

Personal Information

David J. Weiss, Ph.D.

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The University of Colorado Colorado Springs (UCCS)
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Education

1997 Ph.D. Chemistry, The University of Kansas

Research area: Bioanalytical Chemistry

Research Advisor: Professor Ted Kuwana

1992 B.S. in Chemistry, The University of California, Riverside

Research Advisor: Professor Werner G. Kuhr

Professional and Administrative Experience

Sabbatical Spring 2025 UCCS, Chemical Education Research

Spring 2022-Present Faculty Fellow for Policy, Provost Office, UCCS

2021-2022 Faculty Assembly Past President for UCCS

2020-2021 Faculty Assembly President for UCCS (elected)

2019-2020	Faculty Assembly Vice President for UCCS (elected)
2014-2018	Director, Campus-Wide General Education Program The Compass Curriculum Program
Sabbatical Fall 2016	Colorado College, Department of Chemistry and Biochemistry Collaborator: Professor Murphy Brasuel
2013-2016	Associate Chair of the Department of Chemistry and Biochemistry, UCCS
Fall 2009	Sabbatical at Colorado State University, Fort Collins Department of Chemistry Collaborator: Professor Charles (Chuck) Henry
August 2008- Present	Associate Professor of Chemistry, UCCS
August 2001-2008	Assistant Professor of Chemistry University of Colorado at Colorado Springs,
August 2000-May 2001	Visiting Assistant Professor Bucknell University, Dept. of Chemistry, Lewisburg, PA.

October 1997-Aug, 2000

Postdoctoral Research Fellow

National Cancer Institute Training Grant Fellow at The
University of Kansas, Dept. of Chemistry, Lawrence, KS.

Research Advisor: Professor Craig E. Lunte

Current and Ongoing Research Projects:

My research program shifted from analytical chemistry to chemical education research after tenure to have more of a direct impact on the success of my students. My research focuses on improving student success, persistence, and equity in introductory chemistry through scalable instructional interventions. I am currently leading several studies: (1) a multi-year evaluation of embedded tutors in General Chemistry, comparing this model to Learning Assistants, Science Center tutors, and instructor-only sections to assess performance and engagement outcomes; (2) a project using affective surveys and behavioral analytics to identify predictors of success in asynchronous General Chemistry 2 and test interventions such as late tokens, TA outreach, and direct help by the instructor; and (3) a new study on student pathways in General Chemistry 1 and 2, examining why students struggle, when and if they persist, and how course timing and institutional supports impact retention, particularly among first-generation and military-affiliated students. These projects respond to national calls for equity-focused STEM education reform and are designed to inform both local practice and broader curricular policy.

Manuscripts Submitted / Under Review *(names in bold are undergraduate students in my group)*

- "Different Courses, Different Impacts: Unequal Benefits of Learning Assistants in General Chemistry I vs. II." David J. Weiss*, Joseph A Wagoner., **Kailene Black, Aidan Burke, Jake Marcotte**, Laurel Hartley Submitted to the Journal of Chemical Education, June 2025.

Refereed Publications *(names in bold are undergraduate students in my group)*

- "How Instructional Modalities Shape Learning: A Longitudinal Study of Student Perceptions, Engagement, and Outcomes in General Chemistry 2 (2020-2023)", **Kailene Black, Alexa Bullis, Jake Marcotte**, Patrick McGuire, Joey Wagoner, Julie Wiley, Robert Wrobel, and David J. Weiss*, *J. Chem. Educ.*, 2025, 102(6), 2355-2363. Published March 2025.
- "Clickers aren't enough: results of a decade long study investigating instructional strategies in chemistry", David J. Weiss*, Patrick M. McGuire, Wendi Clouse and

Raphael Sandoval, Journal of College Science Teaching, Vol. 49, No. 3, 2020. This journal publishes chemical education research and is peer reviewed.

- “Green Tea Dietary Supplements: Current Issues and Analysis Methods” in Tea in Health and Disease Prevention. David J. Weiss, **Sarah A. Gehrke**, **P. L. Liu**, **Randy Robinson**, Editor, V. Preedy, Academic Press, 2012.
- “A Model for an Introductory Undergraduate Research Experience”, Jeffrey Canaria, Allen Schoffstall, David J. Weiss., Renee Henry. Sonja Braun-Sand , J. Chem. Educ., 2012, 89, 1371-1377.
- “Dehydrogenase based reagentless biosensor for monitoring phenylketonuria,” David J. Weiss, **Megan Dorris**, **Amanda Loh**, **Laura Peterson**, Biosensors and Bioelectronics, 22, 2007, 2436-2441.
- “Analysis of green tea extract dietary supplements using micellar electrokinetic chromatography,” David J. Weiss, **Eric J. Austria**, **Christopher R. Anderton**, **Richard Hompesch**, **Ashley Jander**, J. Chromatogr. A, 1117, 2006, 103-108.
- “Analysis of natural flavonoids by microchip-micellar electrokinetic chromatography with pulsed amperometric detection,” **Richard W. Hompesch**, Carlos D. Garcia, David J. Weiss, Jorge M. Vivanco, and Charles S. Henry, Analyst 130, 2005, 694-700.
- “Determination of catechins in matcha green tea by micellar electrokinetic chromatography,” David J. Weiss and **Christopher R. Anderton**, J. Chromatogr. A 1011, 2003, 173-180.
- “Using ferrocenes to assist in voltammetric characterization of carbon fiber microelectrodes after electrochemical and laser activation,” **Patrick C. Farrell**, Patrick R. Kinley, David J. Weiss and Timothy G. Strein, Electroanalysis 15, 2003, 813-820.
- “pH-mediated field amplified sample stacking of pharmaceutical cations in high ionic strength samples,” David J. Weiss, Kenneth Saunders, and Craig E. Lunte. Electrophoresis 22(1), 2001, 59-65.
- “Applications of Microdialysis/Mass Spectrometry,” David J. Weiss, Ryan M. Krisko, and Craig E. Lunte, in The Mass Spectrometer in Drug Discovery: A Practical Guide to Instrumentation, Experimental Strategies and Applications, Marcel Dekker, David T. Rossi and Michael W. Sinz Ed. Chapter 12. 2001 pp. 377-398.
- “Detection of a urinary biomarker for oxidative DNA damage, 8-hydroxydeoxyguanosine, by capillary electrophoresis with electrochemical detection,” David J. Weiss and Craig E. Lunte, Electrophoresis 21, 2000, 2080-2085.
- “On-line preconcentration methods of capillary electrophoresis,” Damon M. Osbourn, David J. Weiss, and Craig E. Lunte, Electrophoresis 21, 2000, 2768-2779.
- “In vivo microdialysis as a tool for monitoring pharmacokinetics,” David J. Weiss, Susan M. Lunte, and Craig E. Lunte. Trends in Analytical Chemistry 19, 2000, 606-616.
- “Charge selective electrochemistry at high-surface-area carbon fibers,” Richard S. Kelly, David J. Weiss, Sing Hwa Chong, and Theodore Kuwana, Anal. Chem. 71, 1999, 413-418.

