

SARAH M. SWEITZER, Ph.D.

SUMMARY

Academic, research scientist, and administrator with 19 years of experience in liberal arts education, biomedical research, program building, strategic planning, project management, undergraduate, graduate, nursing, pharmacy, physical therapy, genetic counseling, medical school, and healthcare administration teaching, curriculum development, mentoring, and fundraising. Commitment to higher education and student and faculty development. A belief in university collaborations with government and private entities as critical to transform society through higher education serving as place-based anchor institutions. A facilitative and consultative leader that seeks consensus solutions. *Competencies include:*

Leadership: Lead with integrity and respect for all individuals using shared governance. Recruit, hire and mentor faculty, students and staff with strong emphasis on building accomplished and diverse teams.

Strategy: Articulate a shared vision, establish priorities, and develop short- and long-term research and programmatic goals; lead Strategic Planning with undergraduate and graduate faculty to enhance programs, research, and community engagement.

Collaboration: Build strong interprofessional partnerships between government, public health departments, school districts, regional college and universities, research institutions, hospitals, and free medical clinics to develop programs that provide access to underserved communities to reduce health and education inequities.

Research and Administration: Extensive expertise in: Obtaining grant, industrial and foundation support; Implementing institutional research, including pre- and post-award mechanisms, regulatory compliance, data security, conflict of interest, responsible conduct of research, intellectual property and technology transfer.

PROFESSIONAL EXPERIENCE

Touro University California

PROVOST, Chief Academic Officer

2018-2022

PROVOST, Chief Executive Officer

2022-present

As the most senior executive on the campus, a heart-led leader that guided the organization through the COVID-19 pandemic and into the post-pandemic “new normal.” The organization continued growth momentum throughout the pandemic with smooth transitions to fully remote, through sequential stages of hybrid, and a final flexible work and learning model. This required continuously updating policies and procedures, focused on health and safety of the community while still maintaining students on their learning trajectories. Key was clear and consistent communication, and ensuring protective equipment, testing, and vaccines were available. Led successful re-accreditation efforts for the College of Osteopathic Medicine, the Physician Assistant Program, the Masters in Public Health, Nursing, and the College of Pharmacy. Envisioned Touro as a premier anchor institution in Solano County. This included being place-based, mission-driven and leveraging University resources to improve health and education outcomes in the region. Increased grant funding to launch a high school and middle schools PATHS mentoring program in partnership with Kaiser Permanente. Led community-based vaccination efforts in partnership with local hospital partners, Partnership Health Plan, Solano County Public Health, and K-12 education partners. Through Drug Safe Solano (Solano County Opioid Safety Coalition) provided Naloxone training to prevent overdose deaths, increased medication assisted treatment for opioid use disorder, and implemented the County’s first harm reduction and syringe exchange program.

Through a HRSA grant launched a cross county collaborative to train community health workers to address health disparities. **In a 5 year period the following initiatives were implemented:**

Programmatic

- New Programs: new AAS Medical Imaging, new AAS Sonography, new EdD in Leading Innovative Diverse Organizations
- Program Expansions: Expansion of COM class size by 50 students/year, Expansion of PA program to a second site in LA
- Refresh Grad School of Ed MA degrees
- Transition Pharmacy from 4 to 3 yr program
- Development of MOUs with feeder schools

Diversity and Inclusion Efforts

- Annual 3 hour diversity training
- Diversified Campus Leadership Team
- Launch of the JEDI Council
- Implemented a Campus Student Survey & Employee Survey
- Hired a 0.2 FTE Director of Diversity
- Hired a 1.0 FTE Equity Coordinator
- Opened the Social Justice Resource Center
- Raised ~\$300,000 for diversity initiatives

Research

- Grew research portfolio from \$8M to >\$18M with \$4M in proposals pending decision
- 13 new faculty became grant funded
- Grew the Office of Sponsored Projects from one FT employee to three FT employees
- Currently hiring an AVP for Research
- Research mentor for 6 MSMHS students

Faculty Development

- Launched the Center for Innovative Learning and Teaching
- 4 cohorts of ACUE Effective Teaching Practices
- 1 cohort of ACUE Fostering a Culture of Belonging
- Opening of a new VR lab
- Seed Grants and Teaching Awards
- Implemented Flexible work policy

Campus Wellness

- Implemented Trauma Informed Systems
- HRSA Grant: Develop a Resilient Healthcare Workforce using peer-training
- Installed Outdoor Gym
- Built a Second Campus Gym

Information Technology Improvements

- LMS migration from Blackboard to Canvas
- Yuja Video, Zoom teaching
- Centralized Printing
- E-mail migration
- Classroom A/V renovation
- New Website, Launch of a campus intranet

Campus Infrastructure

- Renovation of 33,000 ft building (Truett Hall)
- Campus Branding
- Addition of a second campus work out facility
- Addition of all gender restroom to all buildings
- Addition of lactation rooms to two buildings
- Screened in Gazebo installed
- Classroom Painting Schedule w/branded colors

Safety/Security

- Launched a Campus CARE Team
- Implemented Access (Badge) Control
- Increased campus entrance security
- Installed campus camera system
- Fencing plan developed
- COVID: implemented pod structure and mass surveillance testing
- Emergency Management: Extended power outages, wildfires, wildfire smoke, pandemic

Community Engagement

- High school and middle school mentoring
- Drug Safe Solano
- Community service added to Orientation
- Community Health Worker Training
- Street Medicine Program
- Partnerships with Solano County Public Health for Mobile Diabetes Education Center, Mobile Vaccine Services, and behavioral health access
- Partnerships with regional K-12 School Districts to provide educational partnerships
- Partnerships with regional hospitals to coordinate student run free clinic services, mobile vaccine services, and efforts to increase diversity in healthcare careers

Shared Governance

- Faculty Senate Self Study & Consultant
- Transitioned from a faculty of the whole to an elected faculty senate structure

DEAN

Faculty and student advocate for a vibrant college that contains social work, exercise and sport science, health care administration, and nursing programs. Advanced the reorganization of the Institutional Review Board to accommodate the growing graduate population and thesis requirements. Provide leadership for the development of a comprehensive Wellness Center to serve Concordia University students and Faubian Elementary students in the 3 to PhD Initiative. Develop the 3 to PhD Initiative as a research-ready interdisciplinary platform to reduce health and education disparities. Develop and promote faculty professional development programming. Promotion of new program development that includes a community mini health school, a new major in long term care, an online healthcare administration track, a new masters program in exercise and sports science, and a new accelerated nursing track. **In a 3 year period the following specific initiatives were implemented:**

- Developed a 5 year strategic plan
- New Programs Launched: Accelerated BS in Nursing, BS in Long Term Care, online BS in Healthcare Administration, Revised Healthcare Administration Program
- New Programs in Development: Masters in Healthcare Administration, Masters in Exercise and Sports Science, Bachelors in Public Health, Radiation Technology Portfolio
- Worked with Admissions Team to double enrollment in Social Work Program and growing enrollment in Health Care Administration
- Expanded High School Recruitment Events and Healthcare Program Outreach
- Developed comprehensive articulation agreements with PCC and MHCC
- Worked with the Registrar Office to expedite transcript review process and new program implementation
- Collaborated with Centralized Advising to move toward an augmented advising structure to improve retention and completion
- \$15 Million capital fundraising for the 3 to PhD Initiative
- Development of a comprehensive college and school based health center for the 3 to PhD Initiative
- Engaged Kaiser Permanente (\$14.5 million commitment over 10 years + \$76,000 program grant funding), Kaiser Dental Associates, Pacific Foods (\$20,000/year backpack program funding + \$500,000 commitment over 10 years), and Trillium Family Services in the 3 to PhD Initiative
- Expansion of the 3 to PhD Platform to enhance research and evaluation
- Formed an interdisciplinary evaluation team for the 3 to PhD Initiative (\$300,000 grant funded in partnership with Kaiser Center for Health Research)
- Engaged cross campus faculty in growing a research culture
- Submitted a BRAD grant to develop an Office of Research and Sponsored Projects (OSU is the mentor institution)
- Began a monthly faculty manuscript writing support group
- Doubled the size of the Summer Undergraduate Research Institute and expanded across campus
- One-on-one faculty mentoring
- Collaborative formation of an Academic Deans Council
- Initial chair of the newly formed University Policy Committee
- Initiated college led student recruitment efforts with regional high schools and community colleges (reached an additional 500 students in the first year)
- Regular communication through Monthly Deans Minutes
- Formalized the Institutional Review Board
- CHHS Facebook Page started
- Initiated a monthly college sponsored health news article in the Concordia Neighborhood Newspaper
- Opening of a high fidelity nursing simulation laboratory and a Westside Nursing Skills and Simulation Center (\$1.5 million commitment from Orbis)
- Development of Nursing Simulation Lab (\$150,000 donation)
- Title IX campus leadership team member

- Alignment of CHHS Faculty to 3 to PhD Objectives
- Growing speaking engagements to share 3 to PhD Initiative on the national level

Presbyterian College School of Pharmacy, Clinton, SC

2012-2014

DIRECTOR OF RESEARCH

Developed an Office of Research with a mission to facilitate significant and innovative research by creating a supportive environment for scholarly activities for all faculty and students. A National Institutes of Health (NICHD) G11 (BRAD) Grant entitled “Developing an office of sponsored projects at Presbyterian College” was funded for 5 years (\$440,000). Eighteen faculty members submitted 14 external grants totaling over \$3M from the following funding agencies: NIH, AHRQ, NSF, Phrma Foundation, AACP, IACP, SC-INBRE, SC-BCBS. From 2012-2013, \$635,000 in research funding was awarded for 6 grants, that included 10 PCSP faculty investigators. Through a competitive process, PCSP was invited to join SC INBRE which is a statewide network for biomedical research that links 8 undergraduate institutions with the 3 major research institutions in SC. Participation in SC INBRE provides the college with funding for an undergraduate biomedical research track, targeted biomedical faculty positions, and renovation and infrastructure funds (~\$650,000 to 1.5 million). An AHRQ grant (~\$1.5 million) brought together researchers at PCSP, South Carolina Free Clinic Association and University of South Carolina's Center for Health Care Disparities and Center for Rural Health to engage in a community based action research program to reduce health care disparities. **In a 2 year period the following specific initiatives were implemented:**

- Active Research Seminar Series
- Internal Peer Review for grant proposals
- Lunch-n-Learn Faculty Development
- Submission of 2 NIH R15 grants proposals
- Interprofessional education and research committee
- Coordination with regional healthcare partners related to research proposals
- Attainment of foundation funding for programs related to pharmacy outreach and research
- Summer Research Internship Program
- International Research Exchange Program
- Developing a research track for pharmacy students
- Investigating a 4+1 MPH program
- Organized regional SYNAPSE meeting
- Developed a 5 year strategic plan
- Formalized the Office of Sponsored Projects
- One-on-one faculty mentoring
- Internal Grant Funding
- Annual interdisciplinary research retreat
- Coordinated research faculty involvement in student recruitment
- Opened a zebrafish facility
- Plans drafted to renovate animal facility to increase capacity
- Quarterly Research Newsletter
- Formalized the Institutional Review Board
- Website started
- Coordination of collaborative teaching between PCSP and undergraduate Arts & Sciences
- Manage a growing research budget

Associate Professor

2012-2014

Brought in over \$500,000 in grant funding (NIH and foundation). Taught undergraduate and pharmacy students in numerous team taught courses including: Principles of Pathophysiology, MTM- Cardiovascular I & II, MTM - Gastrointestinal, MTM- Neurosensory, MTM- Psychiatry, MTM - Musculoskeletal, Experimental Psychology, Biology 112, Independent Student, and Honors Research. Student evaluations of instructor ranged from 4.53-4.7. Committee service on IACUC, IRB, Curriculum, Ethics Honor and Professionalism (Chair), Interprofessional Education. National and international service as grant reviewer for NIH, Canadian Health Services, Italian Research Foundation.

- Invited grant reviewer for local, national (NIH), and international grant proposals. Invited reviewer for numerous scientific journals.
- Identifying and developing new research collaborators in the Upstate of South Carolina, PCSP, PC, SC Free Clinic Association, and USC Centers for Health Care Disparities and Rural Health.
- Mentored 3 pharmacy students and 5 undergraduates on independent research projects.
- Chair of the PCSP Ethics Committee, member of PCSP Curriculum Committee, PC IACUC, and Interprofessional education Committee. Ex Officio on PC IRB.
- Developed a new elective course on Death and Dying that was cross listed with undergraduate English for Spring 2014 (the first cross listed course).
- Continued Training: Attended a teaching pedagogy workshop and Faculty Workshop on Diversity. Completed a Core Clinical Research Training and Interprofessional Education Collaborative (IPEC) Institute for Quality Improvement and Patient Safety.
- Science Olympiad coach at Bell Street Middle School.

University of South Carolina, School of Medicine, Columbia, SC	2004-2014
Assistant Professor	2004-2008
Associate (tenured) Professor	2008-2012
Research Associate Professor (0.20 FTE)	2012-2014

Brought in >\$2 million in research grant funding (NIH, foundation, and biotechnology contracts). Took a compound from bench to Phase II clinical trials. Coordinated 3 cross disciplinary and translational research programs. Managed a laboratory of 12 members (undergraduate researchers, technicians, graduate students, professional students). Published >50 peer reviewed manuscripts with over 100 meeting presentations/abstracts.

- Translational research program on pain in sickle cell disease: NIH funded principle investigator of the bench-to-bedside research program that used an animal model of sickle cell pain to identify a genetic polymorphism that is currently being examined in a sickle cell patient population. This project required identification and building collaborative partnerships with a laboratory at Albany Medical College, a clinical psychology researcher, a hematologist and a geneticist.
- Translational research program on gene therapy for the treatment of neuropathic pain: Principle investigator on an NIH RO-1 subcontract awarded to Johns Hopkins. This research has produced two patent applications and identified a novel small peptide therapeutic for treatment and prevention of opioid tolerance.
- Translational research program to develop small peptide PKC inhibitors for the treatment of acute and chronic pain: As a postdoctoral fellow at Stanford University School of Medicine a patent was filed on novel small peptide PKC inhibitors for the treatment of pain. This patent was licensed by KAI Pharmaceuticals and as an Assistant/Associate Professor consulting and contract work was undertaken to complete the preclinical studies required for FDA IND filing. The investigational drug made it to Phase 2 clinical trials.
- Numerous patents have been filed as a result of the collaborative research projects outlined above (see CV for details).
- Invited grant reviewer for local, national (NIH), and international grant proposals. Invited reviewer for numerous scientific journals.
- Member of Society for Neuroscience, American Pain Society, International Association for the Study of Pain, American Association of Colleges of Pharmacy.

