

IRENE YUN SALTER

882 Brandonbury Ln.
Chico, CA 95926
(510) 637-8433 (Cell)
isalter@csuchico.edu
<http://www.mysciencebox.org>

EDUCATION AND TRAINING

Sep 1997 to
Aug 2002

University of California, San Francisco

Ph.D., Neuroscience. Conducted doctoral thesis research on the neurobiology of motivation, learning, and addiction with Dr. Howard Fields.

Sep 1993 to
Jun 1997

Stanford University, Stanford

M.A., Psychology. Conducted master's thesis research on environmental influences on sleep with Dr. Craig Heller.

Sep 1993 to
Jun 1997

Stanford University, Stanford

B.A., Human Biology. 3.7 GPA. Graduated with honors through research on the effects of stress on social behavior in cichlid fish with Dr. Russell Fernald.

SCHOLARLY ACTIVITIES IN SCIENCE EDUCATION

Aug 2007
to present

Department of Biology, California State University, Chico

Pursued several different scholarly interests: conducted research on student attitudes towards science in an introductory college biology course, led professional development programs and workshops for teachers, investigated the impact of online tools for science teachers, and developed science curriculum targeted to K-8 teachers.

Jan 2007 to
Jun 2007

GEMS, Lawrence Hall of Science, Berkeley

Planned, tested and wrote the first GEMS guide specifically designed for after-school settings.

Sep 2004 to
Oct 2006

My Science Box (<http://www.mysciencebox.org>), Berkeley

Developed 6 middle school science curriculum units through a grant from the Rose Foundation. Every lesson is classroom tested and correlated to the California Science Standards. Lessons are freely available at <http://www.mysciencebox.org>. The website currently receives over 8,000 unique visitors per month.

Jan 2004 to
Jun 2004

Assessing Science Knowledge Project, Lawrence Hall of Science, Berkeley

Analyzed and synthesized field test data from student assessments from the Full Option Science System curriculum. Revised assessment criteria according to our observations.

GRANTS AND AWARDS

Submitted
May 2008

Course, Curriculum and Laboratory Improvement Grant, National Science Foundation

PI on a 3-year grant proposal (\$50,000/year) to develop publication-ready curriculum materials for an introductory biology course for future elementary teachers. This work would build off of existing materials from collaborators at Western Washington University. Research would be conducted on student learning outcomes across 3 different curricula taught by the same instructor during 3 consecutive semesters.

Submitted
May 2008

Course, Curriculum and Laboratory Improvement Grant, National Science Foundation

Co-PI on a 2-year grant proposal (\$75,000/year) to create a new course called Student Generated Scientific Inquiry. The course would target future teachers and provide them with a unique opportunity to engage in open-ended scientific inquiry on topics of their choosing. Student and teacher materials would be developed and distributed through conference presentations and publications.

- July 2008 **Enhancing Education Through Technology Grant, California Department of Education**
Project director for a grant (\$83,500/year) to provide 2 years of professional development and year-long follow up for teachers at 2 local elementary schools. Teachers will work collaboratively online and in person to develop lesson plans to complement the curriculum at the Hands On Lab. Research will be conducted on the effect that online collaboration has on the development of pedagogical content knowledge, technological literacy, and community building.
- May 2008 **CELT Impact Grant, California State University, Chico**
PI on a grant proposal (\$20,000) to provide a suite of mobile computing tools (laptops, digital probeware, LCD projector and more) for Department of Science Education courses. Research will be conducted on the effect of these tools on the inquiry-learning process.
- Dec 2007 **Mathematics and Science Partnership Grant, California Department of Education**
Collaborated with Leslie Atkins write, win, and implement a 3 year grant (\$360,000/year) to provide science professional development for local teachers in partnership with the Chico Unified School District. The money was returned un-used to the State by the school district.
- Jan 2005 **Ecology and Environmental Science Curriculum Grant, Rose Foundation, Oakland**
PI on a two-year grant (\$20,000/year) to develop an inquiry-based middle school science curriculum and to disseminate the curriculum via conferences and the Internet.
- Sep 2002 **Postdoctoral National Research and Service Award, NIH, Washington DC**
Won a prestigious, competitive, three-year grant (\$32,000/year) for postdoctoral research to be conducted with Dr. Barry Everitt at Cambridge University, England. Declined to pursue teaching.
- Feb 2000 **Long Teaching Award, University of California, San Francisco**
Selected by students for an award for outstanding teaching in the Department of Pharmacy.
- Aug 1999 **Predoctoral Training Consortium in Affective Science, NSF**
Won a three-year, merit based fellowship. Participation included seminars, hands-on training with psychological and neurobiological techniques, and private tutorials.
- Jun 1998 **Graduate Opportunity Fellowship, University of California, San Francisco**
Won a one-year, merit based fellowship.
- Jun 1997 **Firestone Medal, Stanford University, Stanford**
Won an award for excellence in undergraduate research.