- “Computer simulations of charge-selective electrochemistry of catechols at high-surface-area carbon fibers,” David J. Weiss, Richard S. Kelly, Milo Cumaranatunge, and Theodore Kuwana, *Anal. Chem.* 71, 1999, 3712-3720.

Presentations (Names in bold are undergraduates in my research group. Students with names bolded presented these posters with me at the conferences.)

- Presider Spring 25 National American Chemical Society meeting- General Papers (4 hours), online oral session, **March 2025**
- “Do Learning Assistants Have the Same Impact on General Chemistry 2 Students as They Do on General Chemistry 1 Students?” **Kailene Black, Jake Marcotte, Aidan Burke**, Joey Wagoner (Dept of Psychology), David J. Weiss and Patrick McGuire (Dept. Teaching and Learning), Spring national ACS meeting, March **2025**.
- “Are learning assistants the hidden X factor in General Chemistry?” **Kailene Black, Jake Marcotte**, Joey Wagoner (Dept of Psychology), David J. Weiss and Patrick McGuire (Dept. Teaching and Learning), National American Chemical Society Meeting in Denver, CO, completely revised and updated poster, Fall ACS meeting, **2024**, Poster presentation.
- “Are learning assistants the hidden X factor in General Chemistry?” **Kailene Black, Jake Marcotte**, Joey Wagoner (Dept of Psychology), David J. Weiss and Patrick McGuire (Dept. Teaching and Learning), Colorado Springs Undergraduate Research Forum (CSURF), April 27 at UCCS, **Spring 2024**.
- “Can Learning Assistants Really Improve Inclusiveness and Student Performance in General Chemistry?” David J. Weiss, **Kailene Black, Jake Marcotte**, and Joey Wagoner, Oral presentation at national American Chemical Society Meeting, March **2024**.
- “Implementation of the Learning Assistant Model in Geography Classrooms” Dr. Cerian Gibbes, Brenna Martin*, Dr. David Weiss, Dr. Robert Talbot, American Association of Geographers Annual Meeting, **April 2024**, Hawaii.
- “Learning Assistants at UCCS” Cerian Gibbes and David Weiss, UCCS Faculty Resource Center, April 19, **2024**, UCCS
- “Bridging the gap: Enhancing the roles and impacts of pure STEM faculty in STEM teacher preparation” David J. Weiss, Patrick McGuire (College of Education) and **Kailene Black** (Chemistry), Oral Presentation at Annual Convention of School Sciences and Mathematics, October **2023**. Dr. Joey Wagoner (Psychology) and my student **Jake Marcotte** (chemistry) also participated in the talk.
- “Active learning in instrumental analysis lecture by teaching through the literature” David J. Weiss, **Kailene Black, Robert Wrobel** (chemistry) and Patrick McGuire. Oral presentation at national American Chemical Society Meeting, March **2023**.
- “The impact of online course mode(s) on student learning outcomes and perceptions” David J. Weiss, **Kailene Black, Alexa Bullis, Robert Wrobel and Julie Wiley**, Mountain Lion Research Day, UCCS **Fall 2022**

- “Do we need to change everything to teach remote or online chemistry?”
David J. Weiss, **Robert Wrobel**, **Alexa Bullis**, **Julie Wiley**, Wendi Clouse, Patrick McGuire, Oral presentation and invited poster for Sci-Mixer at national ACS meeting, March **2022**.
- “Can Active Learning in General and Analytical Chemistry Yield Improved Student Satisfaction and Performance Compared to Traditional Approaches?” David J. Weiss, Invited talk to University of Northern Colorado Dept of Chemistry, March **2022**.
- “Secrets to Student Success in Teaching Remote and Online General Chemistry 2 During the COVID 19 Pandemic”, David J. Weiss, Robert Wrobel, Alexa Bullis, Julie Wiley, Wendi Clouse, Patrick McGuire, Oral presentation at national ACS meeting, **March 2021**.
- “Can students learn chemistry without midterm exams?” Weiss, D.J., McGuire, P., Clouse, W., & Wrobel, R. (2020, November). Oral presentation (remote) at Rocky Mountain Regional American Chemical Society meeting, fall **2020**.
- “Peer Led Team learning in General and Upper Division Chemistry courses,” Weiss, D.J., McGuire, P., Clouse, W., & Wrobel, R., Symposium organizer at National American Chemical Society meeting, Spring 20 in Philadelphia, PA. I organized this oral symposium with six speakers from around the world. The meeting was cancelled due to COVID lockdown in March **2020**.
- “Incorporation of the recitation into General Chemistry Lecture using peer leaders”, Weiss, D.J., McGuire, P., Clouse, W., & **Wrobel, R.**, Oral presentation at Spring 2020 national American Chemical Society Meeting at Philadelphia, PA. This meeting was cancelled due to the COVID outbreak in March **2020**.
- “Where is PLTL going in 2020 and beyond” Weiss, D.J., McGuire, P., Clouse, W., & **Wrobel, R.** This was a panel discussion I planned to lead at at National American Chemical Society meeting, Spring 20 in Philadelphia, PA. I organized this oral symposium with six speakers from around the world. The meeting was cancelled due to COVID lockdown in March **2020**.
- “Active Learning in Instrumental Analysis using the Genius Hour”, David J. Weiss, Patrick McGuire, Pittcon **2019**. This is the largest national conference of analytical chemists (around 10,000), and was held in Philadelphia, PA.
- “Can students learn chemistry without midterm exams?” David J. Weiss and Patrick McGuire, Mountain Lion Research Day, Fall **2019**.
- Presentation at Mountain Lion Teaching Day, “Whose more tired at the end of your classes, you or your students?”, David J. Weiss and Patrick McGuire, Spring **2018**.
- “Clickers aren’t enough: Results of a decade long study investigating instruction strategies in General Chemistry, Patrick McGuire, Wendi Clouse, **Raphael Sandoval**, Mountain Lion Teaching Day Poster, Fall **2018**.
- “The Death of the lecture: Active learning essentials”, David J. Weiss* and Patrick McGuire, COLLT Conference, Boulder, CO August **2018**, oral presentation.