- Committee service (for a full list see CV, most pertinent are listed here: Faculty senate, curriculum and admissions committees for the Masters in Nurse Anesthesia Program, graduate committee for biomedical sciences (neuroscience focus).
- Revised and updated the graduate student curriculum to a modular based curriculum to provide neuroscience PhD candidates with a more up-to-date interdisciplinary and translational education.
- Mentored 2 post-doctoral fellows, 6 graduate students, 2 masters in science education student, 3 medical students, 1 resident, 4 minority PREP students, 18 undergraduates, 8 high school students, and 3 technicians. My success as a mentor is measured by the success of my mentees. Two of my post-doctoral fellows have gone on to assistant professor positions. My graduate students have gone on to be an Instructor at USC-Aiken, a pharmacist, and a post-doctoral fellow at Johns Hopkins. The masters in science education students are currently high school science teachers. All of the undergraduates have gone on to graduate school, medical school, or dental school.
- Taught undergraduate, graduate, nurse anesthesia, physical therapy, and genetic counseling students in numerous team taught courses. Was course director for a new undergraduate Honors College course, a graduate module on neurobiology of pain, statistics for biomedical sciences, and two new graduate career development courses (Career Development for Graduate Students and Professional Speaking). Student evaluations of instructor ranged from 4.33-5.0 on a 5 point scale (5 best).
- Developed a series of 4 lectures on evidence based medicine (Case Report to Standard of Care, Drug Development and the FDA process, Interpreting Data from Clinical Trials, and Translational Science and Medicine) for medical resident training (Infectious Disease, Pulmonary, Surgery, Psychiatry).
- Faculty Advisor for IMPULSE, and undergraduate online neuroscience journal.
- Organized and directed Brain Awareness Week Activities in the local community. Judged numerous science fairs and undergraduate research symposiums.

EXTERNAL CONSULTANT

2006-2012

Scientific Projects:

- ***Nektar Therapeutics*** as a contract researcher for the preclinical screening of their drug candid
- ***KAI Pharmaceuticals*** as a contract researcher for the preclinical screening of their drug candidates. KAI Pharmaceuticals licensed a patent from my post-doctoral fellowship studies. This consulting/contract work allowed me to participate in the development of my compound into phase 2 clinical trials.

Educational Projects:

- Member of the ***South Carolina Childhood Obesity Taskforce*** run by the South Carolina Medical Association. This taskforce has a mission to increase the awareness of childhood obesity across the state and to identify and implement interventions to reduce childhood obesity in South Carolina. This taskforce includes members from medicine, education, and government sectors.
- Consulted with ***Center for Knowledge Elementary School*** on Elementary Science Education. Center for Knowledge is an Magnet Elementary School in Columbia, SC. Developed a third grade "Shoebox Science" hands on inquiry based curriculum supplement.
- Developed a class (summer 2014) for the ***South Carolina Governor's School for Science and Mathematics*** entitled "Pharmacology: Patients, Pills, Potions, and Poisons". This class will provide hands-on experiences in pharmacology and its relationship to patient health, disease, and

society. Apply chemistry to understand sugars and calories along with determining active ingredients in supplements and how the body reacts to these ingredients.

Education Summary

Postdoctoral Fellow • Stanford University School of Medicine • Palo Alto, CA • 2001-2003
Ph.D. (Pharmacology and Toxicology) • Dartmouth Medical School • Hanover, NH • 2001
Bachelor in Science (Chemistry) • University of Nevada, Reno • Reno, NV • 1995

PUBLICATIONS

57+ peer-reviewed publications, 3 chapters, 140+ presentations (please see separate curriculum vitae).

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ACADEMIC POSITIONS:

2022-present Provost & CEO, Touro University California, Vallejo, CA
2018-2022 Provost & CAO, Touro University California, Vallejo, CA

2014-2018 Dean, Professor of College of Health and Human Services
Concordia University, Portland, OR

2012-2014 Director of Research, Associate Professor
Presbyterian College School of Pharmacy

2012-2014 Research Associate Professor
Dept of Pharmacology, Physiology, Neuroscience
University of South Carolina School of Medicine

2010-2012 Associate Professor
Dept. of Pharmacology, Physiology, Neuroscience
University of South Carolina School of Medicine

2004-2009 Assistant Professor
Dept. of Pharmacology, Physiology, Neuroscience
University of South Carolina School of Medicine

CONSULTING POSITIONS:

2010-2011, 2013 Scientific Consultant
Nektar Therapeutics
San Francisco, CA

2008-2011 Elementary Science Education Consultant
Center for Knowledge Magnet Elementary School
Richland 2 School District, Columbia, SC

2006-2010 Scientific Consultant
KAI Pharmaceuticals
San Francisco, CA

EDUCATION:

2001-2003 Postdoctoral Fellow
Department of Anesthesiology
Stanford University School of Medicine, Stanford, California
Advisors: Joan J. Kendig, Ph.D.
David C. Yeomans, Ph.D.

1997-2001 Ph.D. – Pharmacology and Toxicology

Dartmouth Medical School, Hanover, NH.
 Thesis Title: Differential neuroimmune interactions in acute inflammatory pain and persistent neuropathic pain
 Ph.D. Thesis Advisor: Joyce A. DeLeo, Ph.D.

- 1996-1997 Masters Student and Teaching Assistant – Chemistry
 University of Nevada, Reno
 Faculty Advisor: Frank Baglin, Ph.D.
- Spring 1996 Study Abroad, Deakin University, Geelong Australia
 Courses: Toxicology, Pharmacology, Women’s Studies
- 1993-1995 BSc - Chemistry
 University of Nevada, Reno
 Thesis Title: Using Raman Spectroscopy to Study Intermolecular Interactions in Supercritical Fluids
 Thesis Advisor: Frank Baglin, Ph.D.
- 1991-1993 Solano Community College
 Solano County, California

AWARDS AND RECOGNITIONS:

- 2022 Drug Safe Solano Champion
- 2020 Certificate of Appreciation from Vallejo Unified School District for Leading Vaccine Efforts
- 2019 Touro University California Awarded the Local’s Choice Humanitarian Award
- 2018 Certificate of Special Congressional Recognition from the US House of Representatives
- 2018 Certificate of Recognition from the California State Legislature
- 2018 Solano Community College Distinguished Alumni Award
- 2017 Portland State University’s Impact Entrepreneurs Health Innovation Impact Award for the 3 to PhD Initiative
- 2016 US Presidential Award for Volunteer Service
- 2013 Presbyterian College Faculty Scholar of the Year (only 1 awarded per year based on scholarship, service, and teaching)
- 2011 American Physiology Society, Frontiers in Physiology Award
- 2007-10 Nominated for Outstanding Undergraduate Research Mentor Award
- 2002 Anesthesia Department Research Award, Stanford University School of Medicine.
- 2003 Katherine McCormick Travel Award, “Developmental regulation of inflammatory pain by protein kinase C” at the 32nd Society for Neuroscience Annual Meeting, Orlando, FL.
- 2002-03 NIH National Research Service Award (F32 NS44729)
 “Cellular and Molecular Regulation of Pediatric Pain”
- 2002-03 Alejandro and Lida Zaffaroni Innovation Fund for Addiction Research Award

- 1999 Pharmacia & Upjohn Award for Best Poster Presentation
"Acute peripheral inflammation produces similar spinal glial activation and IL-1 β expression to that observed following nerve injury in the rat." 28th Annual New England Pharmacologist Meeting, Boston, Massachusetts.
- 1999-01 Ryan Fellowship, Dartmouth Medical School
- 1999-01 NIH National Research Service Award (F31 DA05969)
"Mechanisms of analgesia for a novel therapeutic"

Patents: (*Licensed and in preclinical/clinical development)

1. *PKC Isoform-specific Antagonists for Relief of Pain in Infants, Children and Adults (Joan Kendig, Daria Mochly-Rosen, **Sarah Sweitzer**, David Yeomans) – Phase 2 Clinical Trials in 2010
2. *Isoform-specific Protein Kinase C Antagonists in the Treatment of Withdrawal from Drugs of Abuse (Joan Kendig, Daria Mochly-Rosen, **Sarah Sweitzer**)
3. Invention Disclosure 766 "Modulation of Delta Opioid Receptor Expression for Pain Management" (**Sarah Sweitzer**, Steven Wilson, Kandy Velazquez, Husam Mohammad)
4. Invention Disclosure 767 "Modulation of Receptor Expression for Pain Management" (**Sarah Sweitzer**, Steven Wilson, Srinivasa Raja)

PROFESSIONAL SOCIETIES:

- 2000- Society for Neuroscience
2002- International Association for the Study of Pain (IASP)
2006- Research Society on Alcoholism (RSA)
2006- South Carolina Society for Neuroscience
2006-2012: Representative South Carolina Chapter of the Society for Neuroscience
2009 – American Pain Society
2013 – American Association of College Pharmacists

GRANT REVIEWER

- Local: Concordia University, Reviewer for student research grants (undergraduate and graduate)
Local: Presbyterian College, Reviewer for student summer research grants & reviewer for faculty grants
Local: Univ of South Carolina, School of Medicine: Reviewer for CAM center grants
Local: Univ of South Carolina, Reviewer for Magellan Scholar Grants
Local: Univ of South Carolina, Reviewer for PIRA Grants
National: NIH review committee for Chronic Fatigue Syndrome, Fibromyalgia Syndrome, Temporomandibular Disorders. Member of NIH review committee on SCD Center Grants
National: Ad hoc for NIH CEBRA, B-START, Sickle Cell Center Grants, and Program Project Grants
National: Reviewer for AACP Young Investigator Grants
International: Ad hoc for Canadian Health Ministry
International: Ad hoc for Medizinische Universität Innsbruck
International: Ad hoc for Catalan agency for health technology assessment and research
International: Ad hoc for Italian Ministry of Health General Directorate for Health and Technologies Research

JOURNAL REFEREE ACTIVITIES:

Trends in Neuroscience, Journal of Pharmacology and Experimental Therapeutics, European Journal of Pain, Cytokine, Neuroreport, Neuroscience Letters, Anesthesia, Journal of Neurophysiology, Neuroscience, Anesthesiology, Journal of Pain, Pain, Brain Research

SERVICE:

2021-2023	WASC Accreditation Site Visitor
2021-present	Chair: TUC Opioid Use Disorder Fellowship Steering Committee
2022-present	Member: North Bay Community Health Worker Steering Committee
2020-present	Member: Healthy Solano
2020	Member: Touro College and University System 30-30 Strategic Planning Taskforce
2018-present	Board Member: Solano County Coalition for Better Health
2018-2022	Board Member: Solano County Economic Development Board
2019-present	Board Member: Drug Safe Solano (Solano County Opioid Safety Coalition)
2018-present	Member: Mare Island Neighborhood Association
2018-present	Ex Officio: TUC IACUC
2018-2021	Member: Vallejo Education Business Alliance
2018-2020	Chair: Solano County Anchor Collaborative
2014-17	Board Member: 3 to PhD Initiative
2014-17	Member: CU IRB
2015-16	Chair: CU Policy Committee
2012, 2013	Organizer for regional SYNAPSE meeting held at USC
2012	Organizer for PC Research Forum
2012-2014	Ex office on PC Institutional Review Board
2012-2014	Member: PC IACUC
2012	Member: PC Curriculum Committee
2012-2014	Chair of PCSP Ethics Committee
2012-2014	Member: Interprofessional Education Committee
2013-2014	Member: Women's and Gender Studies Planning Committee
2004-2011	Departmental: Member of Graduate Student Committee
2009-2011	Departmental: Webpage Liason
2007-2011	School of Medicine, MS Nurse Anesthesia Program Admissions Committee
2009-2011	School of Medicine, MS Nurse Anesthesia Program Curriculum Committee
2009-2012	University: Faculty Advisor: for the undergraduate student organization IMPULSE (http://impulse.appstate.edu/) that publishes an on-line journal for undergraduate neuroscience research.
2006-2009	University: Member of the Committee on Honorary Degrees
2008-present	Steering Committee for SYNAPSE
2010-2011	University: Office of the VP for Research Animal Users Group Member
2005-2008	School of Medicine: Member of Faculty Awards Committee
2004-2007	University: School of Medicine Representative on Faculty Senate
2004-2018	Judge for various Graduate & Undergraduate Science Presentations

2003	19th annual W. Morgan Newton Symposium at the School of Medicine
2004,2005	Graduate student day at University of South Carolina
2004	20th annual W. Morgan Newton Symposium at the School of Medicine
2006,2008	Discovery Day for Undergraduate Research at Univ. of South Carolina
2008-2013	USC Central South Carolina Region II Science & Engineering Fair
2010-2014	Judge for SC Junior Science and Humanities Symposium

RESEARCH & PRODUCTIVE SCHOLARSHIP:

Research Support – Current:

Federal Sweitzer, Sarah M (PD) 1/1/2023-6/30/2024

Sub-contract on La Clinica as Funded Agency

Amount: \$200,000

Sub-contract on the “Hub-N-Spoke to provide MAT Treatment Services Using a Substance Use Navigator Services”

The goal of this grant is to fund a Substance Use Navigator (Health Navigator) to increase access to Opioid Use Disorder Treatment and Recovery Services in Solano County and specifically by linkage to services at La Clinica, an FQHC.

Federal Sweitzer, Sarah M (PD) 9/30/2021-9/29/2024

SAMSHA

Amount: \$500,000

“Interprofessional Opioid Use Disorder Fellowship Program”

The goal of this grant is to implement an interprofessional fellowship program for physician assistant, osteopathic medical students, physician assistant, nursing, and pharmacy students to gain knowledge of opioid use disorder including clinical shadowing experiences and community facing service so that upon graduation they will be able to provide substance use disorder treatment services.

Solano County Sweitzer, Sarah M (PD) 7/1/2020-6/30/2023

Solano County Public Health

Amount: \$25,000 annually renewed

“Support for Drug Safe Solano”

The goal of this grant is to support the Program Coordinator for Drug Safe Solano to be a monthly convenor of a cross sector membership to effectively identify gaps in care in the county and provide comprehensive and cross sector support for clients with substance use disorder.

Research Support – Pending:

Foundation Sweitzer, Sarah M (PD) 6/1/2023-5/28/2025

FORE

Amount: \$150,000

“Expansion of OUD Harm Reduction Services in Solano County”

The goal of this grant is to support a Harm Reduction Coordinator for Drug Safe Solano to coordinate and manage community harm reduction activities.

Federal Kinnevey, Christina (PD) 9/1/2023-8/31/2024

HRSA

Amount: \$300,000

“Rio Vista Community Access, Prevention, and Education Program”

The goal of this grant is to expand Drug Safe Solano activities out to the rural community of Rio Vista using a mobile harm reduction van.

Federal Sweitzer, Sarah M (PD) 9/30/2023-9/29/2028

SAMSHA

Amount: \$2,500,000

“Solano County Community Access, Prevention, and Education Program (SC-CAPE)”

The goal of this grant is to provide coordinated harm reduction, substance use navigation, intensive case management, treatment and recovery services specifically focused on providing care to the unhoused. This is a collaborative grant working with Fighting Back Partnership (local CBO), and Archway Recovery Services.

State Sweitzer, Sarah M (PD) 6/30/2023-12/31/2024

CalOES

Amount: \$150,000

“Infrastructure to increase campus safety”

The goal of this grant is to begin the development of a campus fencing project to increase campus safety.

Research Support – Grant written by Sweitzer for an institution Project Director/Investigator

Solano County Hahn, Kathleen (PD) 1/1/2023-6/30/2024

Solano County Public Health

Amount: \$460,000

“Mobile Vaccination Services in Solano County”

This project is a continuation of the mobile vaccination efforts which have been underway for the prior 18 months in partnership with local churches, community centers, and school districts.

