment Techniques, How People Learn)
- Edit quarterly newsletter and manage CTL web content
- Assist CTL Director in overall execution of CTL goals and objectives

Major accomplishments:

- Conceived and launched faculty development program with 3-10 *Teaching Well* workshops and 1-2 courses per quarter, including redesigned *Effective Teaching and Learning* course and faculty orientation program; program based on a peer instruction model and *Understanding by Design* (Wiggins and McTighe, 1998)
- Facilitated six faculty development workshops on various teaching and learning topics, co-taught Effective Teaching and Learning course offered twice per year, and co-taught New Teacher Workshop each fall quarter
- Developed teaching resource binder for new faculty, edited and wrote articles for quarterly newsletter, organized and edited web content for Cal Poly's Faculty web pages

SELECTED SERVICE AND GOVERNANCE ACCOMPLISHMENTS

California State University (CSU) level

Representative CSU Lower Division Transfer Pattern Meetings 2005

- Represented Cal Poly Biological Sciences faculty to statewide conference regarding community college course transfer patterns to be applied to all CSU Biology and Microbiology majors

Co-organizer CSU Biology Curriculum Initiative Workshop Apr 2004

- Played significant role in planning and execution of multi-campus workshop regarding introductory biology course learning outcomes and articulation with community college; co-PI on grant awarded by CSU Institute for Teaching and Learning to support workshop
- Facilitated session on student learning outcomes that led to group consensus on common set of introductory biology course learning objectives

University level

Member WASC Reaccreditation Steering Committee, Cal Poly, San Luis Obispo
Sept 2008 – present

Chair Academic Senate Curriculum Committee, Cal Poly, San Luis Obispo 2004 – 2006

Primary Responsibilities:

- Coordinate committee recommendations regarding academic master planning and curriculum, academic programs, University requirements for graduation, general education, cultural pluralism, and library oversight as it relates to the curriculum
- Facilitate review of curricular proposals for new catalogs

Major accomplishments:

- Completed review and Academic Senate approval of revised curricula for 2005-7 university catalog
- Shepherded two new bachelor's degree programs through review and Academic Senate approval processes
- Authored successful resolutions for revising committee membership (AS-636-05, AS-643-06)
- Created new catalog review procedures to improve efficiency and clarity
- Created curriculum responsibilities document describing administrative and academic unit responsibilities in program and course review process

Chair Status of Women Committee, Cal Poly, San Luis Obispo 2005 – 2006

Primary Responsibilities:

- Lead committee efforts to address employment and educational equity, safety and campus climate; meet annually with the Academic Deans' Council and Student Affairs directors to report on the status of women faculty, staff and students at Cal Poly
- Review the University's Sexual Harassment Policy and Programs

Major accomplishments:

- Proposed campus-wide mentoring program for women faculty that was supported by Provost
- Worked with Academic Personnel staff to gather and analyze salary, recruiting and promotion data with respect to regarding gender, rank, and ethnicity
- Established a Women's Safety subcommittee to coordinate sexual assault policies and education

Member Consultative Committee for the Selection of a Provost and Vice President of Academic Affairs, Cal Poly, San Luis Obispo 2004 – 2006

- Elected to represent College of Science and Mathematics faculty in Provost selection
- Participated in establishment of review criteria and evaluation of applicant files; participated in interview processes

Vice Chair Cal Poly Academic Senate 2003 - 2004

- Co-coordinated senate meetings and agendas; facilitated efficient meeting procedures
- Participated in Academic Senate Executive Committee meetings
- Represented Academic Senate to campus Instructionally Related Activities (IRA) Committee and University Union Advisory Board

Member Registration and Scheduling Committee 2003 – 2004

- Reviewed campus course registration and scheduling procedures
- Participated in analysis and major revision of registration procedures, including an electronic course add/drop system and wait-listing functions

Other University-level service:

Department of the Graduate School of Education Program Review, Internal Reviewer Fall 2006
Associated Students Board of Directors, Academic Senate Representative 2003 – 2005
Science and Technology General Education committee 2001 – 2003

College of Science and Mathematics (CSM) level

Member Assessment Committee 2001- 2006

- Presented Biological Sciences department program assessment plans to committee
- Reviewed program assessment plans from other CSM departments

- Organizer** Biotech Industry Career Day May 1999 – 2006
- Coordinated annual industry education and career event
 - Communicated with industry representatives from 10-15 companies
 - Responsible for execution of all event details, from room scheduling to catering, including coordination of student volunteers
 - Managed modest program budget
 - Organized event web page, including online registration for industry participants
 - Worked with career counseling staff to coordinate advertising and corporate representatives schedules
 - Evaluated event success

Other College-level service:

- Academic Senator, elected two terms 2001-3, 2003-5
CSM Career Counselor for College Search committee member Summer 2003

Biological Sciences Department level

- Director** Curriculum and Scheduling Committee 2003 – 2005
- Reviewed and coordinated departmental course and program curricular proposals for college and university review (for three B.S. degree programs and a Master's degree)
 - Obtained committee input on department class schedule and resource issues related to faculty workload

- Chair** Microbiology Degree 2002 – 2003
- Coordinated course and program curricular proposals for the Microbiology degree
 - Coordinated microbiology course schedules
 - Led discussions regarding faculty, staff and other resource needs for teaching microbiology courses

- Chair** Campus Biology Committee (*ad hoc*) 2001 - 2002
- Coordinated department's efforts for outreach to service departments in other colleges, such as Agriculture and Engineering
 - Gathered and analyzed data regarding service course student credit units (SCUs) taught and faculty workloads in service courses; presented written report to department that revealed department SCU decreases were due to both major and service course reductions

ADVISORY BOARDS AND COUNCILS

- Member**, Project Kaleidoscope – National Issues Task Force Jan 2007 - present

- Chair**, College of Natural Sciences Advisory Board, CSU, Chico Nov 2006 – present
- Inaugural board member since Spring 2005

- Member**, Biotechnology Industry Advisory Council, Cal Poly 2002 - 2006
- Established initial objectives and bylaws for first biotechnology industry council at Cal Poly
 - Recruited council members in collaboration with external council chair
 - Attended biannually meetings and facilitated establishment of industry mentoring program

- Member**, California State University Programs for Education and Research in Biotechnology (CSUPERB), Faculty Consensus Group 1999 – 2006

SCHOLARLY ACHIEVEMENTS

BOOKS, PUBLICATIONS, PATENTS, CONFERENCE PRESENTATIONS AND SEMINARS

Textbooks

- Contract for *Understanding Genetics: An Inquiry Approach* (projected publication date: Dec 2008), New York, NY: W.H. Freeman Publishers
- Consultant for electronic media for undergraduate science textbooks, W.H. Freeman Publishers
- Test Bank for Pierce's *Genetics: A Conceptual Approach* textbook (2005), New York, NY: W.H. Freeman Publishers
- Elrod, Susan L. and William Stansfield (2002) *Schaum's Outline of Theory and Problems of Genetics*. 4th edition. New York: McGraw-Hill

Educational Publications (*student co-authors are underlined*):

- Elrod, S.L., P.D. Bartel, K.M. Polacek *Development of a Genetics Concept Inventory* (in preparation)
- Elrod, S.L. *Facilitating Interdisciplinary Learning: Lessons from Current Programs* (in preparation)
- Garvin-Doxas, K., M. Klymkowsky and S.L. Elrod (2007) *Building, Using and Maximizing the Impact of Concept Inventories in the Biological Sciences: Report on a National Science Foundation-sponsored Conference on the Construction of Concept Inventories in the Biological Sciences*. Life Science Education 6: 277-282.
- Elrod, S.L. and M.M. Somerville, (2007) *Literature-Based Scientific Learning: A Collaborative Model* Journal of Academic Librarianship. 33(6): 684-691.

Scientific Research Publications (*student co-authors are underlined*):

- Chamberlain, A.G., C. Kitts and S.L. Elrod (in preparation for submission to FEMS Microbiology Ecology) *Spatial and Temporal Changes in the Fungal Community in the Soil of a petroleum-degrading land treatment unit using T-RFLP Analysis*
- Lord, N., C. Kaplan, P. Shank, C. Kitts and S.L. Elrod. (2002) *Assessment of fungal diversity using terminal restriction fragment (TRF) analysis: Comparison of 18S and ITS ribosomal regions*. FEMS Microbiology Ecology 24(3): 327-337
- Elrod, S.L., A. Jones, R. Berka, J.R. Cherry. (2000) *Cloning of the Aspergillus oryzae hemA gene and its use as a selectable marker*. Current Genetics 38: 291-8
- Hatcher, S.L.S., R.L. Teplitz, S.L. Elrod. (1990) *Rapid Alkaline Transfer of Low Molecular Weight DNA From Nusieve Gtg Agarose Gels*. Biotechniques 9(3):260-262