- “Active Learning with Clickers and Small Groups in General Chemistry”, David J. Weiss *, Patrick McGuire, Wendi Clouse, **Raphael Sandoval**, National ACS Meeting, spring 2018, Spring **2018**, New Orleans, oral presentation.
- “Can HIPsters transform general education at a public university campus?” David J. Weiss and David Moon, HIPS in the States conference, Dominguez Hills, CA. Feb **2018**.
- “Clickers and cooperative learning as a combination to improve student learning in general chemistry as well as analytical chemistry courses”, David J. Weiss*, Murphy Brasuel (Dept, of Chemistry, Colorado College) and Patrick R. McGuire (UCCS College of Education and UCCS Teach) 253rd ACS Meeting, spring 2017, San Francisco, March **2017**, oral presentation.
- “Detection of a panel of neurotransmitters in human urine using HPLC with UV/Vis detection”, **Justin Petway, Zach Pitcher, Alexandra Krinickas, Kendra Lesnick**, Luis E. Lowe, David J. Weiss*. March **2015**, Denver, CO ACS Meeting. Poster selected for Analytical Division and Sci Mixer.
- “Combining Clickers and Cooperative Learning in Analytical Chemistry,” David J. Weiss, Society of Western Analytical Professors, January **2014**, Tempe Arizona, Arizona State University. Oral Presentation.
- “Rapid determination of neurotransmitters in human urine using capillary electrophoresis and UV/Vis Detection”, **Kathryn Prescott, Char Brecevic, Morgan Pinto**, and David J. Weiss*, Poster presentation at Mountain Lion Research Day, and Colorado Springs Undergraduate Research Forum **2013**.
- “Rapid determination of a panel of neurotransmitters in human urine using capillary electrophoresis”, **Gehrke, S. A., Clarke, E., Lui, P., Robinson, R.** Weiss, D. J., Poster presentation at Colorado Springs Undergraduate Research Forum, March **2012**.
- “Rapid determination of neurotransmitters in human urine using capillary electrophoresis with UV detection”, **Gehrke, S. A., Culhane, C., Shin, M., Robinson, R., Lui, P.** Weiss, D. J., Poster presentation at National ACS meeting in Denver, CO on August 28, **2011**.
- “Do cooperative learning and clickers lead to improved learning in general chemistry I?” Weiss, D. J., Oral presentation on Wed. August 31, **2011** at the National ACS meeting in Denver, CO.
- “Cooperative learning using clickers in instrumental analysis”, Weiss, D. J., Oral presentation on Monday August 29, **2011** at the National ACS meeting in Denver, CO.
- “Determination of a Panel of Neurotransmitters in Human Urine using Capillary Electrophoresis with UV/Vis Detection” **Culhane, K, Shin, M., Riester, L, Beat, C., Liu, P., Robinson, R., Snell, J.** Subudhi, A., Weiss, D. J., Poster presented at Pittcon **2011** in Atlanta, GA.
- “Investigation of Inclusiveness and Best Practices in Scientific Research at UCCS”. Weiss, D. J., **Culhane, K.**, Presented at Mountain Lion Research day at UCCS, Spring **2010**.

- “Collaborative Undergraduate Research Methods Course” Schoffstall, A., Braun-Sand, S., Henry, R., Weiss, D. J., Canaria, J., Poster presented at Boston National ACS Meeting **2010**.
- “A noninvasive technique for the study of neurotransmitters in relations to neurological diseases”, **Kyle M. Culhane, Mimi Shin, Lynn M. Riester, Jordan T. Snell, Randy J. Robinson, Cara J. Beat** and David J. Weiss. Poster presented at the Colorado Springs Undergraduate Research Forum at UCCS in spring **2010**.
- “New approaches to investigating neurotransmitters and their relationship with neurological diseases,” **Culhane, K. M., Shin, M.**, Subudhi, A., Weiss, D. J. Poster presented at the Colorado Springs Undergraduate Research Forum at UCCS in spring **2009**.
- “Establishing and nurturing inclusivity in the scientific research laboratory: a roundtable discussion to open the dialogue”, Braun-Sand, S., Haggren, W, Weiss, D. J., Presented workshop at Building Inclusiveness Conference at CU, , May 15, **2009**. Was in charge of organizing and preparing the talk and workshop.
- “Rapid determination of neurotransmitters by microchip CEEC,” Carol Brown, Jason Hubscher, Ben Napier, Charles S. Henry, and David J. Weiss. Presented as a poster at Pittcon in New Orleans, LA, March **2008**, and CSURF at USAFA.
- “Biosensor based microchip electrophoresis system for PKU,” David J. Weiss, **Carol Brown, Richard Hompesch**, Charles S. Henry, **Jennifer Ingram, Amanda Loh, Laura Peterson**. Presented as a poster at Pittcon in Chicago, IL March **2007**.
- “Reagentless biosensor for monitoring PKU in human urine,” **Megan K. Dorris, Amanda Loh, Laura Peterson**, David J. Weiss. Presented as a poster at the national American Chemical Society (ACS) meeting in Atlanta, GA March **2006**.
- “Biosensor based microchip electrophoresis system for PKU,” **Laura Peterson, Richard W. Hompesch**, Charles S. Henry, David J. Weiss. Presented as a poster at the national ACS meeting Atlanta, GA March **2006**.
- “Analysis of dietary supplements containing green tea extracts,” **Eric Austria, Christopher Anderton, Richard Hompesch, Ashley Jander**, David J. Weiss. Presented as poster at Pittcon in Orlando, FL March **2005**.
- “Rapid determination of methylphosphonic acid nerve agent degradation product by capillary electrophoresis with UV detection,” David J. Weiss, **Christopher R. Anderton, Angela K. Cook, Kristopher J. McKee**, Justin A. Russak, Allen M. Schoffstall. Presented as a poster at Pittcon March **2005**.
- “Carbon paste biosensors for clinical analysis,” David J. Weiss, **Megan Dorris, Laura Peterson**. Presented as a poster at Pittcon March **2005**.
- “Analysis of natural flavonoids by microchip-micellar electrokinetic chromatography with pulsed amperometric detection,” **Richard W. Hompesch**, Carlos D. Garcia, David J. Weiss, Jorge M. Vivanco, and Charles S. Henry. Presented as a poster at Pittcon March **2005**.