Federal Kinnevey, Christina (PD) 1/1/2023-6/30/2024

Sub-contract on Medmark as Funded Agency

Amount: \$175,000

Sub-contract on the “Hub-N-Spoke to Expand Substance Use Navigation and Youth Outreach”

The goal of this grant is to expand youth outreach activities in partnership with Drug Safe Solano and to expand substance use navigation in Solano County.

Federal Hoffman, Newman (PD) 7/1/2022-6/30/2025

HRSA

Amount: \$1,000,000

“Construction Project: Building Renovation to Increase Training of California Healthcare Workforce”

The goal of this construction project is to renovate a 33,000 sq ft building into expanded learning laboratory space to allow for a class size expansion in the DO program and train more future physicians to address the primary care workforce shortage.

Federal Bunker-Alberts, Michele (PD) 9/15/2022-9/14/2025
 HRSA
 Amount: \$3,000,000
 “North Bay Community Health Worker Training Program”
 The goal of this grant is to partner with Aliados Health and the Northern California Center for Well Being to train 126 new community health workers annually and to develop community health worker advanced training.

Solano County Brody, Carinne (PD) 8/1/2020-7/31/2023
 Solano County Public Health
 Amount: \$1,020,000
 “Solano County Mental Health Mapping and Patient Navigation Services”
 The goal of this grant is to increase access to behavioral health care services in Solano County by development of a curated app (Solano Connex) and the training and provision of mental health navigators.

Federal Jacobson, Steve (PD) 12/1/2021-11/30/2024
 HRSA
 Funding: \$1,596,539
 “Developing Healing Organizations to Address Burnout in the Health Workforce in Medically Underserved Communities”
 The goal of this grant is to use a systems level framework to create Safe and responsive spaces for learning and working in a Culture of community wellness with Inclusive access to CARE (SCI). Students will be trained as peer educators for microcredentials on Trauma Informed Systems, Safe Zone, Cultural Humility Training, Suicide Prevention, Substance Use Prevention, and Resiliency Training.

Foundation Jalloh, Mohammad (PD) 5/1/2022-4/30/2023
 National Association of Chain Drug Stores
 Funding: \$15,000
 “Development of High School and Community College Outreach in Introducing Student to Careers in Pharmacy”

State of California Kinnevey, Christina (PD) 12/1/2019-8/31/2023
 Department of Public Health
 Amount: \$226,212
 “Drug Safe Solano: Increasing MAT and Harm Reduction Access in Solano County”

State of California Kinnevey, Christina (PD) 8/1/2022-2/28/2023, 4/1/2023-5/30/2023
 California Harm Reduction Initiative
 Amount: \$10,000
 “Implementation of Syringe Exchange in Solano County”

Federal St. Pierre, Susan (PD) 4/30/2020-4/29/2022
 SAMSHA
 Amount: \$199,448

“Closing the SUD Treatment Gap Through Experiential Interprofessional Practitioner Expansion”

Foundation Kali-Rai, Rolly (PD) 5/15/2021-11/30/2021
 Kaiser Napa-Solano
 Amount: \$75,000

“Increasing COVID-19 Vaccine Access in Vallejo Communities”

Foundation Bunker-Alberts, Michele (PD) 7/1/2021-8/31/2022
 The Center at Sierra Health Foundation
 Amount: \$327,109

“Solano Opportunities and Support (S.O.S.)

Foundation Kali-Rai, Rolly (PD) 6/15/2021-3/31/2022
 East Bay Community Foundation
 Amount: \$199,942

“Boosting COVID-19 Vaccination Rates by Elevating Access, Confidence and Equity in Solano County”

Foundation Chan, Lucinda (PD) 9/30/2021-2/28/2022
 Partnership Health Plan
 Amount: \$250,000

“Increasing Community Vaccination Rates With a Home Visiting Program”

Foundation Norton, Lisa (PD) 11/16/2021-11/15/2024
 The Center at Sierra Health Foundation
 Amount: \$615,000

“Expansion of the PATHS High School and Middle School Mentoring Program”

Research Support – Completed:

Solano County Sweitzer, Sarah M (PD) 3/1/2022-12/31/2022
 Solano County Public Health
 Amount: \$81,000

“Youth Prevention in Opioid Use Disorder”

Federal Sweitzer, Sarah M (PD) 9/30/2020-9/29/2022
 Sub-contract on La Clinica as the funded organization
 Amount: \$200,253

Sub contract on the “Hub-N-Spoke to provide MAT Treatment Services”

Foundation Sweitzer, Sarah M (PD) 12/1/2019-8/31/2020
 Sierra Foundation
 Amount: \$175,837

“Drug Safe Solano: Increasing MAT Access in Vallejo Communities”

Foundation Sweitzer, Sarah M (PD) 1/1/2016-6/30/16

Kaiser Foundation

Amount: \$20,000

“Full STEAM Ahead”

The goal of this grant is to develop a PreK-8th grade healthcareers curriculum, to support innovation approaches to engage families in a Title I school in STEM, and develop a middle school youth advisory council.

NIH, BRAD (G11) Grant

Sweitzer (Co-Director)

5/01/13-4/30/18

Agency: NIH/NICHD

Type: G11

Amount: \$440,000

“Developing an office of sponsored projects at Presbyterian College”

The goal of this grant is to set up an office of sponsored projects and an office of research at Presbyterian College.

NIH, SC INBRE

Sweitzer (Co-PI of sub-contract)

3/1/15-

2/29/20

Amount: \$1,500,000

“Participation of Presbyterian College in South Carolina INBRE”

Participation in SC INBRE allows Presbyterian College to grow the size and diversity of faculty and students involved in biomedical research. The proposal develops a formal biomedical research training program, a faculty development program, and needed infrastructure and renovations.

Foundation

Sweitzer, Sarah M (PI)

8/1/15-7/30/16

United Way

Amount: \$5,000

“Community Engagement in an Underserved Population”

The goal of the project is to complete a community needs assessment and begin community engagement for the 3 to PhD Initiative. This project resulted in a 500+ page Community Needs Assessment report.

Foundation

Sweitzer, Sarah M (PI)

8/1/15-7/30/16

Jackson Foundation

Amount: \$2,500

“Mini Health School to Engage Seniors in Health Lifestyles”

The goal of the project was to develop a mini health school program that target senior health needs.

Foundation

Sweitzer, Sarah M (Co-I)

3/1/13-12/31/14

International Academy of Compounding Pharmacists

“Are compounded pain gels efficacious? The in vivo testing of compounded pain gels using PAMPA.”

This grant will determine whether commonly compounded topical analgesics undergo transdermal penetration and reduce pain.

NIH, RO1

Sweitzer, Sarah M (Co-I)

2/01/06 – 7/31/14

Agency: NIH/NINDS Type: 2RO1NS026363-17

Amount: \$277,345

“Injury-induced pain: chemical modulation of nociceptors”

This sub-contract is to develop and test recombinant herpes viral vectors in a rodent model of neuropathic pain.

Role: Co-investigator on sub-contract: Sarah M. Sweitzer, PhD (10% effort) and Steven P. Wilson, PhD (10%)

NIH, RO1 Sweitzer, Sarah (PI)

4/1/08 – 3/29/13

Agency: NIH/NIDA Type: 1RO1DA023593

Amount: \$1,010,930

“Developmental regulation of endothelin pain”

This grant will characterize how pain experiences early in life can result in a life-long alteration in pain. The mechanism for this life-long sensitization to pain may be mediated by changes in the endothelin receptor system in the epidermis. Furthermore, this may be mediated by the hormonal status of the animal.

Biotechnology Sweitzer (PI)

7/1/10-12/31/11

Nektar Pharmaceuticals (Biotechnology pre-clinical contract work)

Amount: \$210,542

“Preclinical development of novel therapies for neuropathic pain”

The goal of this biotechnology contract is the preclinical development of novel analgesic agents.

Biotechnology Sweitzer (PI)

8/15/06 – 7/31/10

KAI Pharmaceuticals, Inc. (biotechnology pre-clinical contract work)

Amount: \$412,413

“Role of Protein kinase C in nociception”

Pre-clinical drug development of small peptide inhibitors of protein kinase C as novel analgesics for incisional, inflammatory, and neuropathic pain.

Intramural Award Sweitzer & Roberts (Co-PIs)

5/01/06 – 6/30/07

USC School of Medicine – Translational Science Award

Amount: \$25,000

“Understanding the neurobiological basis of sickle cell pain.”

This award is to develop the basic science animal model examining how early exposure to endothelin-1 impacts subsequent pain and analgesia as a complement to the data collected in the pilot study in the sickle cell clinic. These two intramural awards have formed the basis for the present grant application.

Intramural Award Sweitzer & Walsh (Co-PIs)

4/01/06-3/31/07

USC Research and Productive Scholarship Award

Amount: \$18,000

“Opioid tolerance in infants and children”

This award is to develop the use of patch clamp electrophysiology in isolated neuronal cultures for the study of opioid analgesia across development.

Intramural Award Sweitzer, Schatz, & Roberts (Co-PIs) 1/01/06 – 12/15/06
USC School of Medicine, Department of Pharm, Phys, Neuro – Translational Research Seed Grant

Amount: \$10,000

“The clinical experience of sickle cell pain”

This pilot study assesses the feasibility of examining venipuncture pain in the sickle cell patient population.

NIH, F32 Sweitzer, SM (PI), Joan J. Kendig PhD (sponsor) 9/01/02 – 12/31/03

Agency: NIH/NINDS Type: NRSA (NS44729)

“Cellular and Molecular Regulation of Pediatric Pain”

Private Foundation Sweitzer (PI) 7/01/02 – 12/31/03

Alejandro and Lida Zaffaroni Innovation Fund for Addiction Research

“Understanding the neurobiological basis of sickle cell pain.”

NIH, F31 Sweitzer, SM (PI), Joyce A. Deleo PhD (sponsor) 7/01/99 – 6/30/01

Agency: NIH/NIDA Type: NRSA (DA05969)

“Mechanisms of analgesia for a novel therapeutic”

Publications: *indicates clinical/human, **indicates educational

Invited Chapters:

1. **Sweitzer SM**, Arruda JL, DeLeo JA. The Cytokine Challenge: Methods for the detection of central cytokines in rodent models of persistent pain. In: *Methods in Pain Research*. Ed. Lawrence Kruger, 2001, CRC Press.
2. *Haymond T, **Sweitzer SM**. Neuritis: Clinical evidence of cytokines in neuropathic pain. In: *Mechanisms of Pain in Peripheral Neuropathy*. Ed. Maxim Dobretsov, 2009.
3. Romero-Sandoval EA, Sweitzer S. Nonneuronal Central Mechanisms of Pain: Glia and Immune Response. *Progress in Molecular Biology and Translational Science* (in press).

Peer-reviewed publications:

1. Klein AH, Mohammad HK, Ali R, Peper B, Wilson SP, Raja SN, Ringkamp M, Sweitzer S. Overexpression of mu-opioid receptors in primary afferents, but not in combination with enkephalin, decreases neuropathic pain behavior and enhances opioid analgesia in mouse. *Anesthesiology* 2018, 128(5): 967-983.
2. Smith SN, Paige C, Velazquez KT, Smith TP, Raja SN, Wilson SP, Sweitzer SM. Injury-specific promoters enhance herpes simplex virus mediated gene therapy for treating neuropathic pain in rodents. *Journal of Pain*. 2015 (epub)
3. Paige C, Hill B, Canterbury J, Sweitzer S, Romero-Sandoval EA. Construction of an affordable and easy-to-build zebrafish facility. *Journal Visual Experimentation*, 2014, 93:e51989.

4. Bryson E, Hartman R, Arnold J, Gorman G, **Sweitzer S**, Asbill S. Skin Permeation and Antinociception of Compounded Topical Cyclobenzaprine Hydrochloride Formulations. *Int J Pharm Compd*. 2015
5. Smith TP, Schlenz AM, Schatz JC, Maitra R, Sweitzer SM. Modulation of pain in pediatric sickle cell disease: Understanding the balance between endothelin mediated vasoconstriction and apelin mediated vasodilation. *Blood Cells Mol Dis*. 2015 (52):155-9.
6. Smith T, Haymond T, **Smith S**, Sweitzer SM. Evidence for the endothelin system as an emerging therapeutic target for the treatment of chronic pain. *Journal of Pain Research* 2014 (7):531-45.
7. Bryson E, Asbill S, **Sweitzer S**. Skin Permeation and Antinociception of Topical Gabapentin Formulations. *Int J Pharm Compd*. 2014, 18(6): 504-511.
8. Asbill S, Sweitzer SM, Spigener S, Romero-Sandoval A. Compounded pain formulations: what is the evidence? *Int J Pharm Compd*. 2014 Jul-Aug;18(4):278-86.
9. Smith TP, Haymond T, Smith SN, Sweitzer SM. Evidence for the endothelin system as an emerging therapeutic target for the treatment of chronic pain. *J Pain Res*. 2014 Aug 30;7:531-45.
10. Smith T, Beasley S, Smith S, Mark I, Sweitzer SM. Endothelin-1-induce priming to capsaicin in young animals. *Neurosci. Lett*, 2014, 567:15-8.
11. Smith TP, Smith SN, Sweitzer SM. Endothelin-1 induced desensitization in primary afferent neurons. *Neurosci Lett*. 2014 Oct 17;582:59-64.
12. He SQ, Yang F, Perez FM, Xu Q, Shechter R, Cheong YK, Chung CY, Carter AF, Dong X, Sweitzer SM, Raja SN, Guan Y. Tolerance to the anti-allodynic effects of the peripherally acting opioid, loperamide hydrochloride, develops in nerve-injured rats. *PAIN*, 2013, 154(11):2477-86.
13. Schlenz AM, Schatz JC, McClellan CB, Sweitzer SM, Roberts CW. Information Seeking Behaviors during Painful Procedures in Pediatric Patients with Sickle Cell Disease. *Pain Management Nursing*, 2013, 14(3):54-58.
14. Schlenz AM, McClellan CB, Mark TRM, McKelvy AD, Puffer E, Roberts CW, Sweitzer SM, Schatz JC. Sensitization to acute procedural pain in pediatric sickle cell disease: modulation by painful vaso-occlusive episodes, age, and endothelin-1. *Journal of Pain* 2012, 13(7):656-65.
15. ****Jones LS**, Allen L, Cronise K, Juneja N, Kohn R, McClellan K, Miller A, Nazir A, Patel A, **Sweitzer SM**, Vickery E, Walton A, Young R. Incorporating scientific publishing into an undergraduate neuroscience course: a case study using IMPULSE” *Journal of Undergraduate Neuroscience Education* 2011, 9(2):84-91.
16. Lee CY, Perez FM, Wang W, Guan X, Zhao X, Guan Y, Fisher JL, **Sweitzer SM**, Raja SN, Tao YX Dynamic temporal and spatial regulation of mu opioid receptor expression in primary afferent neurons following painful spinal nerve injury, *Eur J Pain*. 2011, 15(7):669-75.
17. **Sweitzer SM**, DeLeo JA. Propentofylline as a Glial Modulator in Neuroprotection and Chronic Pain. In: *Handbook of Experimental Pharmacology* 200, 235-50, 2011.
18. **Sweitzer SM**, Minella C, Wilson SP, Raja SN. Peripheral opioid analgesia for the treatment of neuropathic pain: Gene mutation and virus-mediated gene transfer approaches. *Eur J Pain suppl* 4, 251-256, 2010.

