

HALA G. SCHEPMANN, PH.D.

Professor, Bioorganic Chemistry

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EDUCATION

Doctor of Philosophy, Bioorganic Chemistry

Rice University: 1996 – 2001

Master of Science, Synthetic Organic Chemistry

University of California at Berkeley: 1993 – 1995

Bachelor of Science, Chemistry. Summa Cum Laude

University of Texas at Austin: 1989 – 1993

ACADEMIC EXPERIENCE

Southern Oregon University, Department of Chemistry

2016 – Present Chair, Department of Chemistry and Physics

2014 – 2015 Sabbatical, Southern Oregon University

2013 – Present Professor, Bioorganic Chemistry

2007 – 2008 Sabbatical, Southern Oregon University

2006 Granted Tenure

2005 – 2013 Associate Professor, Bioorganic Chemistry

2001 – 2005 Assistant Professor, Bioorganic Chemistry

Chemistry Capstone and Pre-Capstone, Chemical Research Communication, Advanced NMR Applications, Biochemistry Laboratory, Majors Organic Chemistry, Majors Organic Chemistry Peer-Led Team Learning Workshops, Majors Organic Spectroscopy, Majors Organic Spectroscopy Laboratory, Majors Organic Chemistry Recitation and Laboratory, Principles of Organic Chemistry, Principles of Organic Chemistry Recitation and Laboratory, Principles of Biochemistry, and General Chemistry Laboratory

Visiting Instructor: Organic Chemistry I

University of Texas at Austin, Department of Chemistry, Fall 2000

Visiting Instructor: Organic Chemistry I and II

Cornell College, Department of Chemistry, Spring 2000

Teaching Assistant: Advanced Organic Chemistry and Organic Chemistry II Laboratories

Rice University, Department of Chemistry, Fall 1997, Spring 1997, and Fall 1996

Head Graduate Student Instructor: Organic Chemistry I Discussion and Laboratory

University of California at Berkeley, Department of Chemistry, Fall 1994

Graduate Student Instructor: Organic Chemistry I Discussion and Laboratory

University of California at Berkeley, Department of Chemistry, Fall 1995 and 1993

RESEARCH EXPERIENCE

Southern Oregon University, Department of Chemistry, 2001 – Present

- ◆ Analysis and implementation of career advancement supports for underrepresented STEM faculty
- ◆ Isolation, characterization, and biological activity determination of antineoplastic, antiangiogenic, and antianxiolytic secondary metabolites produced by *Mahonia aquifolium*
- ◆ Development and implementation of HSQC and HMBC 2D NMR spectroscopy experiments
- ◆ Development and implementation of guided-inquiry organic chemistry laboratory experiments and *interactive* guided-inquiry organic chemistry laboratory recitations
- ◆ Development and implementation of Chemical Research Communication courses

Rice University, Department of Chemistry, 1997 – 2001

Research Associate under the direction of Professor Seiichi P. T. Matsuda

- ◆ Cloning and characterization of *Ginkgo biloba* genes employed in the ginkgolide biosynthetic pathway
- ◆ Investigation of the structure and function of *Arabidopsis thaliana* cycloartenol synthase

Rice University, Department of Chemistry, 1996 – 1997

Research Associate under the direction of Professor Marco Ciufolini

- ◆ Investigation of an acid-promoted benzannulation reaction in the total synthesis of Mithramycin

University of California at Berkeley, Department of Chemistry, 1993 – 1995

Research Associate under the direction of Professor K. Peter C. Vollhardt

- ◆ Investigation of the reactivity of alkynyl pyrroles in cobalt-mediated [2+2+2] cyclizations
- ◆ Investigation of a cobalt-mediated cyclotrimerization reaction as a novel synthetic approach to *Strychnos* and *Ergot* Alkaloids