- “Towards reagentless dehydrogenase based biosensors for monitoring PKU,” David J. Weiss. Talk presented at the Society of Western Analytical Professors meeting, Colorado State University, Fort Collins, CO. January **2005**.
- “Determination of nerve agent degradation product derivatives using micellar electrokinetic chromatography,” David J. Weiss, **Christopher R. Anderton, Carrie Dean, Justin A. Russak, Michael J. Slogic, and Allen M. Schoffstall**. Poster presented at spring national ACS meeting in Anaheim CA, March **2004**.
- “Synthesis of Methylphosphonic derivatives,” Allen M. Schoffstall, Justin A. Russak, Michael J. Slogic, Christopher R. Anderton, Carrie Dean, David J. Weiss. Poster presented in the Organic Division at the spring national ACS meeting in Anaheim CA, March **2004**.
- “A new NADH sensor based upon immobilization of 3,4-dihydroxybenzaldehyde mixed into a carbon paste electrode,” David J. Weiss and **Megan Dorris**. Poster presented at the spring national ACS meeting in Anaheim CA, March **2004**.
- “Determination of catechins in over-the-counter dietary supplements by micellar electrokinetic chromatography,” David J. Weiss, **Eric J. Austria, Richard W. Hompesch**. Poster presented at spring national ACS meeting in Anaheim CA, March **2004**.
- “Determination of nerve agent degradation product derivatives using micellar electrokinetic chromatography,” David J. Weiss, **Christopher R. Anderton, Carrie Dean, Justin A. Russak, Michael J. Slogic and Allen M. Schoffstall**. Presented at the Network Institute of Space Security poster session November **2003** at UCCS.
- “The determination of catechins in matcha green tea by micellar electrokinetic chromatography (MEKC),” **Christopher R. Anderton** and David J. Weiss. Presented as a poster at the spring national ACS meeting in New Orleans, March **2003**.
- “Automated explosives detection system,” C. J. Wang, T.S. Kalkur, M. Cilletti and David J. Weiss. Presented at the Campus Security Research Poster session, Feb. **2003**.
- “The threat of chemical and biological weapons,” David J. Weiss and Allen M. Schoffstall presented at the Campus Security Research Poster session, Feb. **2003**.
- “Catalytic oxidation of NADH at 3,4-dihydroxybenzaldehyde (3,4-DHB) modified carbon paste electrodes,” David J. Weiss. Poster presented at the Spring National American Chemical Society Meeting in New Orleans, March **2003**.
- “Detection of 8-hydroxydeoxyguanosine (8-OHdG) in human urine by capillary electrophoresis with electrochemical detection,” David J. Weiss and Craig E. Lunte. Oral presentation given at the Frederick Conference on Capillary Electrophoresis in Frederick, Maryland on October 19, **1999**.
- “Investigation of electrochemistry of 3,4-dihydroxybenzaldehyde (3,4-DHB) and its electrocatalytic oxidation of NADH at glassy carbon electrodes,” David J. Weiss and Theodore Kuwana. Poster presented at The Fifth International Workshop on Bioanalysis, June **1996** in Lawrence, KS.
- “Physical Characterization of Dialysis Fibers,” by David J. Weiss and Werner G. Kuhr. Poster presented at the Federation of Analytical Chemistry and Applied Spectroscopy

Societies (FACSS) conference in Anaheim, CA in **1991**.

Grants and Research Activity

Funded Grants (after tenure)

- **“Leveraging the Learning Assistant Infrastructure to Disseminate Technologically Rich Educational Environments Across Three Campuses.”** Laurel Hartley, Valerie Otero, David J. Weiss. Funded by CU President’s Office for **\$300,000 (2022–2026)**.
- **“Environmental PFC Impact Collaboration (EPIC) in the Fountain Creek Watershed: Determining the Environmental, Ecological, and Societal Impact of PFCs.”** Janel Owens, Kevin Tvrdy, Andrew Klocko, Amy Klocko, James Kovacs, Wendy Haggren, Emily Mooney, Cerian Gibbes, Allen Schoffstall. Funded by UCCS LAS Internal Grant for **\$125,000 (2017–2021)**.
- **“Can Peer TAs Improve Cooperative Learning in General Chemistry Lecture?”** David J. Weiss. Funded by President’s Teaching and Learning Collaborative for **\$1,500 (2011–2012)**.
- **“Shimadzu Equipment Grants for Research Mass Spectrometry Program.”** Janel Owens, David J. Weiss, Ronald Ruminski, Allen Schoffstall, Renee Henry, Murphy Brasuel. Funded by Shimadzu for **\$71,500 (2011–2012)**.
- **“Research Experience for Undergraduates: Green Chemistry in Colorful Colorado.”** Sonja Braun-Sand, Allen Schoffstall, David J. Weiss. Funded by NSF REU for **\$356,589 (2015–2017)**.
- **“Investigation of Cooperative Learning in General Chemistry at UCCS.”** David J. Weiss. Funded by President’s Teaching and Learning Collaborative for **\$800 support and \$500 travel (2010)**.
- **“Investigation of Inclusiveness and Best Practices in Research at UCCS.”** David J. Weiss. Funded by CU Innovations for Scholarship and Inclusiveness Excellence Grant for **\$1,000 (2010)**.
- **“Investigation of Inclusiveness and Best Practices in Research at UCCS.”** David J. Weiss. Funded by Innovations in Scholarship for Inclusive Excellence Proposal for **\$1,000 (2009)**.
- **“Investigation of Cooperative Group Learning in General Chemistry at UCCS.”** David J. Weiss. Funded by President’s Teaching and Learning Collaborative for **\$800 student stipend (2009)**.