19. Weisshaar C, Dong L, Bowman A, Perez F, Guarino B, **Sweitzer SM**, Winkelstein B. Metabotropic Glutamate Receptor-5 and Protein Kinase C-Epsilon Increase in DRG Neurons & Spinal Glial Activation in an Adolescent Rat Model of Painful Neck Injury. *J Neurotrauma*. 27(12), 2261-71, 2010.
20. McKelvy AD, **Sweitzer SM**. Decreased opioid analgesia in weanling rats exposed to endothelin-1 during infancy. *Neuroscience Letters*, 2009.
21. *McClellan CB, Schatz JC, Mark TRM, McKelvy A, Puffer E, Roberts C, **Sweitzer SM**. Criterion and Convergent Validity for Four Measures of Pain in a Pediatric Sickle Cell Disease Population. *Clinical Journal of Pain*, 25, 146-152, 2009.
22. McKelvy AD, **Sweitzer SM**. Endothelin-1 exposure on postnatal day 7 alters expression of the endothelin B receptor and behavioral sensitivity to endothelin-1 on postnatal day 11. *Neuroscience Letters*, 13, 89-93, 2009.
23. Zhang G, **Sweitzer SM**. Neonatal morphine enhances nociception and decreases analgesia in young rats. *Brain Research*, 1199, 82-90, 2008.
24. Zhang G, Muhammad H, Raja S, Wilson SP, **Sweitzer SM**. Enhanced peripheral analgesia using virally mediated gene transfer of the mu opioid receptor in mice. *Anesthesiology* 108, 305-13, 2008.
25. McKelvy AD, Mark TM, **Sweitzer SM**. Age and sex-specific nociceptive responses to endothelin-1. *J of Pain* 8, 657-66, 2007.
26. Velázquez KT, Mohammad H, **Sweitzer SM**. Protein kinase C in pain: Involvement of multiple isoforms. *Pharmacological Research*, 55, 578-89, 2007.
27. Zissen MH, Zhang G, McKelvy AM, Kendig JJ, **Sweitzer SM**. Tolerance, opioid-induced allodynia and withdrawal associated allodynia in neonatal rats. *Neuroscience*, 144, 247-262, 2007.
28. **Sweitzer SM**, Fann SA, Borg TK, Baynes J, Yost MJ. What is the future of diabetic wound care? *The Diabetes Educator* 32, 197-210, 2006.
29. **Sweitzer SM**, Pahl JL, DeLeo JA. Propentofylline attenuates vincristine-induced peripheral neuropathy in the rat. *Neuroscience Letters*, 2006.
30. Zissen MH, Zhang G, Kendig JJ, **Sweitzer SM**. Acute and chronic morphine alters formalin pain in neonatal rats. *Neuroscience Letters*, 2006.
31. Shumilla JA, Liron T, Mochly-Rosen D, Kendig JJ, **Sweitzer SM**. Ethanol withdrawal-associated allodynia and hyperalgesia: age-dependent regulation by protein kinase C ϵ and γ isozymes. *J of Pain* 6, 535-549, 2005.
32. Jones TL, **Sweitzer SM**, Wilson S, Yeomans DC. GABA_B receptors on central terminals of C nociceptors mediate intersegmental A δ nociceptor evoked hypoalgesia: an antisense herpes vector study. *European J of Pain* 9, 233-42, 2005.
33. Wong SME, **Sweitzer SM**, Peters MC, Kendig JJ. Hyperresponsiveness on washout of volatile anesthetics from isolated spinal cord compared to withdrawal from ethanol. *Anesthesia & Analgesia*, 100, 413-436, 2005
34. **Sweitzer SM**, Peters MC, Medicherla S, Protter A, Yeomans DC. Role of p38 MAPK in capsaicin-induced thermal hyperalgesia. *Pain* 111, 278-85, 2004.
35. Tzaebazis A, Kim PH, **Sweitzer SM**, Yeomans DC. Ameroid rings for gradual chronic constriction of the sciatic nerve in rats: contribution of different nerves to neuropathic pain. *Brain Res Bull* 64, 127-32, 2004.
36. Shumilla JA, **Sweitzer SM**, Kendig JJ. Acute and chronic ethanol exacerbates formalin pain in neonatal rats. *Neuroscience Letters* 367, 29-33, 2004.

37. Shumilla JA, **Sweitzer SM**, Kendig JJ. Acute and chronic ethanol does not alter incisional pain in neonatal rats. *Neuroscience Letters* 366, 332-335, 2004.
38. **Sweitzer SM**, Allen C, Zissen MH, Kendig JJ. Opioid withdrawal associated mechanical allodynia in neonatal rats. *Pain* 110, 269-280, 2004.
39. **Sweitzer SM**, Wong SME, Tjolsen A, Allen C, Mochly-Rosen D, Kendig JJ. Exaggerated nociceptive responses on morphine withdrawal: roles of protein kinase C ϵ and γ . *Pain* 110, 281-289, 2004.
40. **Sweitzer SM**, Wong S, Peters MC, Mochly-Rosen D, Yeomans DC, Kendig JJ. Protein kinase C ϵ and γ : Involvement in formalin-induced nociception in neonatal rats. *JPET* 309, 616-625, 2004.
41. **Sweitzer SM**, Medicherla S, Almirez R, Dugar S, Chakravarty S, Shumilla JA, Yeomans DC, Protter A. Antinociceptive action of a p38 α MAPK inhibitor, NPC-037282, in a diabetic neuropathy model. *Pain* 109, 409-419, 2004.
42. Shumilla JA, **Sweitzer SM**, Eger EI, Laster MJ, Kendig JJ. Inhibition of spinal protein kinase C ϵ or γ isozymes does not affect halothane MAC in rats. *Anesthesia and Analgesia* 99, 82-84, 2004.
43. Ying L, **Sweitzer SM**, Laurito CE, Yeomans DC. Differential opioid inhibition of C- and A δ - fiber mediated thermnociception following stimulation of the nucleus raphe magnus. *Anesthesia and Analgesia* 98, 2004.
44. Jones TL, **Sweitzer SM**, Wilson S, Yeomans DC. Afferent fiber selective shift in opiate potency following targeted opioid receptor knockdown. *Pain* 106:365-371, 2003.
45. **Sweitzer SM**, Shumilla JA, Zissen MH, Kendig JJ. Protein kinase C ϵ and γ : Roles in age-specific modulation of acute opioid withdrawal allodynia. *Semin. Pain Med.* 1, 206-219, 2003.
46. **Sweitzer SM**, DeLeo JA. Leflunomide, an immunosuppressive agent, reduces mechanical sensitivity in a rat mononeuropathy model. *J Pain*, 3:360-368, 2002.
47. **Sweitzer SM**, White KA, Dutta C, DeLeo JA. The differential role of spinal MHC II and cellular adhesion molecules in inflammatory versus neuropathic pain. *J Neuroimmunol* 125:1-11, 2002.
48. **Sweitzer SM**, Pahl J, Rutkowski M, Hickey WF, DeLeo JA. Focal peripheral nerve injury induces leukocyte trafficking into the central nervous system: potential relationship to neuropathic pain. *Pain* 100:163-170, 2002.
49. Zaccaro C, **Sweitzer S**, Pipino S, Gorman N, Sinclair PR, Sinclair JF, Nebert DW, DeMatteis F. Role of cytochromes P4501A1 and 1A2 in bilirubin degradation : Studies in cyp1a2 (-/-) mice. *Biochem Pharmacol* 61:843-849, 2001.
50. **Sweitzer S**, Martin D, DeLeo JA. Intrathecal interleukin-1 receptor antagonist in combination with soluble tumor necrosis factor receptor exhibit an anti-allodynic action in a rat model of neuropathic pain. *Neuroscience*, 103:529-539, 2001.
51. **Sweitzer S**, Schubert P, DeLeo JA. Propentofylline, a glial modulating agent, exhibits anti-allodynic properties in a rat model of neuropathic pain. *JPET*, 297:1210-1217, 2001.
52. Winkelstein BA, Rutkowski MD, **Sweitzer SM**, Pahl JL, DeLeo JA. Nerve injury proximal or distal to the DRG induces similar spinal glial activation and selective cytokine expression but differential behavioral responses to pharmacological treatment. *J Comp Neurology*, 439:127-139, 2001.

53. Rutkowski MD, Arruda J, **Sweitzer S**, DeLeo JA. The limited role of peripheral macrophages in the generation of neuropathic pain behavior in a rat model of neuropathy. *Physiology and Behavior*, 71:225-235, 2000.
54. Arruda J, Rutkowski MD, **Sweitzer S**, DeLeo JA. The effect of IgG and anti-IL-6 antibody in a mononeuropathy model in the rat. *Brain Research*, 879:216-225, 2000.
55. **Sweitzer S**, Colburn RW, Rutkowski M, DeLeo JA. Acute peripheral inflammation induces moderate glial activation and spinal IL-1beta expression that correlates with pain behavior in the rat. *Brain Research*, 829:209-221, 1999.
56. Baglin FG, **Sweitzer S**, Friend DG. Interaction induced light scattering studies of CH₄/H₂ mixtures as a function of density. *J. Phys. Chem*, 101:8816-8822, 1997.
57. Baglin FG, **Sweitzer S**, Stanbery W. Raman light scattering from supercritical binary fluid mixtures: CH₄/CF₄. *J. Chem Phys*, 105:7285-7290, 1996.
58. Baglin FG, Rose EJ, **Sweitzer S**. Identification of 1, 2, and 3 body raman scattering by the field gradient induced dipole A tensor in methane. *Molecular Physics*, 84:115-120, 1994.

Invited Presentations:

1. Sweitzer S, Tang M, Hoberman E. Current and Future: Higher Education Enrollment. Touro University System Annual Assessment Retreat, October 2022.
2. Sweitzer S, Canterbury M. “Health Disparities: Stress & Trauma – A Need for Trauma Informed Systems” at the Addiction, MAT, and Probation: Outlining & Integrating Effective Substance Use Treatments in Probation Services Training, Fall 2022
3. Sweitzer S, Garcia A. “Creating Impact as an Anchor Institution: Redefining Community, Addressing Health Disparities, Closing the Achievement Gap”, Vallejo Economic Development Council, Keynote Speaker, May 2022.
4. Sweitzer SM, Kali-Rai R, Roller L, “Stress, Trauma, Institutional Racism and the Need for Trauma Informed Systems in Higher Education” WSCUC ARC 2022 Annual Conference, San Francisco, CA, May 2022.
5. Sweitzer S “Community Impact of Touro University California as an Anchor Institution in Solano County”, Solano County Funders Meeting on March 10, 2022.
6. Sweitzer S “Building Resilient Communities: The Need for Trauma Informed Systems” presented to the Solano County Healthy Kids Annual Conference (virtual) December 2021.
7. Sweitzer S, Canterbury M, “Trauma Informed Systems in Substance Use Disorder” presented to the Drug Safe Solano Coalition Meeting, July 2021.
8. Sweitzer S, Canterbury M, “Trauma Informed Systems for Physician Assistants” presented to the annual TUC PA Clinical Conference (Virtual) May 2021.
9. Sweitzer S “Part II: Health Disparities: stress, trauma and institutional racism – A need for trauma informed systems” presented to the Concordia University Wisconsin Social Work Program, March 2021.
10. Sweitzer S, “Health Disparities: stress, trauma and institutional racism – A need for trauma informed systems” presented to the Concordia University Wisconsin Social Work Program, February 2021

11. Sweitzer S, Canterbury M. “Stress & Trauma: A Need for Trauma Informed Systems” at the Addiction, MAT, and Probation: Outlining & Integrating Effective Substance Use Treatments in Probation Services Training, Fall 2020
12. Salkin P, Sweitzer S. “TCUS Faculty Development Update” at the TCUS Annual January 2020 Retreat
13. Sweitzer S, “Touro University California: Serving as an Anchor Institution in Solano County”, Solano County Economic Development Council, June 2019.
14. Sweitzer S, “Touro University California: Becoming an Anchor Institution in Vallejo”, Rotary Club Invited Annual Luncheon, October 11, 2018
15. Sweitzer S, “3 to PhD as a model to close the educational and health gap in underserved communities”, Portland State University’s Impact Entrepreneurs Health Innovation Impact Award for the 3 to PhD Initiative, 2017
16. Sweitzer S, “The Office of Research Model” in Pharmaceuticals Section Platform Presentation on Engaging Undergraduate and Professional Students in Research Projects in the Pharmaceutical Sciences, AACP Annual Meeting, Chicago, IL, July 2013.
17. Sarah M. Sweitzer, April 2013 “Hosting an undergraduate scientific meeting” Roanoke College, Roanoke, Virginia.
18. Sarah M. Sweitzer, April 2013 “Undergraduate Research Mentorship: From Coach to Cheerleader”, Roanoke College, Roanoke, Virginia.
19. Sarah M. Sweitzer, April 2013 “Navigating the NIH R15 (AREA) Grant” Roanoke College, Roanoke, Virginia.
20. Sarah M. Sweitzer: May 2013 “Gene Therapy for Treating Chronic Neuropathic Pain” , International Society for the Study of Pain – Neuropathic Pain Meeting, Toronto, Canada.
21. Sarah M. Sweitzer: October 2012 “Doctor I Hurt! What can research teach us about managing sickle cell pain?” Wofford University, SC.
22. Sarah M. Sweitzer: September 2012 “Doctor I Hurt! What can research teach us about managing sickle cell pain?” Anderson University, SC.
23. Sarah M. Sweitzer: August 2012 “Gene Therapy for Treating Chronic Neuropathic Pain” Research Triangle Institute, NC.
24. June 2011 “Sickle Cell Disease: Translating Basic Science to Clinical Science” Presbyterian College School of Pharmacy, Clinton, SC.
25. March 2011 “Sickle Cell Disease: Translating Basic Science to Clinical Science” Cincinnati Children’s Hospital, Cincinnati, OH.
26. February 2011 “Modeling Pain in Animals” Nektar Therapeutics, San Francisco, CA.
27. February 2011 “Pain in Sickle Cell Disease: from bench to bed-side” Nektar Therapeutics, San Francisco, CA.
28. January 2011 “Sickle cell disease and Pain: Translating from bench to bed-side” Johns Hopkins, Baltimore, MD.
29. September 2010 “Translating from bench to bed-side: Sickle cell disease and pain” Winthrop College, Rock Hill, SC.
30. June 2010 “Peripheral opioid analgesia: Lessons from virus mediated gene transfer” Nektar Therapeutics, San Carlos, CA.