UNIVERSITY TEACHING

- Jul 2007 to present **Dept. of Biology, California State University, Chico** **Assistant Professor**
Served as a science education specialist within the Biology Department and College of Natural Sciences. Reinvented the introductory non-majors Biology 101 course specifically for students intending to become K-8 teachers.
- Jan 2001 to Jun 2001 **Dept. of Psychology, San Francisco State University** **Instructor**
Directed the upper division course titled: Motivation. Taught about motivation and emotion from a psychological and physiological perspective. (150 students)
- Jan 1999 to Mar 1999 **Dept. of Pharmacy, University of California, San Francisco** **Teaching Assistant**
Led laboratory, discussion, and review sessions for the first-year pharmacy course titled: Introductory Neuroscience. Designed laboratory demonstrations to illustrate course concepts.
- Mar 1998 to Jun 1998 **Dept. of Psychiatry, University of California, San Francisco** **Discussion Leader**
Led discussion sessions for the introductory psychiatry course titled: Brain and Behavior.
- Mar 1996 to Jun 1996 **Dept. of Biology, Stanford University, Stanford** **Teaching Assistant**
Led discussion sessions for the upper-division biology course titled: Human Behavioral Biology.

TEACHER PROFESSIONAL DEVELOPMENT

Aug 2008 to present	Enhancing Education Through Technology	Project Director
	Led the design and implementation of a 2 year professional development program for local elementary school teachers. Teachers will have the opportunity to expand their pedagogical content knowledge in science and to integrate the use of technology by developing lesson plans to complement the Hands-On Lab curriculum. A central feature is the creation of an online portal that will enable teachers to collaborate via the Internet on the curriculum development component.	
Jul 2008	California Science Project	Faculty
	Led a 2-hour workshop for middle and high school teachers on Neurobiology.	
Jul 2007	California Science Project	Faculty
	Led a 4-hour workshop for middle and high school teachers on Earth science.	
Jul 2007	Hands On Lab	Faculty
	Showed elementary teachers how to use good practice in the implementation of science lessons.	
Mar 2006 to Jun 2007	Exploratorium Teachers Institute	Educator and Scientific Consultant
	Designed and facilitated hands-on workshops for middle and high school teachers including a two-day series of neuroscience workshops and an Internet resources workshop for new teachers.	
Apr 2006 to Apr 2007	Science STARTS Project	Teacher Institute Instructor
	Developed a hands-on genetics curriculum for high school teachers as part of a week-long summer teachers' institute with school-year continuation organized by California State University, Stanislaus, and the San Joaquin County Office of Education.	
Oct 2006	California Science Teachers' Association	Workshop Presenter
	Led conference attendees in a standing-room-only workshop on genetics and physiology.	
Apr 2006	National Science Teachers' Association	Workshop Presenter
	Led conference attendees in a hands-on workshop on environmental science and geology.	
Jan 2006	East Bay Independent Schools Association	Workshop Presenter
	Led teachers through ecology and watershed activities.	
Dec 2005	American Geophysical Union	Conference Presenter
	Presented geology and watershed activities as part of the "Hands-on, Inquiry-based Classroom and Laboratory Exercises" poster and workshop session.	
Oct 2004	San Joaquin County Office of Education	Workshop Presenter
	Organized a neuroscience workshop for K-12 teachers culminating in a sheep's brain dissection as part of the Math Science Project Day.	
Jan 2004	East Bay Independent Schools Association	Workshop Presenter
	Designed and led activities for a "Cooking Through Chemistry" unit for middle school teachers.	
Nov 2003	Contra Costa County Association of Science and Mathematics Educators	Presenter
	Demonstrated static electricity activities for the annual Share Fair.	
Aug 1999	Drug Abuse Research Teams, NIDA	Educator and Scientific Consultant
	Developed and led hands-on activities that taught about the action of abusive drugs on the brain for a program sponsoring original addiction research projects conducted by high school students, teacher mentors, and scientist partners.	