Total since tenure, either as co-PI or participant: \$858,689

Submitted but Not Funded Grants (after tenure)

- **“The Importance of Negative Emotions: Expert Research and Cross-Disciplinary Collaboration.”** Kisley, M. A. (PI), Al-Shawaf, L., Dorne, M., Feliciano, L., Kopaneva, I., Laroche, R. L., Morreale, S. P., Olkowski, D., Pyszcynski, T. A., Robins, T., Sassower, R., Staley, C. M., David J. Weiss (Supporting). Sponsored by UCCS College of LAS. Requested: **\$82,000. Not funded (2018–2020)**.

- **“Transforming STEM Education in Southern Colorado.”** Christensen, T. M. (PI), Hines, L. M., Khaliqi, D., McGuire, P. R., **David J. Weiss** (Co-PI). Sponsored by the National Science Foundation. Requested: **\$242,001. Not funded (2014–2015).**
- **“REU Site Renewal: Explorations in Sustainable Chemistry.”** Tvrdy, K., Schoffstall, A., **David J. Weiss** (Participant Researcher). NSF Research Experience for Undergraduates (REU) Program. Requested: **\$421,871. Not funded (Summer 2014).**
- **“Transforming STEM Education in Southern Colorado.”** Christensen, T. (PI), McGuire, P., **David J. Weiss** (Co-PI), Khaliqi, D., Hines, L. NSF WIDER Program. Requested: **\$242,001. Not funded (2013).**
- **“Incorporating Sustainability and Green Chemistry in the Chemistry Curriculum Through Inquiry Experiments.”** Owens, J., Braun-Sand, S., Henry, R., Schoffstall, A., **David J. Weiss**. NSF TUES Program. Requested: **\$198,583. Not funded (2012).**
- **“Guided Inquiry Laboratories to Implement Green Chemistry Practices Across the Curriculum.”** Owens, J., Henry, R., Schoffstall, A., **David J. Weiss**. NSF TUES Program. Requested: **\$199,259. Not funded (2011).**
- **“Discovery Experiments Using Microwave Technology in the Chemistry Curriculum.”** Owens, J., **David J. Weiss**, Henry, R., Ruminski, R., Schoffstall, A. NSF MRI Program. Requested: **\$198,395. Not funded (2012–2014).**
- **“Guided Inquiry Laboratories to Implement Green Chemistry Practices Across the Curriculum.”** Owens, J. (PI), Henry, R., **David J. Weiss**, Schoffstall, A. NSF TUES Program 10-544. Requested: **\$199,259 for 2 years. Not funded (2010).**
- **“REU Site: Green Chemistry in Colorful Colorado.”** Ruminski, R., Braun-Sand, S., Henry, R. M., **David J. Weiss**, Schoffstall, A. M., Owens, J. NSF REU Proposal. Requested: **\$347,770. Not funded (2010).**
- **“MRI-R2: Acquisition of a Hyphenated LC-NMR-MS for Enhanced Undergraduate Research.”** Henry, R., Schoffstall, A., Owens, J., Brasuel, M., Wolkow, T., Ruminski, R., **David J. Weiss**, Braun-Sand, S. NSF MRI Program. Requested: **\$129,461. Not funded (Summer 2009).**
- **“Revitalizing and Reinvigorating the Analytical Chemistry Curriculum at a Public PUI Using Cooperative and Problem-Based Learning.”** **David J. Weiss**, Schoffstall, A. M. NSF CCLI Program. Requested: **\$199,939. Not funded (Spring 2009).**
- **“REU Site: Green Chemistry in Colorful Colorado.”** Braun-Sand, S., Henry, R. M., **David J. Weiss**, Schoffstall, A. M., Ruminski, R. R., Owens, J. NSF REU Proposal. Requested: **\$423,759. Not funded (2009).**

Funded Grants (before tenure)

- **“Biology and Chemistry Collaborative Undergraduate Research at UCCS.”** Braun-Sand, S., **David J. Weiss**, Subudhi, A., et al. Merck AAAS Undergraduate Science Research Program. Requested and Funded: **\$60,000. Funded (2007).**
- **“Rapid Determination of Neurotransmitters for Monitoring Human Disease.”** **David J. Weiss**. UCCS Committee on Research and Creative Works (CRCW). Requested and Funded: **\$5,000. Funded (2007–2008).**
- **“Student Travel Grant to Local American Chemical Society Section.”** **David J. Weiss**. Requested: **\$2,300** for four students; Funded: **\$400. Funded (2007).**