31. October 2009 “Sickle Cell Disease: From animal models to children” Wofford College, Spartanburg, SC.
32. September 2009 “Sexually dimorphic nociceptive priming by endothelin: Involvement of the endothelin B receptor” ET-11: APS International conference on endothelin, Montreal, Canada.
33. July 2009 “Role of Protein Kinase C gamma in central sensitization” KAI Pharmaceuticals, San Francisco, CA.
34. April 2009 “Sickle Cell Disease & Pain: Translating from bedside to bench and back” 4th annual GA/SC Neuroscience Consortium Meeting, Athens, GA.
35. March 2009 “Pain: Why men are babies and women have the babies?” Brain Awareness Week Symposium for the General Public, University of South Carolina, Columbia, SC.
36. October 2008 “OUCH! Fetal Alcohol Exposure & PAIN” College of Charleston, Charleston, SC.
37. May 2008 “Attenuation of Acute and Neuropathic Pain by Inhibition of Protein Kinase C” KAI Pharmaceuticals, San Francisco, CA.
38. May 2008 “Modulation of endogenous opioid expression and neuropathic pain using herpes virus” Blaustein Lecture, Johns Hopkins Medical University, Baltimore, MD.
39. April 2008 Modulation of endogenous opioid expression using herpes simplex virus: A novel approach to attenuate pain” 3rd annual GA/SC Neuroscience Consortium Meeting, Columbia, SC.
40. April 2008 “Does fetal alcohol exposure produce peripheral neuropathy in infants and children?” Hard data café, Department of Psychology, University of South Carolina.
41. March 2008 “Modulation of endogenous opioid expression using herpes virus: gene therapy for neuropathic pain?” Department of Bioengineering, University of Pennsylvania, Philadelphia, PA.
42. September 2007 “Growing Pains: Why men are babies and women have the babies” Department of Pharmacology, Eastern Tennessee State University, School of Medicine.
43. June 2007 “Growing pains: Lessons from Development” Merck, West Point, PA.
44. April 2007 “Modeling the pain of sickle cell disease” Albany Medical College, Albany, NY.
45. February 2007 “Pain in sickle cell disease” Columbia College, Columbia, SC.
46. October 2006 “Age specific regulation of pain in sickle cell disease” Furman University, Greenville, SC.
47. September 2006 “Modeling pain associated with sickle cell disease” KAI Pharmaceuticals, San Francisco, CA.
48. May 2006 “Alcohol exposure modulates pain and analgesia during early life” Dartmouth Medical School, Hanover, NH.
49. November 2005 “Alcohol, Pain, and Analgesia” Alcohol Research Center, Medical University of South Carolina, Charleston, SC.
50. May 2005 “Altering nociception by ethanol and morphine” Department of Neuroscience, University of New Mexico Health Sciences, Albuquerque, NM.

51. October 2004 “Morphine analgesia in infants and children” Grand Rounds, Department of Surgery, University of South Carolina School of Medicine, Columbia, SC.
52. April 2004 “Age-specific regulation of pain by morphine” Blaustein Lecture, Johns Hopkins Medical University, Baltimore, MD.
53. February 2003 “Opiate induced hyperalgesia: A developmental study of second messenger systems” Department of Pediatrics, University of Arkansas for Medical Sciences, Little Rock, AK.
54. November 2002 “Pain, Analgesia and Withdrawal: A developmental study” Department of Pharmacology, Physiology, and Neuroscience, University of South Carolina School of Medicine, Columbia, SC.
55. March 2002 “Developmental Regulation of Pain: A Basic Science Study” Department of Anesthesiology Research Seminar Series, Stanford University Medical School, Stanford, CA.
56. January 2001 “The role of CNS immunocompetence in neuropathic and inflammatory pain” Scripps Research Center, San Diego, CA.
57. January 2001 “Glial Activation: A marker for CNS immunocompetence following nerve injury?” Department of Anesthesiology Research Seminar Series, Stanford University Medical School, Stanford, CA.
58. September 2001 “Differential Neuroimmune Interactions in Acute Inflammatory Pain and Persistent Neuropathic Pain” Department of Psychology, University of Colorado, Boulder, CO.
59. September 1999 “Adenosine regulation: A potential sight for the development of novel analgesics” Department of Anesthesiology Seminar Series, Dartmouth-Hitchcock Medical Center, Lebanon, NH.

Abstracts:

1. Sun J, Sweitzer S. “Understanding Factors that Increase Harm Reduction Readiness and Knowledge in Healthcare Professional Students” TUC Annual Research Day April 2023.
2. Uppal S, Sweitzer S “Understanding Factors that Increase Trauma-Informed Care Knowledge and Readiness in Healthcare Professional Students” TUC Annual Research Day April 2023.
3. Hernandez F, Yeung D, Chan L, Hahn H, Pay M, Hendriksz T, Sweitzer S, Kali-Rai R. Touro CARES MVP Ambassadors: Implementing IPE Through COVID-19 Community Vaccination Clinics. Touro University System IPE Day Spring 2022
4. Doroudgar S, Landel G, Kinnevey C, Camargo A, Sweitzer S. Drug Safe Solano: Closing the Substance Use Disorder Treatment through Experiential Interprofessional Practitioner Education. Touro University System IPE Day 2022
5. Alam M, Quarashi M, Sweitzer S. “Understanding Factors that Increase Healthcare Professional Student Knowledge, Attitudes, and Readiness to Provide Care for Substance Use Disorder Patients” TUC Annual Research Day April 2022.
6. Hwang G, Sharma N, Sweitzer S. “Impact of Community COVID-19 Vaccination Clinic Participation on Interprofessional Competencies and Leadership” TUC Annual Research Day April 2022.
7. Karagiannis C, Canterbury M, Redman J, Camargo, Sweitzer SM. Evaluation of “Addiction, MAT, and Probation” Outlining and Integrating Effective Substance Use

- Treatment in Probation Services” Training for Probations in Solano County. TUC Annual Research Day May 2021
8. S. N. SMITH¹, J. L. FISHER, S. N. RAJA, S. M. SWEITZER. Opioid receptor heterodimerization in the development of peripheral opioid tolerance, Society for Neuroscience Meeting 2013, San Diego, CA.
 9. T. P. SMITH, A. M. SCHLENZ, R. MAITRA, S. RUNYON, S. M. SWEITZER, Interplay between apelin and endothelin systems in pediatric sickle cell disease patients and a rodent model of endothelin-1-induced sensitization, Society for Neuroscience Meeting 2013, San Diego, CA.
 10. **Sweitzer SM**, Asbill S, Fuhrman C, Romero-Sandoval A. Approaches to Promote Faculty Scholarship at a New Pharmacy School. AACP Annual Meeting, Chicago, IL, 2013.
 11. Smith S, Fisher J, Raja SN, **Sweitzer SM**. Blocking opioid receptor heterodimerization prevents and reverses peripheral opioid tolerance. IASP Neuropathic Pain Meeting, Toronto, Canada, 2013.
 12. Smith TP, Schlenz A, Maitra R, Runyon S, **Sweitzer SM**. Apelin and apelin receptor: role in sickle cell disease and endothelin-1 sensitization. IASP Neuropathic Pain Meeting, Toronto, Canada, 2013.
 13. Petz J, **Sweitzer SM**. Using Herpes Simplex Virus Mediated Gene Therapy to Decrease Neuronal Activation in Neuropathic Pain. SYNAPSE 2013, University of South Carolina, SC.
 14. Anderson RM, **Sweitzer SM**. Do Water Fleas Feel Cold? Evidence for TRPM8 Expression In *Daphnia Magna*. SYNAPSE 2013, University of South Carolina, SC.
 15. Thomas A, **Sweitzer SM**. pH sensitivity in Water Fleas: Evidence for ASIC 3 Expression in *Daphnia magna*. SYNAPSE 2013, University of South Carolina, SC.
 16. Hammett J, **Sweitzer SM**. Sickle cell pain: Protein kinase C gamma expression in the periaqueductal gray following peripheral endothelin-1 administration. SYNAPSE 2013, University of South Carolina, SC.
 17. Patel J, **Sweitzer SM**. Heating Up Water Fleas: Do *Daphnia Magna* Express the Capsaicin Receptor (TRPV1)? SYNAPSE 2013, University of South Carolina, SC.
 18. Smith TP, Schlenz A, Maitra R, Runyon S, **Sweitzer SM**. Apelin and apelin receptor: role in sickle cell disease and endothelin-1 sensitization. SYNAPSE 2013, University of South Carolina, SC.
 19. Smith S, Fisher J, Raja SN, **Sweitzer SM**. Blocking opioid receptor heterodimerization prevents and reverses peripheral opioid tolerance. SYNAPSE 2013, University of South Carolina, SC.
 20. Rambo, RP, Nixon, L., Cui, C. B., Candler, P., **Sweitzer S.**, & Jones, L. IMPULSE: The benefits and challenges of running a reviewer training site as a student organization. SYNAPSE 2012, University of South Carolina, SC.
 21. Mohammad HK, Raja SN, Wilson SP, **Sweitzer SM**. Peripheral delta opioid receptor-mediated analgesia and neuropathic pain: modulation of receptor expression in primary afferents using herpes simplex virus. American Society of Gene & Cell Therapy Annual Meeting, 2011.
 22. Smith TP, Els H, Jefferson C, Smith S, **Sweitzer SM**. Brain awareness week 2011: the 5th grade experience of learning and memory. Society for Neurosciences Annual Meeting, Washington DC, 2011.

23. Fisher JM, Sargent-Jones L, **Sweitzer SM**. The scientific peer review process: An on-line reviewer training module for undergraduate and graduate students. Society for Neurosciences Annual Meeting, Washington DC, 2011.
24. Rambo, RPO, Nixon L, Bhatia R, Cui CB, **Sweitzer SM**, Sargent-Jones L. IMPULSE: The benefits and challenges of running a reviewer training site as a student organization. Society for Neurosciences Annual Meeting, Washington DC, 2011.
25. Smith, SN, Smith TP, Jefferson C, Raja SN, Wilson SP, Sweitzer SM. Injury-specific promoters enhance herpes simplex virus mediated gene therapy for treating neuropathic pain. Society for Neurosciences Annual Meeting, Washington DC, 2011.
26. Smith TP, Smith SN, Sweitzer SM. Sexually dimorphic modulation of capsaicin-induced secondary mechanical allodynia by prior exposure to endothelin-1. Society for Neurosciences Annual Meeting, Washington DC, 2011.
27. Schlenz AM, McClellan CB, Puffer E, Roberts CW, Schatz JC, Sweitzer SM. Sensitization to acute procedural pain in pediatric sickle cell disease: Modulation by age, vaso-occlusive episodes, and endothelin-1. Society for Neurosciences Annual Meeting, Washington DC, 2011.
28. Paige C, Mark I, Zaric V, **Sweitzer SM**. Limiting Central Nervous System Side Effects in Common Medications. SYNAPSE 2011, Wake Forest University, NC.
29. Robinson E, Mark I, Hoff T, Khaliq S, Nazir A, Reeves M, Revels B, Schlenz A, Spears W, Velazquez K, **Sweitzer SM**. Brain Awareness Week 2010: Small Group Based Elementary School Activities. Society for Neurosciences 40th Annual Meeting, San Diego, CA, 2010.
30. Robinson E, Guram G, McKelvy AD, **Sweitzer SM**. Neonatal Exposure to Alcohol Alters Spinal Cord Innervation. Society for Neurosciences 40th Annual Meeting, San Diego, CA, 2010.
31. McKelvy AD, Perez F, Tomar S, **Sweitzer SM**. Sexually dimorphic nociceptive priming by endothelin-1: alteration in endothelin b receptor expression, function, and endorphin release. World Congress On Pain, Montreal, Canada, September 2010.
32. **Sweitzer SM**, Velazquez K, Spears W, Ray A, Wilson SP, Raja SN. Modulation of glial activation and neuropathic pain by herpes simplex virus driven preproenkephalin and mu opioid receptor expression in primary afferents. World Congress On Pain, Montreal, Canada, September 2010.
33. Revels BN, Harrison SD, **Sweitzer SM**. Effects of PKC epsilon and gamma in capsaicin-induced secondary mechanical hyperalgesia. Society for Neurosciences 39th Annual Meeting, Chicago, IL, 2009.
34. Revels B, Robinson E, Guram G, Juneja N, Kadali S, Khaliq S, Mark I, McKelvy AD, Nazir A, Patel A, Spears W, Velazquez K, **Sweitzer SM**. Brain Awareness Week 2009 Small Group Based elementary school activities. Society for Neurosciences 39th Annual Meeting, Chicago, IL, 2009.
35. McKelvy AD, Haymond TE, **Sweitzer SM**. Sexual dimorphism in endothelin-induced nociceptive priming in infant rats. Society for Neurosciences 39th Annual Meeting, Chicago, IL, 2009.
36. Velazquez K, Mohammad H, Spears W, Perez F, Wilson S, **Sweitzer SM**. Modulation of delta opioid receptor expression with herpes simplex viral vectors attenuates allodynia and hyperalgesia in a rodent model of neuropathic pain. American Pain Society Annual Meeting, Sand Diego, CA, May 2009.

37. McKelvy AD, Haymond T, **Sweitzer SM**. Sexual dimorphism in endothelin-induced nociceptive priming in infant rats. American Pain Society Annual Meeting, Sand Diego, CA, May 2009.
38. Guram GS, Sander DL, McKelvy AD, **Sweitzer SM**. Altered peripheral and spinal innervations patterns in a rodent model of fetal alcohol exposure: Implications for somatosensation and pain. Synapse, College of Charleston, March 2009.
39. Mohammad H, Spears WE, Velazquez KT, **Sweitzer SM**. Role of delta opioid receptors in the regulation of chronic neuropathic pain. Synapse, College of Charleston, March 2009.
40. Sanders D, Ali R, Barrett S, Guram G, Haymond T, McKelvy A, Velazquez K, **Sweitzer SM**. Small group based elementary school activities for brain awareness week. Synapse, College of Charleston, March 2009.
41. Ali R, Mohammad H, Wilson SP, Raja SN, **Sweitzer SM**. Transient inflammation in the skin and prolonged overexpression of enkephalin and mu opioid receptors in primary afferent neurons using herpes simplex viral vectors. Synapse, College of Charleston, March 2009.
42. Mark IM, **Sweitzer SM**. Protein kinase C epsilon inhibition decreases endothelin-1 induced nociception and neuronal activation. Synapse, College of Charleston, March 2009.
43. Revels BN, Liu J, **Sweitzer SM**. Temporal effects of PKC epsilon and gamma in capsaicin-induced mechanical allodynia. Synapse, College of Charleston, March 2009.
44. Juneja NS, **Sweitzer SM**, Mott DD. Nociceptive threshold is altered during epileptogenesis in the pilocarpine model of temporal lobe epilepsy in rats. Synapse, College of Charleston, March 2009.
45. Guram GS, Sanders DL, McKelvy AD, **Sweitzer SM**. Altered peripheral and spinal innervations patterns in a rodent model of fetal alcohol exposure: implications for somatosensation and nociception. Society for Neurosciences 38th Annual Meeting, Washington DC, 2008.
46. Sanders DL, Ali R, Barrett S, Guram G, Haymond T, McKelvy A, Velazquez K, **Sweitzer SM**. Small Group based elementary school activities for brain awareness week. Society for Neurosciences 38th Annual Meeting, Washington DC, 2008.
47. Velazquez KT, Miao FJP, Mohammad HK, Ogden CJ, Harrison SD, **Sweitzer SM**. KAI-1678, a novel inhibitor of protein kinase C epsilon, attenuates mechanical hyperalgesia in rodent models of acute nociceptive, inflammatory, and post-surgical pain. Society for Neurosciences 38th Annual Meeting, Washington DC, 2008.
48. Miao FJ, Mohammad HK, Velazquez KT, Harrison SD, **Sweitzer SM**. KAI-1678, a novel inhibitor of protein kinase C epsilon, attenuates hyperalgesia and allodynia in three neuropathic pain models in rodents. Society for Neurosciences 38th Annual Meeting, Washington DC, 2008.
49. Ali R, Mohammad HK, Raja S, Wilson SP, **Sweitzer SM**. Attenuation of capsaicin induced hyperalgesia using virally mediated expression of the mu opioid