University of Texas at Austin, Department of Chemistry, 1991 – 1993

Research Assistant under the direction of Professor Alan H. Cowley

- ◆ Synthesis and characterization of Main Group metal complexes

AWARDS AND HONORS

- ◆ Certificate of Recognition and Accommodation Ally Badge: Outstanding Work Accommodating Students with Disabilities, Southern Oregon University Disability Resources, 2022
- ◆ Outstanding Leadership Award Nominee, Southern Oregon University Raider Academy Awards, Nominated by students, 2017, 2018
- ◆ Presidential Recognition Award: Planning and Implementation of the First Distinguished Faculty Teaching and Service Awards at Southern Oregon University, 2016
- ◆ Excellence in Teaching, Dean's Nominee, SOU School of Science, 2006-2007
- ◆ Graduate Student Research Award, American Society of Pharmacognosy, 2000
- ◆ Vice President's Appreciation Award, Rice University, 1999
- ◆ Harry B. Weiser Graduate Student Teaching Award, Rice University, 1998
- ◆ Regents Fellowship, UC Berkeley, 1994-1995
- ◆ Graduate Opportunity Fellowship, UC Berkeley, 1993-1994
- ◆ Dean's Honored Graduate in Chemistry, College of Natural Science, UT Austin, 1993
- ◆ Dow Chemical Company Scholarship, 1992-1993
- ◆ Dow Chemical U.S.A. Centennial Endowed Presidential Scholarship, 1992-1993
- ◆ Louis M. Pearce, Jr. Endowed Presidential Scholarship, UT Austin, 1992-1993
- ◆ Undergraduate Award for Excellence in Chemistry, Iota Sigma Pi National Honor Society for Women in Chemistry, 1992-1993
- ◆ Outstanding College Senior in Chemistry, American Chemical Society, 1992-1993
- ◆ Phi Beta Kappa, UT Austin, 1992-present
- ◆ James A. Bush/Dwight D. Book Scholarships, UT Austin, 1990, 1991, 1992
- ◆ University Scholar and Dean's Honor List, UT Austin, 1989-1993

GRANT AWARDS

- ◆ National Science Foundation Major Research Instrumentation grant proposal submitted, \$548,953
PI: Acquisition of a 400 MHz Nuclear Magnetic Resonance Spectrometer to Support Research, Research Training, and Education at Southern Oregon University, January 2022
- ◆ National Science Foundation ADVANCE Partnership grant, \$999,898, No. 1936070/2128203
Co-PI: **ASCEND: Advancing STEM Careers by Empowering Network Development**, 2019-2024
- ◆ Carpenter Grant Category I Southern Oregon University, Higher Education Resource Services Leadership Institute Participant, 2018-2019
- ◆ Upping your Game Refresher Workshop Participant Travel Grant, National Science Foundation Committee on the Advancement of Women Chemists, 2017
- ◆ National Science Foundation: Advancing the Careers of Women in Science, Technology, Engineering, and Mathematics at Predominantly Undergraduate Institutions through Professional Networks: Support Grant, **ASCEND (Advancing STEM Careers by Empowering Network Development)** Meeting, 2016- 2017
- ◆ National Science Foundation: Advancing the Careers of Women in Science, Technology, Engineering, and Mathematics at Predominantly Undergraduate Institutions through Professional Networks: Support Grant, SOU X-Factor End-of Year Meeting, 2016-2017
- ◆ “STEM Professional Communications Workshop,” Professional Development Grant, Southern Oregon University, 2016-2017
- ◆ “Organic Chemistry Laboratory Equipment Upgrade,” Schepmann, H.G.; Kirms, L. Professional Development Grant, Southern Oregon University, 2016-2017
- ◆ “Reaching Out: Chemistry Outreach Programs for High School and Community College Students,” Carpenter II Grant, Southern Oregon University, 2014-2015
- ◆ The Dorothy and Moses Passer Education Endowment Fund Grant, Awarded by the American Chemical Society Division of Chemical Education, 2013
- ◆ Medicinal Chemistry Workshop Participant Grant, Awarded by the National Science Foundation Chemistry Collaborations, Workshops & Communities of Scholars, 2013
- ◆ National Science Foundation: Advancing the Careers of Women in Science, Technology, Engineering, and Mathematics at Predominantly Undergraduate Institutions through Professional Networks: Travel Grants, 2012- 2016
- ◆ “*Interactive Guided Inquiry: A Solution for Organic Laboratory Recitations*,” Carpenter II Grant, Southern Oregon University, 2010-2011
- ◆ Process Oriented Guided Inquiry Learning Workshop Participant Grant, National Science Foundation POGIL Project, 2008