- **"The Chemistry of Enzyme Sensor Microchips."** David J. Weiss. Research Corporation Cottrell College Science Awards. Requested and Funded: **\$40,500. Funded (2005–Present).**
- **"Summer Grant Writing Workshop Fellowships."** David J. Weiss. UCCS Internal Grant. Requested and Funded: **\$500. Funded (2004).**
- **"A New Method for Determining Nerve Agent Use by Capillary Electrophoresis with Direct Detection."** David J. Weiss, Schoffstall, A. M. Network Information and Space Security Center (NISSC) Renewal. Requested and Funded: **\$5,000. Funded (2004).**
- **"Determination of Catechins in Dietary Supplements Containing Green Tea Extracts."** David J. Weiss. UCCS Committee on Research and Creative Works (CRCW). Requested and Funded: **\$5,000. Funded (2004–2006).**
- **"Development of a Reagentless Biosensor for the Determination of Phenylalanine in Human Urine."** David J. Weiss. Undergraduate Analytical Research Program (UARP), Society for Analytical Chemists of Pittsburgh. Requested and Funded: **\$10,000. Funded (2003–2006).**
- **"A New Method for Determining Nerve Agent Use by Capillary Electrophoresis with Direct Detection."** David J. Weiss, Schoffstall, A. M. Network Information and Space Security Center (NISSC). Requested and Funded: **\$15,000. Funded (2003–2004).**
- **"Student Travel Grant to Local ACS Section."** David J. Weiss. For undergraduate research student travel to Spring ACS National Meeting, Anaheim. Requested: **\$2,000; Funded: \$1,200. Funded (2003).**
- **"Analysis of Polyphenolic Compounds in Commercial Green Tea Extracts Using Capillary Electrophoresis."** Austria, E., David J. Weiss. Sigma Xi Grants-in-Aid of Research. Requested: **\$1,000; Funded: \$688. Funded (2003–2005)**
- **"Undergraduate Travel Grant for Spring ACS National Meeting."** David J. Weiss. For student Christopher Anderton. Requested: **\$500; Funded: \$300. Funded (2002)**
- Weiss, D. J. (7/04) Summer Grant Writing Workshop Fellowships at UCCS. Submitted February 2004, Requested funding: \$500. Funded for \$500.
- Weiss, D. J., Schoffstall, A. M., (2004–2004) "A New Method for Determining Nerve Agent Use by Capillary Electrophoresis with Direct Detection." Network Information and Space Security Center (NISSC) Grant Renewal. Requested funding: \$5,000. Funded for \$5,000.
- Weiss D. J., Subudhi, A., contribution to proposal compiled by S. Braun-Sand (fall **2006**). "Biology and Chemistry Collaborative Undergraduate Research at UCCS." Merck AAAS. Proposed collaborative research with Dr. Subudhi in Dept. of Biology. Requested Funding: \$ 60,000. Not funded.
- Weiss, D. J. (2004–2006) "Determination of catechins in dietary supplements containing green tea extracts." Committee on Research and Creative Works at UCCS, Requested funding \$5,000. Funded for \$5000.
- Weiss, D. J. (2003–2006) "Development of a Reagentless Biosensor for the Determination of Phenylalanine in Human Urine." Undergraduate Analytical Research Program (UARP) Grant from the Society for Analytical Chemists of Pittsburgh. Requested funding \$10,000. Funded for \$10,000.

- Weiss, D. J., Schoffstall, A. M. (2003–2004) “A New Method for Determining Nerve Agent Use by Capillary Electrophoresis with Direct Detection.” Network Information and Space Security Center (NISSC). Requested funding \$15,000. Funded for \$15,000.
- Weiss, D. J. (3/03) Travel Grant to local ACS Section for undergraduate travel funding. This grant was written for travel for four of my undergraduate research students to attend the spring national ACS meeting in Anaheim. Requested Funding: \$2,000.00. Funded for \$1,200.
- Austria, E., Weiss, D. J. (2003–2005) “Analysis of polyphenolic compounds in commercial green tea extracts using capillary electrophoresis.” Sigma Xi Grants-in-Aid-of Research. Submitted with student Eric Austria October 2003. Requested funding \$1,000. Funded for \$688.00.
- Weiss, D. J. (3/02) Submitted travel grant to local American Chemical Society Section for undergraduate Christopher Anderton for travel to the spring national ACS meeting to present research. Requested Funding: \$500. Funded for \$300.
- Weiss, D. J. (2003–2005) “A Novel Sensor for Monitoring Phenylalanine Levels in Children and Adults with Phenylketonuria.” Committee for Research and Creative Works at UCCS, February 2002. Requested funding: \$5,000. Funded for \$4,600.
- Weiss, D. J., (2002–2002) “A Novel Sensor for Monitoring Phenylalanine Levels in Children and Adults with Phenylketonuria.” Faculty and Curriculum Development Mini-Grant, Spring 2002. Requested funding: \$300. Funded for \$150.

Funding before tenure as PI or participant: \$143, 188

Selected Submitted but Not Funded Grants (before tenure)

- Braun-Sand, S, Weiss D. J., Subudhi, A. et. al., Merck AAAS proposal 2007. "Biology and Chemistry Collaborative Undergraduate Research at UCCS." Merck AAAS Undergraduate Science Research Program proposal. Requested Funding: \$ 60,000. Funded for \$60,000.
- Weiss, D. J. “A New Approach to Monitoring Levels of Phenylalanine in Children and Adults with Phenylketonuria,” Research Corporation. April 2002. Requested Funding: \$35,000. Not funded.
- Weiss, D J. contribution to T. Wolkow proposal to NSF for Major Research: Instrument Development and Acquisition, January **2004**. Requested funding: \$65,599.72. Not funded.
- Weiss, D. J., “Investigation of Anti-Carcinogenic Flavonoids in Herbal Teas using Micellar Electrokinetic Chromatography.” The Herb Society of America Research Grant. Submitted January **2003**. Requested funding: \$4,000. Not funded.
- Weiss, D. J. contribution to Pyati, R. proposal “Integration of inductively-coupled plasma atomic emission spectroscopy across the undergraduate chemistry curriculum,” to National Science Foundation, December **2002**. Requested Funding: \$78, 828. Not funded.

- Weiss D. J. contribution to proposal written by Pyati, R., Beckman Scholars Program in **2002**. Requested Funding: \$ 105,600. Not funded.
- Weiss, D. J. contributed to a departmental proposal for a Merck/AAAS Undergraduate Science Research Program (USRP) written by Prof. Pyati. **2002**, Requested funding \$ 60,000. Not funded.
- Weiss, D. J., "Applications of Bioanalytical Chemistry to Biomedical Problems." The Camille and Henry Dreyfus Foundation Faculty Start-up Grant for Undergraduate Institutions. Submitted March **2001**. Requested Funding: \$ 20,000. Not Funded.