Patents

- Elrod, S.L., *Polypeptides having uroporphyrinogen decarboxylase activity and nucleic acids encoding same*. Pat No. 6,200,795 Mar 13, 2001
- Elrod, S.L., J. Cherry and A. Jones. *A Method for Increasing Hemoprotein Production in Filamentous Fungi*. Pat. Nos 6,261,827, 6,100,057 Aug 8, 2000, Jul, 17, 2001
- Jensen, E. B., S.L. Elrod, J. Cherry. *Methods for Overproducing Polypeptides in Respiratory-Deficient Cells*. Pat. No. 5,891,669 Apr 6, 1999
- Elrod, S.L. and J. Cherry. *Aspergillus oryzae 5- Aminolevulinic Acid Synthases and Nucleic Acids Encoding Same*. Pat. Nos. 5,871,991; 5,958,747 Feb 16, 1999, Sept 29, 1999

National Scientific Conference Presentations (*student co-authors are underlined*):

- Chamberlain, A.G., C.L. Kitts, S.L. Elrod, *Fungal community dynamics in a petroleum-degrading land treatment unit*, American Society for Microbiology 104nd General Meeting (poster presentation), New Orleans, LA May 2004
- Spiker, D., C.L. Kitts, P. Unkefer, S.L. Elrod. *Functional Terminal Restriction Fragment (TRF) Analysis of Carbon Degradation Activity in Soil*, American Society for Microbiology 102nd General Meeting (poster presentation), Salt Lake City, Utah May 2002

- Lord, N.S., T. Stine, C. Kaplan, C. Kitts, S.L. Elrod. *Fungal Terminal Restriction Fragment (TRF) Analysis of Petroleum-contaminated Soils*, American Society for Microbiology 102nd General Meeting (poster presentation) Salt Lake City, Utah May 2002
- Shank, P., L. Martinez, C. Reimers, K. Palmer, C. Kaplan, C. Kitts and S.L. Elrod. *Fungal Community Analysis of a Petroleum-Degradation Land Treatment Unit using Terminal Restriction Fragment Patterns (TRFP)*, American Society for Microbiology 100th General Meeting (poster presentation), Los Angeles, CA May 2000
- DeSantis, T., and S. L. Elrod. *Construction of a Plasmid For Expression of Glycosylated Bovine Beta-Casein in the Fungus, Aspergillus oryzae*, Fungal Genetics Conference (poster presentation), Asilomar, CA Mar 1999

Education Conference Presentations

- Elrod, S. L. *Genetics Concept Inventory*, working paper presented at NSF-sponsored Biology Education Research Group – Conceptual Assessment Group II meeting, Asilomar, CA Jan 2008
- Elrod, S. L. *Genetics Concept Inventory*, working paper presented at NSF-sponsored Biology Education Research Group – Conceptual Assessment Group I meeting, Boulder, CO Mar 2-3, 2007
- Elrod, S. L. *Science Learning Communities: A Learner-Centered Genetics Class*, Lily Conference on College and University Teaching – West (poster presentation) Pomona, CA Mar 19-20, 2004
- Elrod, S.L. *Increased Student Learning through Challenging Exam Questions (ChEQ)*, American Society for Microbiology Undergraduate Education Conference (poster presentation) Pomona, CA May 2000

Invited Seminars

- Literature-based Learning in Genetics*, University of Colorado, Michigan State University Spring 2008
- Microbial Biotechnology and Vampire Fungi*, University of the Pacific, Stockton, CA Mar 2006
- T-RFLP Analysis of Fungal Communities in the Environment*, Davidson College Sept 2005
- Functional and Taxonomic Diversity Assessment of Fungi in Soil using T-RFLP Analysis*, UC, Davis and CSU, Chico Mar 2003
- Heme Pathway Engineering in Filamentous Fungi*, CSU, Chico Oct 1998

GRANTS AND CONTRACTS

Education Grants \$232,500

- Elrod, S.L., (January 2007 – December 2009) *Literature-Based Scientific Learning in Genetics*, National Science Foundation DUE # 0633351
- *Conceptual Assessment in Biology Meeting II Grant Supplement*
- Elrod, S.L., B. Schader, and M.M. Somerville, (Spring 2006) *A Constructivist Model for Literature-Based Scientific Information Competence*, CSU Chancellor's Office Grant
- Elrod, S.L., F.X. Villablanca, T. Kearns, , R. and Bowker, *Bioinformatics Computational Resources*, (2000), CSUPERB (California State University Programs for Education and Research in Biotechnology)
- Cal Poly Dean's office match
- Elrod, S.L. *Molecular Biology Teaching Lab* (2000) CSUPERB