K-12 TEACHING

Sep 2003 to Jun 2007	Archway School, Oakland	Teacher
	Taught sixth through eighth grade science, algebra, and geometry at a K-8 private school. Independently designed science curriculum in physical, earth, and life sciences. Founded in 1973, Archway enrolls 90 students in a program that emphasizes "learning by doing" in all subjects.	

Jun 2003 to Jul 2003	Aim High, San Francisco Taught ninth grade science and elective workshops for a six-week summer program for underprivileged city youth. Developed a genetics course and a "Flying Things" elective.	Teacher
INFORMAL AND OUTDOOR EDUCATION		
Sep 2002 to Jun 2007	Physics of Toys, Exploratorium, San Francisco Designed activities for a monthly museum program providing hands-on explorations to museum visitors. Coordinated volunteers, facilitated hands-on science activity tables, and led workshops for museum volunteers about inquiry-based learning and facilitation strategies.	Co-leader
Oct 2005 to Jan 2006	Techbridge, Chabot Space and Science Center, Oakland Provided curriculum materials for an after-school girls science program designed to encourage girls in science, technology and engineering.	Consultant
Oct 2002 to Apr 2006	Exploratorium, San Francisco Advised in the design process of the new exhibit: Mind.	Consultant
Aug 1998 to Sep 2002	Fort Miley Adventure Ropes, San Francisco State University Facilitated outdoor educational experiences for non-profit groups in the Bay Area. Helped organizations build community and individuals build self-esteem.	Leader
Oct 2001 to Sep 2002	Triad, Science and Health Education Partnership, San Francisco Organized a bimonthly science club for middle school girls through a collaborative program between scientists and public school teachers.	Scientist
Jun 1999 to Jun 2000	LINKS, Science and Health Education Partnership, San Francisco Designed and implemented a science improvement plan for Aptos Middle School as part of a collaboration between University researchers and public school teachers. Mentored a teacher through a summer research project at the University of California, San Francisco.	Scientist
Oct 1997 to Oct 1999	Double XX Club, Thurgood Marshall High School, San Francisco Led hands-on activities and discussed career options in an after-school girls science club .	Guest Speaker
Oct 1997 to Mar 1998	Mission Science Workshop, City College, San Francisco Designed and facilitated hands-on science activities and exhibits at an after-school science workshop for elementary school girls.	Volunteer
LEADERSHIP AND SERVICE		
Aug 2008 to present	Academic Policies Committee, California State University, Chico Served on the College of Natural Sciences committee dealing with academic policies such as student leaves of absence and curriculum matters.	
Aug 2008 to present	RTP and Constitution Committee, California State University, Chico Chaired the committee responsible for drafting the RTP Procedures and Constitution for the fledgling Department of Science Education.	
Aug 2007 to present	MiST Advisory Committee, California State University, Chico Advised in the creation of a mission statement, learning objectives, and program redesign for the Masters in Science Teaching (MiST) Program.	
Aug 2007 to present	Biology Department Curriculum Committee, California State University, Chico Reviewed and made recommendations for changes among courses within the Biology Department.	
Aug 2007 to Jun 2008	Science FEST Committee, California State University, Chico Crafted learning objectives for the 13 units of science coursework for future elementary teachers (Science FEST).	
Sep 2004 to Jun 2007	Woods Edge Board of Directors Elected to represent the faculty on the board of directors for Archway School.	

- Sep 2000 to Sep 2002
Neuroscience Program Curriculum Committee, University of California, San Francisco
 Reviewed the selection and sequencing of required courses for the Neuroscience Program as the student representative to the committee. Revised educational policy.
- Dec 2000 to Sep 2001
Commission on the Growth and Support of Graduate Education, University of California Office of the President
 Represented graduate students on a University-wide task force responsible for planning the long-term growth and financing of public graduate education throughout California.
- Jul 2000 to Jul 2001
University of California Students' Association
 Served as vice-chair of a non-profit student organization that represents all 170,000 University of California students. Supervised the organization's 6 full time staff, including hiring, evaluation, and firing procedures.