Courses Taught

University of Colorado Colorado Springs (2001-Present):

- General Chemistry I
- General Chemistry II
- Analytical Chemistry
- Instrumental Analysis lecture
- Instrumental Analysis laboratory
- Merch Research Laboratory
- Merch Research Methods Course
- Graduate Instrumental Analysis
- General Chemistry II honors

Bucknell University, 2000 (Visiting Professor Sabbatical Replacement for Dr. Tim Strein):

- Analytical Chemistry I
- Analytical Chemistry II (Instrumental Analysis)
- General Chemistry laboratory
- Analytical Chemistry I laboratory
- Instrumental Analysis laboratory
- General Chemistry lecture for nonmajors
- Introduction to Chemistry for nonmajors

Course Modes: Traditional Online, In-person, Synchronous remote, hyflex (partially in-person where students can choose their mode)

Recognitions

- UCCS Outstanding Teaching Award 2025
- LAS Teaching Award for tenure track faculty 2024
- Student Choice Award for Educator of the Year 2023
- National Society of Leadership and Success Excellence in Teaching Award 2019
- Nominated for campus-wide teaching award, 2019 and 2020.
- Nominated for the University of Colorado at Colorado Springs College of Letters, Arts and Sciences Outstanding Teaching Award, 2011, 2013, 2023.
- Winner of Chemistry student “Golden Erlenmeyer” award from chemistry student group as favorite professor 2014.
- Winner of Chemistry student “Golden Erlenmeyer” award from chemistry student group as favorite professor 2013.
- University of Colorado Excellence in Leadership Class Member 2011-2012
- Winner of Chemistry student “Golden Erlenmeyer” award from chemistry student group as favorite professor 2011-2012.
- Member of President’s Teaching and Learning Collaborative 2009-2011
- Mentor for the President’s Teaching and Learning Collaborative 2012-2013
- Winner of 2010 Outstanding Faculty Diversity Award from the Diversity Alliance Committee, Faculty Minority Affairs Committee and Multicultural Office for Student Access, Inclusiveness and Community at UCCS
- Winner of Chemistry student “Golden Erlenmeyer” award from chemistry student group as favorite professor 2010.
- Representative for UCCS Department of Chemistry and Biochemistry Statewide Agreement on Community College Transfer Curriculum 2011-2014
- Nomination for Outstanding Club Advisor Award from MOSAIC campus organization. 2009.
- Winner of Chemistry student “Golden Erlenmeyer” award from chemistry student group as favorite professor 2009.
- Nominated for the University of Colorado at Colorado Springs College of Letters, Arts and Sciences Outstanding Teaching Award, 2006. The committee was very impressed and they strongly recommended the department to re-nominate me next year.
- Golden Erlenmeyer Award from ACS Student Affiliates 2008 for faculty members who have contributed to student life in the Department of Chemistry
- President’s Faculty Excellence Award for Advancing Teaching and Learning through Technology 2004.
- Ray Q. Brewster Teaching Award for Advanced Graduate Students, University of Kansas, Spring 1997.

Professional Organizations

- The American Chemical Society (ACS)
- Society of Electroanalytical Chemistry (SEAC)
- Gamma Sigma Epsilon Chemistry Honor Society
- Phi Lambda Upsilon (PLU) Honorary Chemical Society

Professional Development

- Learning Assistant Faculty community 2022-Present
- Faculty leadership Development Academy 2023-2024
- CU Learning Assistant Faculty Community 2022-2024
- CU Learning Assistant Faculty retreat, August 2023, Denver Botanical Gardens
- Faculty student online CU Denver cross-campus course SCED 4050- 002 "Introduction to science teaching and learning", 2 Credit hours, CU Faculty Teaching and Learning Course, taught by CU Boulder and CU Denver College of Ed faculty, Spring 2023
- Participated in International Learning Assistants Conference, CU Boulder, CO November 11-13, 2022
- CREST Bias Mitigation in RPT Workshop, UCCS, fall 2022
- Participated in "Learning Assistants Essential Elements" Workshop from Boulder, Fall 22
- Attended and presented at Spring national ACS meeting 2020, 2021, 22 and 23, 24
- Attended and presented at Rocky ACS Mountain Regional Meeting 2020
- Attended and presented at Pittcon Spring 2019.
- Attended National Association of System Heads Meeting, March 2017, Denver, CO,
- Attended National American Chemical Society Meeting, Spring 17, San Francisco, CA
- Writing Across the Curriculum Workshop- Spring 2013
- Attended American Association of Colleges and Universities General Education and Assessment Meeting, Spring 2014 and 2015
- Presented at National ACS Meeting, San Francisco, CA, Spring 2017

Service

Campus and Departmental Leadership

- Faculty Fellow for Policy from Provost office (Spring 2022-Present):
- Chair Faculty Assembly Committee on Teaching (2022-2024):
- Faculty Assembly President Major Accomplishments (2020-2021)
- Director of the Compass Curriculum Accomplishments (2014-2018)
- Associate Chair of the Department of Chemistry and Biochemistry Accomplishments (2014-2016)

University Service (selected)

- Policy review committee member, Policy 900-006, Principal Investigator Eligibility for Sponsored Programs (Fall 2023)
- Policy review committee member, Policy 900-003, Distribution of F&A Recovery from Sponsored Programs (Fall 2023)
- Chair, Faculty Assembly Committee on Teaching (2022–2024)
- Proposed and authored bylaws for Faculty Assembly Committee on Teaching (FACT) (Spring 2022)
- Tenure Review Committee for Lisanna Follari, COE (Spring 2022)
- Initial Review Committee for Kathleen Randolph, COE (Spring 2022)
- Full Professor Review Committee for Christi Kasa, COE (Spring 2022)
- Full Professor Review for Ronald Martella, COE (Spring 2022)
- Post-Tenure Review Committee for Barbara Frye, COE (Spring 2022)
- Chair, Post-Tenure Campus Policy Review Committee (2022–2023)
- Member, Faculty Grievance Policy Development Committee (Spring–Fall 2022)
- President, Faculty Assembly (2020–2021)
- Past President, Faculty Assembly (2021–2022)
- President-Elect, Faculty Assembly (2019–2020)
- Member, Faculty Council (systemwide) (2020–2021)
- Member, Dean’s Council for Faculty Assembly (2020–2021)
- Member, Academic Affairs Recovery Group (2020–2021)
- Member, Academic Council (2020–2021)
- Member, Council on Undergraduate Education (2020–2021)
- Faculty Assembly Member (2018–2022)
- Member, Admissions Strategic Planning Group (2019–2020)
- Primary Unit Committee, College of Education (3 comprehensive/full professor reviews) (2021)
- Chair, Faculty Assembly Teaching Evaluation Committees (2018–2019, 2020–2022)