GRANT AWARDS, continued

- ◆ NMR Spectroscopy Workshop Participant Grant, National Science Foundation Center for Workshops in Chemical Sciences, 2007
- ◆ Leadership Development Workshop Participant Travel Grant, National Science Foundation Committee on the Advancement of Women Chemists, 2006
- ◆ “Development of an Organic Chemistry Guided-Inquiry Laboratory Experimental: Ring-Closing Metathesis,” Association of Professors: Southern Oregon University Research Grant, 2003-2004
- ◆ Strategic Persuasion Workshop Participant Travel Grant, National Science Foundation Committee on the Advancement of Women Chemists, 2003
- ◆ Science Education for New Civic Engagements and Responsibilities Summer Institute Participant Travel Grant, Association of American Colleges and Universities, 2002
- ◆ “Department of Chemistry Instrumental Laboratories Upgrade,” Chapman, D., Miller, G., Petrovic, S., Schepmann, H. G. Professional Lab Grant, Southern Oregon University, 2002
- ◆ “Science and Engineering Professional Development Workshop Series,” Survival Skills and Ethics Program Start-Up Grant, University of Pittsburgh and the National Institutes of Health, 2001-2003
- ◆ Course Development Grant, Southern Oregon University New Faculty Mentor Program, 2001-2002
- ◆ Survival Skills and Ethics Trainer of Trainers Conference Participant Travel Grant, University of Pittsburgh and the National Institutes of Health, 2001

PATENTS AND PUBLICATIONS

"A Guided-Inquiry Approach to Ring-Closing Metathesis," Schepmann, H.G.; *Mynderse, M. *Comprehensive Organic Chemistry Experiments for the Laboratory Classroom*, Afonso, C. A. M., Candeias, N. R., Simao, D. P., Trindade, A. F., Coelho, J. A. S., Tan, B., Franzen, R., Eds.; Royal Society of Chemistry: **2017**; pp 646-649.

"Ring-Closing Metathesis: An Advanced Guided-Inquiry Experiment for the Organic Laboratory," Schepmann, H.G.; *Mynderse, M. *J. Chem. Ed.*, **2010**, 87, 7, 721-723.

"*Ginkgo biloba* Levopimaradiene Synthase," Matsuda, S. P. T.; Schepmann, H. G., U.S. Patent 7,374,920, **May 20, 2008**.

"Chemical Research Writing: A Preparatory Course for Student Capstone Research," Schepmann, H.G.; Hughes, L.A. *J. Chem. Ed.*, **2006**, 83, 7, 1024-1028.

"*Ginkgo biloba* Levopimaradiene Synthase," Matsuda, S. P. T.; Schepmann, H. G., U.S. Patent 6,946,283, **September 20, 2005**.

"Cloning, Characterization, and Molecular Manipulation of Plant Terpene Synthases," Schepmann, H.G. Ph.D. Thesis, Rice University, **2001**.

"*Ginkgo biloba* Levopimaradiene Synthase" Schepmann, H.G.; Matsuda, S.P.T. U.S. Provisional Patent Application Filed, **2001**.

"Cloning and Characterization of *Ginkgo biloba* Levopimaradiene Synthase, Which Catalyzes the First Committed Step in Ginkgolide Biosynthesis" Schepmann, H.G.; Pang, J.; Matsuda, S.P.T. *Arch. Biochem. Biophys.* **2001**, 392, 263-269.

"Steric Bulk at Cycloartenol Synthase Position 481 Influences Cyclization and Deprotonation" Matsuda, S.P.T.; Darr, L.B.; Hart, E.A.; Herrera, J.B.R.; *McCann, K.E.; *Meyer, M.M.; Pang, J.; Schepmann, H.G. *Org.Lett.* **2000**, 2, 2261-2263.

"Facile Transmetalation Reactions of Macrocyclic (TMTAA, C₂₂H₂₂N₄) Complexes of Germanium (II), Tin(II), and Lead(II)" Cowley, A.H.; Atwood, J.L.; Atwood, D.O.; Atwood, V.O.; *Gobran, H.R. *Inorg.Chem.* **1993**, 32, 4671-4672.

"Oxidative Addition Reactions and Reverse Ylide Formation Involving Macrocyclic (TMTAA, C₂₂H₂₂N₄) Complexes of Germanium(II) and Tin(II)" Cowley, A.H.; Atwood, D.O.; Atwood, V.O.; *Gobran, H.R. *Polyhedron* **1993**, 12, 2073-2074.

"Dimeric Gallium and Indium Dialkylphosphido Complexes with Unusual Group 13-15 Stoichiometries" Cowley, A.H.; Jones, R.A.; Atwood, D.O.; Atwood, V.O.; *Gobran, H.R.; Smeal, T.M.; Carrano, C.J. *Organometallics* **1993**, 12, 3517-3521.