- receptor and enkephalin. Society for Neurosciences 38th Annual Meeting, Washington DC, 2008.
50. Mohammad HK, Velazquez K, Raja S, Wilson SP, **Sweitzer SM**. Herpes simplex virus driven preproenkephalin and mu opioid receptor but not delta opioid receptor expression in primary afferents reverses neuropathic pain-associated behaviors and enhances peripheral opioid analgesia. Society for Neurosciences 38th Annual Meeting, Washington DC, 2008.
 51. McKelvy AD, Haymond TE, **Sweitzer SM**. Endothelin-1 exposure sex-dependently sensitizes rodents to endothelin-1 induced nociception. Society for Neurosciences 38th Annual Meeting, Washington DC, 2008.
 52. **Sweitzer SM**, Miao F, Ogden C, Mohammad H, Velazquez K, Li A, Harrison S. Epsilon protein kinase inhibitors targeting inflammatory and neuropathic pain. World Pharma Congress, Philadelphia, PA, May 2008.
 53. Rabiah Ali, Husam Mohammad, Srinivasa Raja, Steven P Wilson, SM Sweitzer. Using herpes simplex virus-1 to over-express the mu opioid receptors in afferent neurons. GA/SC Neuroscience Consortium, University of South Carolina, Columbia, SC, March 2008.
 54. Dana Sanders, Alvin McKelvy, Gurjeet Guram, SM Sweitzer. Changes in Cutaneous Peptidergic and Nonpeptidergic nociceptors associated with fetal ethanol exposure. GA/SC Neuroscience Consortium, University of South Carolina, Columbia, SC, March 2008.
 55. McKelvy AD, **Sweitzer SM**. Endothelin-1 exposure early in development changes pain sensitivity and opioid analgesia later in development. GA/SC Neuroscience Consortium, University of South Carolina, Columbia, SC, March 2008.
 56. Mohammad HK, Raja SN, Wilson SP, **Sweitzer SM**. Herpes simplex virus driven preproenkephalin and mu opioid receptor expression in primary afferents reverses neuropathic-pain associated behaviors and enhances peripheral opioid analgesia. GA/SC Neuroscience Consortium, University of South Carolina, Columbia, SC, March 2008.
 57. Velazquez K, Mohammad H, **Sweitzer SM**. A small peptide inhibitor of protein kinase C gamma translocation attenuates allodynia and hyperalgesia in a rodent model of neuropathic pain. GA/SC Neuroscience Consortium, University of South Carolina, Columbia, SC, March 2008.
 58. Rabiah Ali, Husam Mohammad, Srinivasa Raja, Steven P Wilson, SM Sweitzer. Using herpes simplex virus-1 to over-express the mu opioid receptors in afferent neurons. Synapse, College of Charleston, Charleston, SC, March 2008.
 59. Dana Sanders, Alvin McKelvy, Gurjeet Guram, SM Sweitzer. Changes in Cutaneous Peptidergic and Nonpeptidergic nociceptors associated with fetal ethanol exposure. Synapse, College of Charleston, Charleston, SC, March 2008.
 60. Gurjeet Guram, Alvin McKelvy, SM Sweitzer. Enhanced Capsaicin induced thermal hyperalgesia and neuronal activation in fetal alcohol exposed rats. Synapse, College of Charleston, Charleston, SC, March 2008.
 61. McKelvy AD, **Sweitzer SM**. Endothelin-1 exposure in infancy, but not in young childhood sensitizes males and de-sensitizes females to endothelin-1 induced pain

- later in development. Society for Neuroscience 37th Annual Meeting, San Diego, CA, 2007.
62. Mohammad HK, Raja S, Wilson SP, **Sweitzer SM**. Herpes simplex virus driven preproenkephalin and mu opioid receptor expression in primary afferents decreases basal nociception, increases peripheral opioid analgesia, and reduces phasic pain. Society for Neuroscience 37th Annual Meeting, San Diego, CA, 2007.
 63. **Sweitzer SM**, Mohammad HK, Velazquez KT, Harrison SD. Inhibition of protein kinase C epsilon translocation reduces allodynia and hyperalgesia in a rodent model of neuropathic pain. Society for Neuroscience 37th Annual Meeting, San Diego, CA, 2007.
 64. Velazquez KT, Mohammad HK, Harrison SD, **Sweitzer SM**. A small peptide inhibitor of protein kinase C gamma translocation attenuates allodynia and hyperalgesia in a rodent model of neuropathic pain. Society for Neuroscience 37th Annual Meeting, San Diego, CA, 2007.
 65. McKelvy AD, Sanders D, Sweitzer SM. Exposure to endothelin-1 early in development alters pain sensitivity and opioid analgesia later in development. 2nd annual GA/SC Neuroscience Consortium, Augusta, GA, April 2007.
 66. Mohammad HK, Raja S, Wilson SP, Sweitzer SM. Virus-mediated expression of endogenous opioids decreases basal nociception, enhances opioid analgesia, and reduces phasic pain. 2nd annual GA/SC Neuroscience Consortium, Augusta, GA, April 2007.
 67. Velazquez KT, Barr T, Rice F, Sweitzer SM. Modulation of nociceptive proteins in the skin of female rats across the estrous cycle. 2nd annual GA/SC Neuroscience Consortium, Augusta, GA, April 2007.
 68. Hyperalgesia during withdrawal from acute ethanol exposure is a function of type of pain stimulus, age, and sex. 2nd annual GA/SC Neuroscience Consortium, Augusta, GA, April 2007.
 69. Mark TM, McClellan CB, McKelvy AD, Roberts CW, Schatz JC, **Sweitzer SM**. Effect of current age and age of on-set for vaso-occlusive episodes on acute procedural pain in the pediatric sickle cell population. Posters on the Hill, Council for Undergraduate Research, Washington DC, April 2007.
 70. Mark TM, Peper B, Fisher C, McKelvy AD, **Sweitzer SM**. Effect of age and sex on endothelin-1 induced c-fos expression in the rat brain. Synapse, Davidson College, Davidson, NC, March 2007.
 71. Sanders D, Ali R, Guram J, Mark TM, Peper B, McKelvy AD, Puffer E, McClellan CB, Roberts C, Schatz JC, **Sweitzer SM**. Vaso-occlusive pain early in life increases acute procedural pain in the pediatric sickle cell population. Synapse, Davidson College, Davidson, NC, March 2007.
 72. McClellan CB, Roberts CW, Schatz JC, **Sweitzer SM**, Puffer ES. Procedural Pain Experience in Pediatric Sickle Cell Disease: A Multi-Method Comparison of Pain Response across Age Groups. 6th Biennial International Forum on Pediatric Pain, Nova Scotia, Canada, Oct 2006.
 73. McClellan CB, Mark TM, McKelvy AD, Roberts CW, Schatz JC, **Sweitzer SM**. Procedural pain experience in pediatric sickle cell disease: a multi-method comparison of pain response across age groups. Society for Neuroscience 36th Annual Meeting, Atlanta, GA, 2006.
 74. McKelvy AD, Ford J, **Sweitzer SM**. Repetitive endothelin-induced nociception early in development: effects on nociception and opioid analgesia. Society for Neuroscience 36th Annual Meeting, Atlanta, GA, 2006.

75. **Sweitzer SM**, Fulk LJ, Zhang G, McKelvy A, Bravo M, Jinks SL. Neonatal ethanol exposure produces modality dependent changes in nociception and decreases opioid analgesia in juvenile rats: behavioral and neurophysiological evidence. 29th annual scientific meeting of the Research Society on Alcoholism. Baltimore, MD, June 2006.
76. Holzinger E, McKelvy A, **Sweitzer SM**. Specific role of protein kinase C in a rodent model of sickle cell pain. Synapse, Davidson College, Davidson, NC, April 2006.
77. Mark TM, Zhang G, **Sweitzer SM**. Effect of binge morphine exposure on pain thresholds and opioid analgesia in neonatal and adolescent rats. Synapse, Davidson College, Davidson, NC, April 2006.
78. McKelvy AM, Ford JB, **Sweitzer SM**. Repetitive pain early in development: effects on nociception and opioid analgesia. GA/SC consortium, Mt. Pleasant, SC, April 2006.
79. Propst JT, McKelvy AM, **Sweitzer SM**. Neonatal morphine alters nociception in a sex-dependent and independent manner. GA/SC consortium, Mt. Pleasant, SC, April 2006.
80. Jink SL, Fulk LJ, Wilson LB, **Sweitzer SM**. Neonatal alcohol exposure alters nociceptive reflexes and spinal dorsal horn neuronal responses to mechanical and thermal stimuli in juvenile rats. Society for Neuroscience 35th Annual Meeting, Washington D.C., 2005.
81. Fulk LJ, Zhang G, McKelvy AD, **Sweitzer SM**, Jinks SL. Neonatal ethanol exposure decreases endogenous and exogenous opioid analgesia in juvenile rats. Society for Neuroscience 35th Annual Meeting, Washington D.C., 2005.
82. **Sweitzer SM**, Zhang G. Neonatal morphine exposure alters nociception and opioid analgesia in juvenile rats. Society for Neuroscience 35th Annual Meeting, Washington D.C., 2005.
83. Zhang G, Raja S, Wilson SP, **Sweitzer SM**. HSV encoding the mu opioid receptor modulates peripheral opioid analgesia in the mouse. Society for Neuroscience 35th Annual Meeting, Washington D.C., 2005.
84. McKelvy AD, Davar G, **Sweitzer SM**. Age and sex-specific nociceptive response to endothelin in rats. Society for Neuroscience 35th Annual Meeting, Washington D.C., 2005.
85. **Sweitzer SM**, Wong SME, Wilson SP, Kendig JJ. Pre-synaptic mu opioid receptors contribute to opioid withdrawal-associated allodynia in neonatal rats. Society for Neuroscience 34th Annual Meeting, San Diego, CA, October 2004.
86. Wong SME, **Sweitzer SM**, Kendig JJ. C fibers contribute to opioid withdrawal-associated allodynia in neonatal rats. Society for Neuroscience 34th Annual Meeting, San Diego, CA, October 2004.
87. Zissen MH, Kendig JJ, **Sweitzer SM**. Tolerance, opioid-induced hypersensitivity and withdrawal-associated hypersensitivity in neonatal rats. Society for Neuroscience 34th Annual Meeting, San Diego, CA, October 2004.
88. **Sweitzer SM**, Wong SME, Wilson SP, Kendig JJ. Contribution of pre-synaptic mu opioid receptors to morphine withdrawal hyperalgesia in neonatal rats. AUA 51st annual meeting, Sacramento, CA, May 2004.

89. Wong SME, **Sweitzer SM**, Kendig JJ. Exaggerated nociceptive responses on morphine withdrawal: role for extracellular signal-regulated kinase. Society for Neuroscience 33rd Annual Meeting, New Orleans, LA, November 2003.
90. **Sweitzer SM**, Allen C, Zissen MH, Kendig JJ. Opioid induced hyperalgesia in the neonatal rat. Society for Neuroscience 33rd Annual Meeting, New Orleans, LA, November 2003.
91. Shumilla JA, **Sweitzer SM**, Kendig JJ. Alcohol in neonates. Society for Neuroscience 33rd Annual Meeting, New Orleans, LA, November 2003.
92. Han HC, **Sweitzer SM**, Peters MC, Kendig JJ, Yeomans DC. Delta and C fiber response changes after spinal nerve injury in the rat. Society for Neuroscience 33rd Annual Meeting, New Orleans, LA, November 2003.
93. **Sweitzer SM**, Wong SME, Tjolsen A, Allen C, Mochly-Rosen D, Kendig JJ. Role of protein kinase C ϵ and γ in morphine withdrawal hyperalgesia. AUA 50th annual meeting, Milwaukee, WI, May 2003.
94. **Sweitzer SM**, Jones TJ, Kheifets V, Mochly-Rosen D, Yeomans DC, Kendig JJ. Developmental regulation of nociception by protein kinase C. Society for Neuroscience 32nd Annual Meeting, Orlando, FL, November 2002.
95. Jones TJ, **Sweitzer SM**, Medicherla S, Scott B, Feng Y, Protter A, Kendig JJ, Yeomans DC. Involvement of p38 α MAPK in capsaicin-induced hyperalgesia. Society for Neuroscience 32nd Annual Meeting, Orlando, FL, November 2002.
96. Medicherla S, **Sweitzer SM**, Scott B, Feng Y, Liu Y, Yeomans DC, Protter A. Antinociceptive action of p38 α MAPK inhibitor, NPC-037282, in a diabetic neuropathy model. Society for Neuroscience 32nd Annual Meeting, Orlando, FL, November 2002.
97. Tanga F, **Sweitzer SM**, Kalehua A, DeLeo JA. The importance of confirming microarray analysis in spinal gene assessment in a rat model of neuropathic pain. Society for Neuroscience 32nd Annual Meeting, Orlando, FL, November 2002.
98. **Sweitzer SM**, Kheifets V, Jones TJ, Mochly-Rosen D, Kendig JJ, Yeomans DC. Developmental regulation of formalin-induced nociception by protein kinase C epsilon and gamma. 10th World Congress On Pain, San Diego, CA, August 2002.
99. Jones TL, **Sweitzer SM**, Peters M, Margeta M, Wilson SP, Yeomans DC. HSV encoding GABAB receptor anti-sense attenuates sciatic A δ fiber-mediated modulation of saphenous C fiber hypoalgesia in the mouse. American Pain Society Meeting, 2002.
100. DeLeo JA, Arruda JL, Hunt J, Rutkowski MD, **Sweitzer S**, Winkelstein BA, Wynkoop T. Differential physiological and pharmacological outcomes in rat models of neuropathic and radicular pain. Society for Neuroscience, New Orleans, LA, 2000.
101. **Sweitzer S**, DeLeo JA, Martin D. Intrathecal interleukin-1 receptor antagonist and tumor necrosis factor binding protein exhibit an antiallodynic effect in a rat model of neuropathic pain. Society for Neuroscience, Miami, FL, 1999.
102. **Sweitzer S**, Colburn RW, Rutkowski M, DeLeo JA. Acute peripheral inflammation produces similar spinal glial activation and IL-1b expression to that observed following nerve injury in the rat. Society for Neuroscience, Anaheim, CA, 1998.