PERSONAL GROWTH AND TRAINING AS AN EDUCATOR

- Oct 2007
Institute for Inquiry, Exploratorium, San Francisco
 Intensive training on using inquiry in the context of teacher professional development as part of the California Science Project. (40 hours)
- Sep 2003 to Jun 2005
Teachers Institute, Exploratorium, San Francisco
 Pedagogical and scientific content training for science teachers including in-class coaching and over 180 hours of professional development.
- Dec 2005
GIFT Workshop, American Geophysical Union, San Francisco
 Scientific talks and hands-on activity sessions on earth science for K-12 educators. (16 hours)
- Jun 2005
"Gold Rush to the Golden Gate" Summer Teacher Institute, Save the Bay, Oakland
 An in-depth look at the cultural, historical, and natural history of the San Francisco Bay. (60 hours)
- Nov 2003
NSTA Western Regional Conference, Reno
 Workshops and seminars on science education. (24 hours)
- Aug 2003
High Tech High, Project Based Learning Workshop, Palo Alto
 Intensive training on how to implement project-based learning in a school setting. (40 hours)
- Oct 2001 to Sep 2002
Gender Equity in the Classroom, University of California, Berkeley Extension
 Course on teaching pedagogy and gender equity in the classroom. (40 hours)
- Jun 1999
LINKS, Science and Health Education Partnership, San Francisco
 Training for research scientists on curriculum development and teaching. (20 hours)

SCIENTIFIC RESEARCH

- Jun 1998 to Aug 2002
Neuroscience Program, University of California, San Francisco
 Pioneered behavioral and electrophysiological experiments investigating the neural mechanisms underlying relapse to drug-seeking when triggered by environmental cues.
- Jan 1996 to Jun 1997
Dept. of Biology, Stanford University, Stanford
 Investigated Sudden Infant Death Syndrome (SIDS) by studying the effect of environmental risk factors for SIDS on sleep development in neonatal rats.
- Mar 1995 to Jun 1997
Dept. of Psychology, Stanford University, Stanford
 Coordinated experiments analyzing the effects of stress on social behavior and on the morphology of GnRH releasing neurons in the African cichlid fish, *H. burtoni*.

PUBLICATIONS

Salter IY, Beals K, Willard C. *Falling and Flying Things*. Berkeley: Great Explorations in Math and Science. Book and science kit to be released in 2008 or 2009.

Salter IY, Smith R, Nielsen KM. Injecting Inquiry into Photosynthesis Investigations. *Science Scope*. 32 (1) pp 34-39.

Salter IY. My Science Box: Hands-on genetics for the adventurous teacher. National Science Teachers Association Annual Conference, Boston, MA. Workshop. (2008) Workshop proposal accepted but session cancelled for personal reasons.

Salter IY. My Science Box: Hands-on biology for the adventurous teacher. California Science Teachers Association Annual Conference, San Francisco, CA. Workshop. (2006)

Salter IY. My Science Box: Hands-on science for the adventurous teacher. National Science Teachers Association Annual Conference, Anaheim, CA. Workshop. (2006)

Salter IY. From creeks to the classroom: Hands-on curriculum units on the web. *American Geophysical Union Annual Meeting, San Francisco, CA. Poster ED53A-0321*. (2005)

Yun IA, Wakabayashi KT, Fields HL, Nicola SM. The ventral tegmental area is required for the behavioral and nucleus accumbens neuronal firing responses to incentive cues. *J Neurosci*. (2004) 24(12):2923-33.

Yun IA, Nicola SM, Fields HL. Contrasting effects of dopamine and glutamate receptor antagonist injection in the nucleus accumbens suggest a neural mechanism underlying cue-evoked goal-directed behavior. *Eur J Neurosci*. (2004) 20(1):249-63.

Nicola SM, Yun IA, Wakabayashi KT, Fields HL. Cue-evoked firing of nucleus accumbens neurons encodes motivational significance during a discriminative stimulus task. *J Neurophysiol*. (2004) 91(4):1840-65.

Nicola SM, Yun IA, Wakabayashi KT, Fields HL. Firing of nucleus accumbens neurons during the consummatory phase of a discriminative stimulus task depends on previous reward predictive cues. *J Neurophysiol*. (2004) 91(4):1866-82.

Yun IA, Fields HL. Basolateral amygdala lesions impair both cue- and cocaine-induced reinstatement in animals trained on a discriminative stimulus task. *Neuroscience*. (2003) 121(3):747-57.

INTERESTS

Cooking, swing dancing, surfing, kayaking, and reading fiction.

D. Y. Y. Yun 1/14/06 10:25 AM

Deleted: (swing, Argentine tango, and ballroom)

D. Y. Y. Yun 1/14/06 10:25 AM

Deleted: fiction

Jason P. Salter 1/10/06 3:27 PM

Deleted: .