* Denotes undergraduate student

PRESENTATIONS

“ASCEND: Advancing STEM Careers By Empowering Network Development,” Hala G. Schepmann, Lead Co-Presenter with Mia Bertagnolli, Ph.D., Patricia Flatt, Ph.D., and Elizabeth Roberts-Kirchhoff, Ph.D. Co-Authors Chrystal Bruce, Ph.D., Sarah Kirk, Ph.D., Erika Stone, Cheryl Swanier, Ph.D., Victoria Turgeon, Ph.D., and Mary Katherine Watson, Ph.D. Virtual round table discussion presented at Gonzaga University 2021 International Conference on Hate Studies: Justice and Equity: Challenging Hate and Inspiring Hope, Spokane, Washington, November 2021.

“SOU Chemistry: Preparing Future Scientists to Lead, Innovate, and Inspire,” Hala G. Schepmann, Invited Co-Presenter with Jack Diab*. Southern Oregon University Foundation Board of Trustees Quarterly Meeting, October 2021.

“Supporting Innovation, Creativity, and Collaboration through Formal Professional Networks,” Hala G. Schepmann, Lead Co-Presenter with Sarah Kirk, Ph.D. Co-Authors Mia Bertagnolli, Ph.D., Chrystal Bruce, Ph.D., Patricia Flatt, Ph.D., Elizabeth Roberts-Kirchhoff, Ph.D., Erika Stone, Cheryl Swanier, Ph.D., Victoria Turgeon, Ph.D., Mary Katherine Watson, Ph.D. Virtual seminar presented at the 261st National American Chemical Society Conference, Women Chemists Committee Division, Atlanta, Georgia, August 2021.

“Advancing STEM Careers by Empowering Network Development,” Hala G. Schepmann, Lead Presenter. Co-Presenters Mia Bertagnolli, Ph.D., Chrystal Bruce, Ph.D., Patricia Flatt, Ph.D., Sarah Kirk, Ph.D., Elizabeth Roberts-Kirchhoff, Ph.D., Erika Stone, Cheryl Swanier, Ph.D., Victoria Turgeon, Ph.D., Mary Katherine Watson, Ph.D. STEM FOR ALL Video Showcase, May 2021, <http://videohall.com/p/2048>.

“Virtual Faculty Panel Discussion: Teaching In-Person During COVID,” Panelist, Southern Oregon University, January 2021

“Picture a Scientist Virtual Panel Discussion II,” Organizer/Co-moderator. Panelists: Alma Rosa Alvarez, PhD, Professor of English; Alison Burke, PhD, Professor of Criminology and Criminal Justice, Brie Paddock, PhD, Associate Professor of Biology, Jacki Strenio, PhD, Assistant Professor of Economics, Susan Walsh, PhD, Provost and Vice President for Academic Affairs, Professor of Communication. Office of the Provost and STEM Division, Southern Oregon University, April 2021.

“Picture a Scientist Virtual Panel Discussion,” Organizer/Co-moderator. Panelists: Alison Burke, PhD, Professor of Criminology and Criminal Justice; Arielle Halpern, PhD, Assistant Professor of Biology and Environmental Education, Christopher Lucas, Senior Instructor of Communication; Priscilla Oppenheimer, Adjunct Faculty, Computer Science; Jacki Strenio, PhD, Assistant Professor of Economics, and Maggie Vanderberg, PhD, Associate Professor of Computer Science. Friday Science Seminar Series, Southern Oregon University, January 22, 2021.

“Advancing STEM: Increasing Diversity in Academia and Industry,” Town Hall Meeting Co-Moderator/Co-Presenter with Maria Bertagnolli, Ph.D., American Association for the Advancement of Science Pacific Division 100th Annual Meeting, Ashland, Oregon, 2019.

“Be the Change: Transforming Workplace Culture,” Selected Session Speaker, co-presented with Emily Reeder, Ph.D., Women’s Leadership Conference: Leadership in Action, Ashland, Oregon, 2018.

“The State of the Academy: ADVANCING Female Faculty at Southern Oregon University,” Invited Program Speaker, American Association of University Women, Medford, Oregon Branch, 2017.

PRESENTATIONS, continued

“ADVANCing Female Faculty at Southern Oregon University,” Lightning talk co-presented with Carol Ferguson, Ph.D., 2015 ASAP ADVANCE Meeting, Seattle, Washington, 2015.