TEACHING EXPERIENCE:**Teaching Evaluations: (Scale of 1-5, 1=poor, 5=outstanding)***Touro University California Didactic Teaching:*

Fall 2019-2022	Physician Assistant Principles in Basic Science Course 21 hours of Lectures on: Cell Signaling, Introduction to Pharmacology, Basics of the Nervous System, Autonomic Pharmacology, Injury, Inflammation and Repair
Fall 2022	Pharmacy School Pharmacology Course 6 hours of Lecture on: Pathophysiology and Pharmacology of Traumatic
Spring 2023	Brain Injury and Epilepsy Pharmacy School Pharmacology Course 6 hours of Lecture on: Pathophysiology and Pharmacology of Anemias and
Spring 2022, 2023	Hematopoietic Disease, and Immunopharmacology Masters in Medical Health Sciences 2 hour lecture on: Scientific Publishing 101

Concordia Online Course Development:

Summer 2016	Course: HCA 414: Population Health Course Writer for online 3 credit course
Summer 2016	Course: HCA4xx: Healthcare Data Analytics Course Writer for online 3 credit course

Concordia Student Didactic Teaching:

Summer 2017	Course: HCA 431: Health Law and Ethics Course Director
Fall 2016	Course: HHS: Seminar: Medical Terminology Course Director
Spring 2016-present	Course: HCA: Managerial Epidemiology Course Director This course applies the concepts of epidemiology to healthcare management.
Fall 2015	Course: HHS: Seminar: Pharmacology in Exercise: Pills, Potions, Poisons Course Director
Fall 2015	Course: HCA: Leadership

	Lecturer Professional Conduct
Summer 2015	Course: HCA: Internship Lecturer Professionalism in the Workplace
Summer 2015	HCA Orientation Guest Speaker Professionalism 101, Neuroscience of Learning
Spring 2015	Course: SCW: Grant Writing Course Director This is an introductory course on grant writing for social work majors.
Spring 2015&16 Fall 2015&16	Course: HCA: Issues in Aging Lecturer 2 hrs, Living with your Mortality
Spring 2015, 2016	Course: ESS: Careers in Exercise Science Lecturer 1 hr, Careers in the Health Professions
Fall 2014, 2015	Course: NUR: Research Methods Lecturer 2 hrs, study design and critical evaluation of the scientific literature
Fall 2014	Course: ESS: Advanced Topics Lecturer 2 hrs, drug development and basic pharmacology

Pharmacy Student Didactic Teaching:

Spring 2014	Course: PHRM Elective: On Death and Dying Course Director Presbyterian College School of Pharmacy This is an <u><i>interdisciplinary experimental course</i></u> that is cross listed with undergraduate Biology and English departments.
2012-2014	Course: PHRM 5203 Principles of Pathophysiology Presbyterian College School of Pharmacy Lectures on Oral Cavity, Nutritional Disease, Gastrointestinal Tract, Liver, Gallbladder, Pancreas, Bones, Joints, Musculoskeletal, Pain Student Evaluations of Instructor: 4.75

- 2012-2014 Course: PHRM 6204 MTM III – Cardiovascular I
Presbyterian College School of Pharmacy
Lectures on Pathology and Pharmacology of Hypertension,
Dyslipidemia, Peripheral Arterial Disease
Student Evaluations of Instructor: 4.58
- 2012-2014 Course: PHRM 6205 MTM IV – Cardiovascular II
Presbyterian College School of Pharmacy
Co-Course Director
Lectures on Pathology and Pharmacology of Ischemic Heart Disease,
Congestive Heart Failure
Student Evaluations of Instructor: 4.55
- 2012 Course: PHRM 7103 MTM VII – Gastrointestinal
Presbyterian College School of Pharmacy
Co-Course Director
Lectures on Pathology and Pharmacology of Hepatitis, Cirrhosis,
Infectious Diarrhea, Peptic Ulcer Disease, Inflammatory Bowel
Disease, Pancreatitis
Student Evaluations of Instructor: 4.53
- 2012-2014 Course: PHRM 7105 MTM IX – Neurosensory
Presbyterian College School of Pharmacy
Course Director
Lectures on Pathology and Pharmacology of Stroke, Parkinson’s
Disease, Alzheimer’s Disease, Dementia, Multiple Sclerosis, Headache
Student Evaluations of Instructor: 4.67
- 2013-2014 Course: PHRM 7201 MTM X – Psychiatry
Presbyterian College School of Pharmacy
Co-Course Director
Lectures on Pathology and Pharmacology of Schizophrenia, Bipolar,
Depression, Anxiety, Sleep Disorders, ADHD, Substance Abuse
Student Evaluations of Instructor: 4.7
- 2013-2014 Course: PHRM 7203 MTM XI – Musculoskeletal
Presbyterian College School of Pharmacy
Co-Course Director
Lectures on Pathology and Pharmacology of Osteoporosis, Acute &
Chronic Pain, Rheumatoid Arthritis, Osteoarthritis, Lupus, Gout
Student Evaluations of Instructor: 4.6

Medical Student Didactic and Small Group Teaching:

Responsible for teaching Sensory Neurophysiology to first year medical students and 2 hours of clinical pain management to second year medical students in Pharmacology. The clinical pain management lecture utilizes an audience responder system.

- 2006-2013 Course: PHPH D603 Medical Neuroscience
 University of South Carolina School of Medicine
 4 hours of Lecture on Somatosensatin and Pain
 1 hour of Lecture on Audition Physiology
 2 hours of Lecture on Vision Physiology
 Peer Evaluations of Instructor: 4.0
 Student Evaluations of Instructor: 4.0
- 2008-2011 Course: PHPH D631 Medical Pharmacology
 University of South Carolina School of Medicine
 2 hours of Lecture on Clinical Pain Management
 Utilizes an audience responder system
- 2004-2005 Course: PHPH D621 Medical Physiology
 University of South Carolina School of Medicine
 4 hours of Lecture on Somatosensation and Pain
 Small Group Facilitator for case studies
 Peer Evaluations: 3.9 Student Evaluations: 3.8
- 1999-2001 Course: Medical Pharmacology Small Groups
 Dartmouth College School of Medicine
 Small Group Facilitator for case studies (10-12 students)

Medical Resident Training:

Responsible for a series of 4 lectures on Evidence Based Medicine: Case Report to Standard of Care, Drug Development and the FDA process, Interpreting Data from Clinical Trials, and Translational Science and Medicine. These lectures or tailored to the specific audience and presented to Medical Residents from Surgery, Pulmonary, Neuropsychiatry, and Infectious Disease.

- May 2013 “How to Write a Systematic Review” Infectious Disease Residents, University of South Carolina School of Medicine
- November 2012 “Phase 4 Clinical Trials” Pulmonary Residents, University of South Carolina School of Medicine
- October 2012 “Drug Development: Preclinical to Clinical Advances, the conflicts in new asthma medications” Pulmonary Residents, University of South Carolina School of Medicine
- April 2012 “Critically Assessing the Evidence Base” Infectious Disease Residents, University of South Carolina School of Medicine
- March 2011 “Clinical Study Design” Pulmonary Residents, University of South Carolina School of Medicine, Columbia, SC.
- December 2010 “Drug Development: Preclinical to Clinical Advances, why are we making better progress to new antibiotics?” Infectious Disease

- Residents, Department of Infectious Disease, University of South Carolina School of Medicine, Columbia, SC.
- November 2010 “Interpreting Data from Geriatric Clinical Trials” Grand Rounds, Department of Neuropsychiatry, University of South Carolina School of Medicine, Columbia, SC.
 - October 2010 “Drug Development: Preclinical to Clinical Advances” Grand Rounds, Pulmonary Residents, University of South Carolina School of Medicine, Columbia, SC.
 - November 2009 “Evidence Based Medicine: Case Report to Standard of Care” Grand Rounds, Pulmonary Residents, University of South Carolina School of Medicine, Columbia, SC.
 - October 2009 “Gene therapy for treating chronic neuropathic pain” Grand Rounds, Neurosurgery Residents, University of South Carolina School of Medicine, Columbia, SC.
 - November 2008 “Case-reports to meta-analysis: Using the scientific” Grand Rounds, Pulmonary Residents, University of South Carolina School of Medicine, Columbia, SC.
 - May 2008 “Translating Basic Science to New Analgesics” Pain Fellowship Seminar, Department of Anesthesiology, Johns Hopkins Medical School, Baltimore, MD.
 - February 2008 “Case-reports to meta-analysis: Using the scientific literature to examine the pain-depression link” Grand Rounds, Department of Neuropsychiatry, University of South Carolina School of Medicine, Columbia, SC.
 - August 2007 “Case-reports to meta-analysis: Using the scientific literature to explore pre-emptive analgesia for the phantom limb pain” Grand Rounds, Department of Surgery, University of South Carolina School of Medicine, Columbia, SC.
 - September 1999 “Adenosine regulation: A potential sight for the development of novel analgesics” Department of Anesthesiology Seminar Series, Dartmouth-Hitchcock Medical Center, Lebanon, NH.

Nurse Anesthesia Didactic Teaching (Responsible for teaching 8 hours of anesthetic pharmacology and 2 hours of clinical pain management to Nurse Anesthesia students. This program uses distance learning for our students that are located remotely at Greenville Hospital.)

2006-2011	Course: PPH 704 Biomedical Pharmacology University of South Carolina School of Medicine 8 hours of Lecture on Anesthetic Pharmacology Student Evaluations of Instructor: 4.46
2007-2011	Course: PPH Clinical Pharmacology of Anesthesia University of South Carolina School of Medicine 2 hours of Lecture on Clinical Pain Management
2013	Course: PPH Physiology for Health Sciences

University of South Carolina School of Medicine
4 hours of Lecture on Sensory Physiology

Graduate, Physical Therapy, and Genetic Counseling Student Teaching

This includes didactic lectures, course development and directorship in 2 of the 4 neuroscience seminar series on Graduate Student Development and Neurobiology of Disease Module, guest lecturer in ethics and neuroscience seminars, and the use of telecommunication to enhance student learning.

- 2004-2012 Course: PPHH 750 Fundamental Neuroscience I
University of South Carolina School of Medicine
3 hours of Lecture on Somatosensation and Pain Physiology
2 hours of Lecture on Audition and Vision Physiology
Peer Evaluations of Instructor: 4.5
Student Evaluations of Instructor: 4.67
- 2012 Course: PPHH 741 Statistics for Biomedical Sciences
University of South Carolina School of Medicine
Course Director
3 lecture hours/week for the entire semester
- 2008-2011 Course: BMSC702 Biomedical Ethics
University of South Carolina School of Medicine
1 hour lecture on ethics in authorship
1 hour lecture on ethics in peer review
Student Evaluations of Instructor: 4.33
- 2010-2011 Course: BMSC700 Interdisciplinary Laboratory
University of South Carolina School of Medicine
1 hour lecture on keeping a lab notebook
- Spring 2009 Course: PPHH743 Neurobiology of Disease: Pain and Analgesia
University of South Carolina School of Medicine
Course Director
Overall student rating of the course: 4.0
Student Evaluations of Instructor: 4.56
- Spring 2008, 2010 Course: PPHH 742 Seminar: Professional Speaking
University of South Carolina School of Medicine
Course Director
- Spring 2006, Fall 2009 Course: PPHH 742: Seminar: Career Development for Graduate
Students
University of South Carolina School of Medicine
Course Director

Utilized Skype to bring scientists from around the country into the classroom

Student Evaluations of Instructor: 5.0

Spring 2007

Course: PHPH 740 Biology of Neurological and Neuropsychiatry Diseases

Telecommunications course between University of South Carolina School of Medicine and Medical University of South Carolina

Co-Course Director

Student Evaluations of Instructor: 4.75

Undergraduate Student Teaching

This includes mentorship in independent study and senior thesis research projects in my laboratory for undergraduate and high school students, as well as undergraduate course development and directorship.

2012

Course: Psychology

Presbyterian College

3 hours of Sensory and Pain Neuroscience which weaved together lecture material and in class hands-on demonstrations

2013

Course: Biology 112

Presbyterian College

1 hour lecture on learning and memory which weaved together lecture material and in class demonstrations

2006-2011

Course: SCCC499: Proseminar: Senior Thesis/Project

University of South Carolina Honors College

Mentoring a senior thesis research project

1 undergraduate student each year

Fall 2006

Course: SCCC484H: Proseminar: America's Pain Crisis

University of South Carolina Honors College

Course Director

9 undergraduates

Student Evaluations of Instructor: 4.64

2005-2011

Course: SCCC284B: Research Internship

University of South Carolina Honors College

Mentoring laboratory project for high school students (summer term)

1-2 high school students each year

Course: SCCC390Z: Proseminar: Project Planning

University of South Carolina Honors College

Planning stages of senior thesis

1 undergraduate student each year

2004-2012 Course: Biol 399: Independent Study
University of South Carolina
Mentoring undergraduate independent laboratory projects
1-3 undergraduate students each year

Undergraduate and Graduate Research Supervision

Stanford Undergraduate Researchers:

Student Initials	Year	Woman Minority	or	Current position
CA	Summer	Woman		Medical Residency
JC	Summer	Minority		Research Associate in Biotechnology
YZ	Summer	Minority		Medical Student
MZ	2002-04	Minority		Medical Student

University of South Carolina Research Supervision:

Postdoctoral Fellows:

Student Initials	Year	Woman Minority	or	Current position
GZ	2004-05	Woman, minority		Post-doctoral fellow at UCLA
LF	2005-06	Woman		Post-doctoral fellow at University of
VZ	2010-11	Woman		UNC

Graduate Students:

Student Initials	Year	Woman Minority	or	Current position
KL (PhD)	2011-2014			Nurse Anesthetist
AS (PsyD)	2009-2014	Woman		Clinical Psychologist
TS (PhD)	2010-2014	Woman, minority		
SS (PhD)	2010-2014	Woman, minority		
AM (PhD)	2006-2009	minority		Post-doc Hopkins
KV (PhD)	2008-2009	woman, minority		Post-doc USC
HM (PhD)	2005-2008	minority		Pharmacist
TH (MS)	2007-2008	woman		Instructor at USC Aiken

Medical Student or Resident Training:

Student Name	Year	Woman Minority	or	Current position
UC	Summer 2004	minority		Medical Residency
JL	2008-present	woman, minority		Medical Residency
AR	Summer 2009			Medical Residency

PC, MD	Fall 2009	Woman	Practitioner
BG	Summer 2012		Third year medical student

Masters in Science Education Students:

Student Name	Year	Woman Minority	or Current position
DR	Summer 2010		High School Science Teacher
CJ	Summer 2011	woman, minority	High School Science Teacher

South Carolina Post-Baccalaureate Research Education Programs for Minorities (PREP)
(A 2 year NIH R25 program for minority students to prepare them for graduate school):

Student Name	Year	Woman Minority	or Current position
AM	2004-06	Minority	Works for FDA
KV	2006-08	woman, minority	Post-doc at USC

Undergraduates (*indicated honors college student):

Student Name	Year	Woman or Minority	Current position
CP	2010-2012	Woman	Podiatrist
LP-M	2010-11	Woman	
ER	2009-11		Physician
TH	2009-10	Woman	Physician
CB	Summer 2009		Physician
AG	Summer 2009	Minority	Medical Student
DS*	2006-09	Woman	Physician
GG*	2006-09	Minority	Physician
RA*	2007-09	Woman, minority	Physician
IM	2008-09	Woman, minority	Speech Therapist
WS	2008-10		MS, works in research
BP	2006-08		Dentist
JF	2005-06		Physician
NJ*	2006-07		Physician Carolina
EH*	2005-06	Woman	PhD
TM*	2004-07	Woman	Physician