Scientific Research Grants and Contracts \$445,000

- Elrod, S.L., (Jul - Aug 2005) Consultant on NSF (National Science Foundation) RUI (Research at Undergraduate Institutions): grant awarded to Dr. Christopher Paradise at Davidson College for TRFLP analysis of treehole leaf and sediment samples
- Cal Poly Biological Sciences Student Fee Summer Research Program match
- Kitts, C., R. Cano, and S.L. Elrod, (2003 - 2004), *Development of microbial tools for analysis of bioremediation at the Guadalupe Dunes*, UNOCAL Corp
- Elrod, S.L. (2001 - 2003), *Analysis of Fungi at the Guadalupe Dunes*, UNOCAL Corp
- Kitts, C. and S.L. Elrod, (2001 - 2003), *Molecular Probes for N- and C- Cycling in Soils*, Los Alamos National Laboratory (LANL) contract (Department of Energy grant to Pat Unkefer)

- Elrod, S.L. (2000 - 2002), *Analysis of Fungal Molecular Diversity during Phytoremediation in a Petroleum-Contaminated Dune System*, CSUPERB (California State University Programs for Education and Research in Biotechnology)
- Elrod, S.L. Summer 1998, 1999, & 2000, *Expression of bovine beta-casein in Aspergillus oryzae*. University Summer Services Grants (Cal Poly)
- Elrod, S.L. 1997 - 1998; 1998 - 1999, *Expression of bovine beta-casein in Aspergillus oryzae*. Faculty Development Grants (Cal Poly)
- Cano, R. and S.L. Elrod, (Mar 2000), EBI Bioremediation Symposium Proposal, CSUPERB National Institutes of Health Molecular and Cellular Biology pre-doctoral training grant (1991 - 1992) University of California, Davis Graduate Research Awards (1990 - 93)

STUDENT RESEARCH SUPERVISION

Master's Students

Guided four master's theses from 1998-2005

- 2 theses resulted in published papers (one in preparation)
- 4 national conference poster presentations

After graduation all students obtained laboratory research, pharmaceutical sales or teaching positions

Undergraduate Research and Senior Project Students

Guided 30 undergraduate student projects from 1997-2006

- 18 scientific research projects – 14 presented posters at national or local conferences
- 3 industry research projects – 1 presented poster at national or local conference
- 8 other projects (K-12 science materials, university laboratory manuals & educational websites)

After graduation: 33% graduate or professional school, 33% careers in the biotechnology or biology-related industries, 33% other careers

OTHER PROFESSIONAL ACTIVITIES:

Participant, Association of College & Research Libraries (ACRL)/Association of Research Libraries (ARL) Institute on Scholarly Communication (part of a Cal Poly team) July 2006

Sabbatical Leave, "Development of Literature-Based Case Studies in Genetics" Winter Qtr 2006

Member, Environmental Biotechnology Institute (EBI), California Polytechnic State University, San Luis Obispo 1997 – present

Manuscript Reviewer for *BioScience* and *FEMS Microbiology Ecology*

Grant Reviewer

- Cal Poly Center for Teaching and Learning, Faculty Development Grant Program 2004, 2005
- National Science Foundation (NSF): Course, Curriculum and Laboratory Improvement (CCLI) panel and reviewer for microbial ecology scientific research grants *ad hoc*
- CSUPERB (California State University Programs for Education and Research in Biotechnology) programmatic grants 1999 – 2004
- CSUPERB (California State University Programs for Education and Research in Biotechnology) joint venture research grants 1999 – 2003
- National Environment Research Council (United Kingdom) *ad hoc*

TEACHING AND LEARNING PROFESSIONAL DEVELOPMENT

<i>CSU Teacher Scholar Summer Institutes</i>	Jun 2003, 2002, 2001
<i>POD (Professional and Organizational Development) Conference</i>	Oct 2002
<i>American Society for Microbiology Undergraduate Education Conferences</i>	May 2002, 2001
<i>CSU Biology Graduate Teaching Associate Training Workshop</i>	Jun 2001
<i>GE Embedded Assessment Conference</i>	Mar 2001
<i>Maintaining Instructor Effectiveness & Dimensions of Learning (Cal Poly)</i>	Fall 1998 & Winter 2001
<i>WINGED (Writing IN Generally Every Discipline) Workshop (Cal Poly)</i>	Winter 2001
<i>Teaching Undergraduate Bioinformatics Courses Workshop</i>	Aug 2001
<i>CSU General Education Biology Workshop</i>	Jun 2000

Undergraduate Microbiology Education Gordon Research Conference
CSU Symposium on University Teaching

Jun 1999
Feb 1998

SELECTED HONORS AND AWARDS

Apple Polysher Teaching Award, California Polytechnic State University, Poly Reps	Mar 1998
Associated Students President, CSU, Chico	1985-1986
Associated Students Board of Directors Member, CSU, Chico	1984-1985
National Woman's Political Caucus Outstanding Woman Student Leader,	1985, 1986
Honors Research Program, CSU, Chico	1984-85
<i>Omicron Theta Epsilon</i> Biological Honor Society Scholarship, CSU, Chico	1984