“Forensic Chemistry as an Outreach Tool,” Seminar presented at the 243rd National American Chemical Society Conference, San Francisco, California, 2014.

“Interactive Guided-Inquiry: A Solution for Organic Laboratory Recitations,” Seminar presented at the 241st National American Chemical Society Conference, Anaheim, California, 2011.

“Guided-Inquiry in the Organic Laboratory,” Seminar presented at the 231st National American Chemical Society Conference, Atlanta, Georgia, 2006.

“Peer-Led Team Learning in Organic Chemistry,” Seminar presented at the American Association for the Advancement of Science, Pacific Division Conference, SOU, Ashland, Oregon, 2005.

“SOU: Big Science in a Small School Atmosphere,” Seminar presented at the President's Breakfast Series, Southern Oregon University, Ashland, Oregon, 2005.

"Revising Science Research Papers," Seminar presented to the SOU Mathematics Department Capstone Students, 2004.

“Applications of Biochemistry and Molecular Biology in the Synthesis of Diterpenoid Natural Products,” Seminar presented at the Friday Science Seminar Series, Southern Oregon University, Division of Natural Science, Ashland, Oregon, 2003.

“Preparing Science Research Papers: How To Get It Right,” Seminar presented for the Science and Engineering Professional Development Workshop Series, Southern Oregon University, Ashland, Oregon, 2002.

“Preparing for Success – Southern Style,” Seminar presented at the New Faculty Orientation, Southern Oregon University, Ashland, Oregon, 2002.

“A Recombinant Biochemical Approach to Natural Product Synthesis,” Seminar presented at the Friday Science Seminars, Southern Oregon University, Division of Natural Science, Ashland, Oregon, 2002.

“Mastering the Art of Oral Presentations,” Seminar presented at the Science and Engineering Professional Development Workshop Series, Southern Oregon University, Ashland, Oregon, 2002.

“Preparation for Success in Graduate School,” Seminar presented at the Science and Engineering Professional Development Workshop Series, Southern Oregon University, Ashland, Oregon, 2001 and 2002.

“Cloning, Characterization, and Molecular Manipulation of Plant Terpene Synthases,” Seminar presented at Rice University, Houston, Texas, 2001.

“Cloning and Characterization of *Ginkgo biloba* Levopimaradiene Synthase: The First Committed Step in Ginkgolide Biosynthesis,” Seminar presented at the 41st Annual Meeting of the American Society of Pharmacognosy, Seattle, Washington, 2000.

PRESENTATIONS, continued

“Advancement in Antisense Technology: A Cell-Free Screening Method for the Identification of Accessible mRNA Binding Sites,” Seminar presented at the Rice University Graduate Research Seminar, Houston, Texas, 1999.

“Investigation of the Structure and Function of a Cycloartenol Synthase and The Cloning and Characterization of Genes in Ginkgolide B Biosynthesis,” Seminar presented at the Rice University Graduate Research Seminar, Houston, Texas, 1998.

“Cobalt-Mediated [2+2+2] Cycloadditions: An Approach to the *Ergot* and *Strychnos* Alkaloids,” Seminar presented at the University of California at Berkeley Graduate Research Seminar, Berkeley, California, 1995.

“Unusual Reactivity Patterns in Group XIII Macrocyclic Complexes,” Poster presented at the 48th Southwest Regional Meeting of the American Chemical Society, Lubbock, Texas, 1992, Abstract 43.