High School Students from the Governors School for Science and Mathematics or German High School exchange students (6 week summer internship) :

Student Name	Year	Woman Minority	or Current position
SV	Summer 2010	Woman	German exchange student
KB	Summer 2009	Woman	
SC	Summer 2009	Woman, minority	

MC	Summer 2008	Woman	College Graduate
BC	Summer 2007	Woman	College Graduate
CB	Summer 2007		College Graduate
CF	Summer 2006	Woman	College Graduate
SW	Summer 2005	Woman, minority	College Graduate

Technicians :

Student Name	Year	Woman or Minority
FP	2008-present	Minority
BR	2008-2009	Woman
IM	2009-present	Woman, minority

Presbyterian College School of Pharmacy:

Pharmacy students:

Student Name	Year	Woman or Minority	Current position
KL	2013	Woman	Pharmacist
MA	2012-2013	Woman	Pharmacist
JP	2012-2013	Minority	Pharmacist

Undergraduate Students:

Student Name	Year	Woman or Minority	Current position
KC	2012	Woman	PhD
JP	2012-2013	Woman	Physical Therapist
TH	2012-2013		Physician
AT	2012-2013	woman, minority	Physician

Clafin University Pre-Pharmacy Student Summer Research Program:

Student Name	Year	Woman or Minority	Current position
KF	Summer	Minority	Junior

Concordia University:

Graduate Students:

Student Name	Year	Woman or Minority	Current position
MD (MBA)	2015-16	Woman	Dental Hygeinist

Undergraduate Students:

Student Name	Year	Woman or Minority	Current position
MM	2015	Woman, Minority	Employed in healthcare
JA	2015-16	Woman, Minority	Employed at a non-profit
YP	2016	Minority	Employed in healthcare
ME	2016		Employed in healthcare
JB	2016-17	Woman	Employed in healthcare
KB	2016-17	Woman	Employed in healthcare

Touro University California:

Masters in Medical Health Sciences Student Researchers:

Student Name	Year	Woman or Minority	Current position
GH	2022	Woman, Minority	Medical Student
NS	2022	Woman, Minority	PA Student
MQ	202	Woman, Minority	Gap Year
MA	2022		Medical Student
JS	2023	Woman, Minority	Current student
SU	2023	Woman, Minority	Current student

Professional Activities:STEM EDUCATION

2013	Bell Street Middle School Guest Science Teacher Learning and Memory Guest, Digestive System Guest
2013	Eastside Elementary School Guest Science Teacher Led experiments on Adaptations, Food Chains and Food Webs, Photosynthesis
2012-present	Science Olympiad Coach (Anatomy and Heredity) Bell Street Middle School
Summer 2011	Awarded a Frontiers in Physiology Award Goal: Mentor a Middle School Science Teacher & develop outreach activities for middle school classrooms Funded by: American Physiological Society
2010-2011	Elementary Mathematics Enrichment Teacher Center for Knowledge Magnet Elementary School Richland 2 School District Pre-algebra Mathematics Instructor
2008-2012	Elementary Science Education Consultant Center for Knowledge Magnet Elementary School

- Richland 2 School District
 Develop Science Curriculum for K-5th grade students
 Provide teacher training for K-5th grade science
 Coordinate Science Fair for 4th and 5th grade students
 Prepare 5th grade students to compete at the Regional Science Fair
- Spring 2011 Elementary Teacher Science Professional Development Seminar
 Univ of South Carolina Center for Science Education
 “Shoebox Science” for 3rd graders
- Summer 2010, 2011 Mentor Masters in Science Education Students in
 Independent Summer Research Projects.
 Assist students in developing projects into a dry lab for high school
 students.
- Summer 2011 Frontiers in Physiology Mentor and Host laboratory
 Mentor a high school science teacher in a laboratory project.
 Assist the teacher in developing a lab for high school students.
- 2008-2012 Organize Brain Awareness Week Activities at Center for Knowledge, a
 local magnet elementary school K-5th grade small group instruction led
 by undergraduate and graduate students
- 2001-2018 Science Related Community Outreach
 2001-2003, 2010-2013: Judge for the Intel Science Fair
 2005-2013 Preschool classroom visits sharing the wonder of the brain, the
 skull, the importance of calcium to build strong bones, helmet safety,
 and “What is a scientist”.
- 2008-2018 Host laboratory for visits from local elementary school teachers

TRAININGS/CERTIFICATIONS:

- Jan 2023-present FSU College Student Wellbeing, Trauma and Resilience Course (online
 course)
- January 2023 Building Capacity for Shared Equity Leadership, American Council on
 Education (2 hrs)
- November 2022 The Evolving Pathways and Data Needs Beyond Today’s Measures,
 Inside Higher Education (1 hr)
- Aug-Oct 2022 Managing Difficult Faculty and Staff, Academic Impressions (6 hour)
- June-Nov 2022 ACUE Microcredential: Inclusive Teaching for Equitable Learning
 5 Course Modules: Managing the Impact of Biases, Reducing

	Microaggressions in the Learning Environment, Addressing Imposter Phenomenon and Stereotype Threat, Creating Inclusive Learning Environments, Designing Equity-Centered Courses (online course)
Jan-Feb 2021	Trauma Informed Care (San Francisco Department of Public Health, Trauma Informed System Initiative) Train-the-Trainer (12 hours)
July 2020	Narcan Train-the-Trainer, Drug Safe Solano (3 hours)
March 2020	University Strategic Planning, Academic Impressions (2 day course)
September 2018	Touro University California Safe Zone Train-the-Trainer (adapted from The Safe Zone Project), Leading Effective LGBTQ Awareness and Ally Training Workshops (4 hours)
May 8, 2013	Teaching Pedagogy Workshop, Presbyterian College, Clinton, SC.
May 20-22, 2013	Interprofessional Education Collaborative (IPEC), 2013 Interprofessional Faculty Development Institute for Quality Improvement and Patient Safety, Washington, DC
May –June 2013	Core Clinical Research Training (1 week), South Carolina Clinical and Translational Research Institute, Medical University of South Carolina, Charleston, SC
November 2013	“Speaking Our Peace!” A Series of 4 Faculty Workshops on Diversity and Culture, Office of Multicultural Affairs, Presbyterian College.

TRAININGS LED:

- Opioid Overdose Prevention: Narcan Training, Training for Touro University California employees, December 8, 2022
- Opioid Overdose Prevention: Narcan Training, Training for Touro University California employees, December 12
- Opioid Overdose Prevention: Narcan Training, Training for Touro University California employees, November 18
- Trauma Informed Train-the-Trainer (4 hours), Training Student Peer Educators for the abbreviated 2 hour Trauma Informed Systems Training for the HRSA Resiliency Grant, May 2022
- Trauma Informed Systems for Public Safety (4 hours), Training for the Vallejo Police Department, September 2021
- Trauma Informed Systems Training (4 hour), Training for TUC Staff, February 2021
- Trauma Informed Systems Training (4 hour), Training for TUC Staff, April 2021

- Building Resilient Communities: The Need for Trauma Informed Systems (4 hour), Training for the Solano County Board of Supervisors and Solano County Directors, April 14 & 28, 2022 (co-led with TUC MPH Students Anika Lee and Jasmine Chisley)
- Trauma Informed Teaching (2 hours), Training for TUC College of Osteopathic Medicine Faculty, June 2021
- Trauma Informed Teaching (2 hours), Training for TUC College of Pharmacy Faculty Training, May 2021

Workshops Led:

- January 21-22 2020: “Strategically Frame and Operationalize Innovative and Sustainable Assessment in the Touro College and University System” led by Provosts Sweitzer and Alden for all TCUS Deans and Assessment Administrators
- February 17, 2020: “Touro Law School Strengths and Opportunities Analysis” : In preparation for the March 2021 re-accreditation site visit this retreat will identify key strengths and opportunities for improvement in the Touro Law Schools program of legal education.
- Sept-Nov 2019: “Foundation Grant Writing Community Workshop”. A series of 6 weekly 2 hour sessions covering topics of “What is a grant?”, Grant Formats and Identifying Funders, Understanding the RFP and aligning with your community needs, Program Design, Evaluation and Sustainability, and Budgets.

PRESBYTERIAN COLLEGE

ADMINISTRATION ACCOMPLISHMENTS: OFFICE OF RESEARCH

- **Our Mission:** To facilitate significant and innovative research by creating a supportive environment for scholarly activities for all faculty and students.
- **Funded by:** National Institutes of Health (NICHD) G11 (BRAD) Grant entitled “Developing an office of sponsored projects at Presbyterian College” funded for 5 years (\$440,000).

SPECIFIC INITIATIVES:

- **FACULTY DEVELOPMENT:** Our faculty are actively involved in research as demonstrated by >30 symposium, seminars, online presentations; >30 abstracts and poster presentations; 5 book chapters, >25 peer reviewed manuscripts in a three year period.
 - **Research Seminar Series:** Seminar speakers are invited from South Carolina research institutions who have the potential for collaboration with Pharmacy Faculty. These seminars give the faculty a chance to meet with speakers in small research focused groups and individually.
 - **Lunch-n-Learn:** These one hour seminars are held by Office of Research Faculty on topics of interest to Faculty researchers. Some topics have included: How to

submit an IRB application, the NIH R15 Funding Mechanisms, From clinical idea to grant funding, What the BRAD Grant means to research faculty

- **One-on-one mentoring:** The mainstay of getting faculty (especially young faculty) involved in research is one-on-one mentoring with Office of Research Faculty and then with a senior faculty mentor in a related field of research.
 - **Internal peer review of grant applications:** All grants are peer reviewed before submission.
 - **Annual interdisciplinary faculty research retreat:** The goal of this retreat is facilitating collaborations between pharmacy & undergraduate faculty. The first retreat was held in 2012 and >30 faculty from Pharmacy, Biology, Chemistry, Physics, and Psychology participated. A second retreat is scheduled for December 16, 2013.
 - **Small Pharmacy Awards for Research & Collaboration (SPARC):** Awards up to \$3000 with 3 application deadlines a year (spring, summer, fall). Four funding tracks: Junior Pharmacy School Faculty; Senior Pharmacy School Faculty; Interdisciplinary Collaborations: Infrastructure. The format of the applications are a 3 page NIH style proposal with an NIH Biosketch. The applications are peer reviewed by an interdisciplinary review panel (including undergraduate faculty reviewers). To date 16 grants have been awarded for a total of \$50,000.
- **FUNDING:** Eighteen faculty members submitted 14 external grants totaling over \$3M from the following funding agencies: NIH, AHRQ, NSF, Phrma Foundation, AACP, IACP, SC-INBRE, SC-BCBS. From 2012-2013, \$635,000 in research funding was awarded for 6 grants, that included 10 PCSP faculty investigators
 - Funding of an **NIH BRAD** grant to support an Office of Sponsored Projects and Office of Research (**\$440,000 over 5 years**).
 - **One AHRQ grant** has been submitted to develop a Pharmacist intervention to reduce health disparities in rural, indigent, underserved patients (**~\$1.5 million**) – **Scored in the fundable range**
 - **SC INBRE** proposal submitted to join the statewide network and compete for and NIH INBRE renewal grant. This membership will provide the institution with funding for an undergraduate biomedical research track, targeted biomedical faculty positions, and renovation and infrastructure funds. (**~\$1.5 million**)
 - Two submitted **NIH R15 grants** (November deadline) to fund individual faculty research projects (each grant is ~\$350,000 for 3 years). Three additional R15s will be submitted in the spring.
 - **Small grants:** Numerous small research grants have been submitted by our faculty.
 - **STUDENT RECRUITMENT:** Pharmacy school faculty are actively engaged in the student recruitment process and the office of research helps to coordinate two specific initiatives.
 - Scheduling faculty research talks at regional undergraduate institutions to recruit pharmacy students.
 - Participation in career fairs at regional undergraduate institutions.

- **INTERPROFESSIONAL EDUCATION AND RESEARCH:** Pharmacy faculty and students are actively engaged in interprofessional education with regional healthcare partners including: Lander University School of Nursing; Virginia Commonwealth Ostopathic Medicine in Spartanburg, SC; Greenville Hospital Systems; Free Medical Clinics of South Carolina; and Self Hospital.
 - Coordination with regional healthcare partners
 - Develop collaborative research opportunities

- **RESEARCH INFRASTRUCTURE:** Upon arriving at PCSP research infrastructure was minimal and the opening of the pharmacy school and the hiring of a director of research was a major step in growing the research infrastructure.
 - **Zebra fish facility:** PC had limited animal research space so a zebra fish facility has been set up as a model organism for student and faculty research projects
 - **Office of Research/Sponsored Projects Websites:** The undergraduate campus website was re-vamped in August and the Pharmacy School is currently in a holding pattern which means nothing new is getting uploaded and the current site is poorly maintained but when it was launched last year it was very functional.
 - **Quarterly Research Newsletter:** Distributed from the Office of Sponsored Projects and Office of Research.
 - **An Institutional Review Board** has been formalized over the last two years and this year the focus is on coming into compliance by initiating CITI training for all researchers.
 - A USDA certified Institutional Animal Care and Use Committee was in place at PC. We are currently transitioning to certification to allow NIH funded research.

- **FACULTY AND STUDENT RESEARCH:** Undergraduate and pharmacy students are involved in Independent Research Study, Honors Research, Research Seminars, Summer Fellows, PRSI programs. Over 25 Pharmacy students are annually involved in Pharmacy Research and over 10 Undergraduate students are annually involved in Pharmacy Research.
 - Set up collaborations with regional research partners
 - **Pharmacy Research Summer Internship (PRSI) Program:** This is a summer research program for pharmacy and pre-pharmacy students. The program pays a \$3000 stipend for 8 wks of full time research and \$1000 for mentors research budget. The program includes: Orientation & Safety Training, Weekly Meetings, Scientific Writing, Journal Club, a Service Component (Habitat for Humanity). In the final week the students present their research at a Research Symposium. During the school year it is expected that the students will attend a scientific meeting to present research findings as well as present their research at PC's Honors Day. In the summer of 2013, four pharmacy students and 1 pre-pharmacy student participated in the program.
 - **International research exchange program:** We are currently developing a research exchange program between Pharmacy students at PC and Medical students at University of Alcalá near Madrid, Spain.
 - **Initiated:** Research track being developed for pharmacy students

- **Initiated:** 4+1 program being investigated with School of Public Health at University of South Carolina which would provide pharmacy students a PharmD + MPH in a five year period.
- **COLLABORATIVE TEACHING BETWEEN PHARMACY & UNDERGRADUATE ARTS AND SCIENCES**
 - Coordination of Pharmacy Faculty Involvement in “Womens and Gender Studies” events
 - Coordination of Pharmacy Faculty as Guest Lecturers in Undergraduate Psychology and Biology Courses
 - Coordination of a new elective on Death and Dying that is cross listed and team taught with pharmacy, English, and biology faculty