- Diversity Champion on Campus Searches (2018–2023)
- Director, Compass Curriculum (Campus-Wide General Education) (2014–2018)
- Member, Course Scheduling and Capacity Committee (Spring 2018, 2020–2022)
- Member, Admissions Policy Committee (Spring 2018)
- Member, Student Success Cross-Function Action Team (2014–2019)
- Member, Campus Orientation Committee (Spring 2012–2016)
- Co-Chair, General Education Task Force Phase III (Spring–Fall 2013)
- Search Committee, Student Success Advisors (Summer 2013)
- Member, Academic Program Review Committee (2008–2011, 2012–2018)
- Chair, CSURF Committee (Undergraduate Research Forum) (2003–2007)
- Mentor, Program for At-Risk Students (Spring 2007–2016)
- Faculty Assembly Representative (2010–2011, 2012–2013)
- High School Outreach, Fountain Fort Carson & Vanguard Schools (Fall 2012–Spring 2013)
- Member, General Education Task Force Phase II (Spring 2011–Spring 2012)
- Member, Campus Recreation Center Hiring Committee (Summer 2007, 2012)
- Member, Diversity Strategic Planning and Foundations Committee (Fall 2006–2011)

Department Service (Selected)

- Member, Department of Chemistry DEI Committee (2020–2023)
- Associate Chair, Department of Chemistry and Biochemistry (2013–2016)
- Chair, Faculty Search Committees, Department of Chemistry (2008–2015)
- Faculty Advisor, ACS Student Members (2002–2025)
- Member, Master's Committee for Amanda Wessels (Spring 2023)
- Member, Master's Thesis Committee for Janel Owens's Student (Spring 2018)
- Member, Tenure Review for Sonja Braun-Sand (Fall 2013)
- Member, Comprehensive Review for Janel Owens (Fall 2013)
- Member, Comprehensive Review Committee for Renee Henry (Fall 2012)
- Chair, Post-Tenure Review for Prof. Allen Schoffstall (Fall 2012)
- Member, Faculty/Student Research Awards Committee (2013–2022)
- Faculty Advisor, Gamma Sigma Epsilon Chemistry Honor Society (2003–2009)

College Service (selected)

- Member, Dean's Review Committee, LAS (2022–Present)
- Member, LAS DEI Committee (2020–2024)
- Member, Department of Chemistry Master's Committee for Amanda Wessels (2023–2024)
- Member, Committee on Academic Progress (CAP) (2018–2024)
- Co-Chair, LAS Ad-Hoc Policy Review Committee (2019–2021)
- Chair, LAS Admissions Committee (Spring 2011–2021)
- Member, Salary Grievance Committee (2018–2021)
- Member, Curriculum and Requirements Committee (2018–2021)
- Member, Fee Advisory Committee (2019–2021)
- Member, LAS Budget and Planning Committee (Spring 2013–2016)
- Member, LAS Research Award Committee (Fall 2012–2019)
- Member, LAS Undergraduate Scholar Awards Committee (2013–2014, 2019)
- Member, LAS Budget Committee (Fall 2011–Fall 2012)
- Chair, LAS Scholar Awards and Colorado Springs Undergraduate Research Forum (CSURF) Committee (2003–2007)
- Member, LAS Scholar Awards and CSURF Committee (2003–2011)

Professional

- Reviewer, Chemistry Teacher International
- Reviewer, ACS Books
- Associate Editor, Analytical Sciences Digital Library
- Reviewer, Biosensors and Bioelectronics
- Reviewer, Journal of Chromatography A
- Reviewer, Journal of Chromatography B
- Reviewer, IEEE Sensor Journal
- VP/President, Local Chapter of Sigma Xi (2005–2012)

Press Interest:

Science News published an article on our work titled "Matcha green tea packs the antioxidants" in their April 12, 2003 issue, Volume 163, page 238.

List of Undergraduates in Research Group

(60 undergraduate and graduate students since 2001)

- Najla Vasquez 2024-Present
- Aidan Burke 2024-Present
- Jake Marcotte 2023-2024
- Julian Burwell 2023
- Kailene Black* 2022-2025
- Molly Weir 2020
- Julie Wiley 2020-2022
- Alexa Bullis* 2019-2022
- Robert Wrobel 2019-2022
- Raphael Sandoval 2016-2017
- Justin Petway 2015-2016
- Zach Pitcher 2015-2016
- Isaac Ahn 2013 REU
- Josh Denning 2013-2014
- Brittany Guererro 2013 REU
- Kendra Lesnick 2013-2014
- Jordan Townsend 2013-2016
- Kristina Barber 2012-2013
- Char Brecevic 2012-2013
- Ryan Johnson 2012-2013
- Jennifer Mitchell 2012-2013
- Morgan Pinto 2012-2012
- Nicole Simmons 2012-2013
- Elle Clarke 2011-2012
- Neha Jevan* 2011
- Katheryn Prescott 2011-2013
- Cara Beat 2010
- Sarah Gehrke 2010-2012
- Penxin Liu 2010-2012
- Randy Robinson 2010-2012
- Jordan Snell 2010
- Arielle Kanner 2009
- Lynn Riester 2009-2010
- Kyle Culhane 2008-2011
- James Harris* 2008-2009
- Shelly Haskell, grad., **Msc** 2008
- Emilie Nowell (Andrews)* 2008-2009

- Mimi Shin 2008-2011
- Carol Brown* 2006-2008
- Jennifer Ingram* 2006
- Jason Hubscher 2006-2008
- Abigail King 2006-2007
- Ben Napier* 2006-2008
- Danielle Wells* 2006-2008
- Ashley Jander* 2005
- Amanda Loh* 2005-2007
- Suzanne Bloemen* 2004
- Angela Cook* 2004-2005
- Kristopher McKee 2004-2005
- Laura Peterson* 2004-2006
- Zamawang Almemar-Ray* 2003
- Eric Austria* 2003-2005
- Carrie Dean 2003
- Megan Dorris* 2003-2006
- Aaron Doussett, grad., **MBS** Spring/ Summer 2003
- Richard Hompesch* 2003-2006
- Christopher Anderton* 2002-2005
- Andrew Combs* 2002
- Mike Davis* 2002
- Kathryn Mikula* 2002

* These students started research as freshman in my group