CHEMISTRY CHAIR ACTIVITIES and ACCOMPLISHMENTS

- ♦ Participated in the formation of the Lou and Ron Worland Chemistry Research Fund Endowment
- ♦ Launched Chemistry Ambassadors Program
- ♦ Proposed and initiated General Chemistry Peer Leaders
- ♦ Planned and promoted new Bioinformatics course
- ♦ Planned and promoted new Advanced NMR Applications course
- ♦ Initiated and organized creation of funded faculty and student summer research experience, ChemREx
- ♦ Implemented use of Unattended Experiment Form
- ♦ Established research collaborations and student internship opportunities with the U.S. Fish & Wildlife Service National Fish and Wildlife Forensic Laboratory
- ♦ Established student internship opportunities with Neilson Research Corporation
- ♦ Implemented Students Under the Influence Faculty Response Protocol and Students Under the Influence Policy Statement
- ♦ Led departmental discussions and planning for delivery of courses during COVID-19 pandemic
- ♦ Oversaw departmental curricular changes including allowing P/NP grade option for nonmajors
- ♦ Prepared and disseminated recruiting letter to regional high school STEM students
- ♦ Oversaw annual department budget
- ♦ Shadowed STEM Director during monthly budget meetings with Provost Office
- ♦ Prepared annual and six-year American Chemical Society Accreditation Department Reports
- ♦ Established student internship opportunities with Oregon State University Extension
- ♦ Developed and instituted equitable advising load distribution policy
- ♦ Prepared Department Course Enrollment Maximum Document in consultation with faculty and staff
- ♦ Organized and led annual department retreats and weekly department meetings
- ♦ Conducted and presented comprehensive review of Department financial accounts
- ♦ Established weekly departmental lunches
- ♦ Independently conducted unplanned faculty search
- ♦ Oversaw and participated in three new faculty searches
- ♦ Participated in one new staff search
- ♦ Provided in-depth mentoring to new and adjunct chemistry faculty and staff
- ♦ Reassigned and reorganized numerous chemistry offices and laboratories to maximize efficiency and usage
- ♦ Established and maintained Chemistry Department Student Food Pantry
- ♦ Administered Graduating Seniors Overall Program Evaluation Qualtrics Survey
- ♦ Established Chemistry Department faculty personnel and annual review committees
- ♦ Communicated with donors
- ♦ Prepared Chemistry Department faculty evaluations
- ♦ Contributed to Chemistry Department staff evaluations
- ♦ Prepared annual course planners
- ♦ Obtained funding for PEAK student: Science Media Development and Communications Assistant
- ♦ Upgraded Chemistry Department Conference Room
- ♦ Updated catalog entries
- ♦ Developed first chemistry articulation agreement with a community college: Southwestern Oregon Community College AS Chemistry to SOU BS Chemistry
- ♦ Organized video recording and wrote narrative for SOU360 Virtual Campus Tour of Science Building
- ♦ Obtained Affiliate Faculty Status for Dr. Tom Pratum
- ♦ Co-Led re-introduction of general education pre-health chemistry courses
- ♦ Mentored early career chemistry faculty and staff
- ♦ Designed and obtained chemistry promotional products including water bottles, back bags, and stickers
- ♦ Led the creation of the Julian Battaile Chemistry Scholarship

PROFESSIONAL AFFILIATIONS

- ◆ Higher Education Resource Services (HERS): Member, 2018-present
- ◆ Oregon Women in Higher Education: Member, 2017-present
- ◆ Chemistry Women Mentorship Network: Mentor, 2014-present
- ◆ National Science Foundation ADVANCE Alliance: Member, 2012-present
- ◆ American Society of Pharmacognosy: Member, 2010-present
- ◆ Sigma Xi: Member, 2002-2004
- ◆ Committee on the Advancement of Women Chemists (COACh): Member, 2001-present
- ◆ American Chemical Society: Member, 1994-present
- ◆ Friar Honor Society: Member, UT Austin, 1993-present
- ◆ Iota Sigma Pi National Honor Society for Women in Chemistry: Member, 1992-present

CHEMISTRY-RELATED COMMUNITY SERVICE ACTIVITIES

- ◆ American Association for the Advancement of Science Pacific Division 100th Annual Meeting: Chemistry Poster Session Judge, 2019
- ◆ Southern Oregon University Advocates for Women in Science, Engineering and Math Symposium — Science: A Force for the Future: Chemistry Workshop Presenter: Mystifying Chemistry of Everyday Materials, 2016
- ◆ Chemistry Women Mentorship Network: Mentor to Chemistry Doctoral Graduate Student, 2015-2016
- ◆ Grace Christian School, Medford, Oregon: Chemistry Experiment Designer, Demonstrator, and/or Instructor 2009 (two sessions), 2014 (four sessions), 2015 (five sessions)
- ◆ Southern Oregon High School and College Chemistry Instructors Meeting: Organizer and Meeting Facilitator, 2004
- ◆ River Oaks Elementary School, Houston, Texas: Chemistry Demonstrator, 2003
- ◆ ScienceWorks Hands-On Museum, Volunteer Committee: Member, 2002
- ◆ Ashland Middle School Science Fair, Ashland, Oregon: Student Advisor, 2001

PROFESSIONAL ACTIVITIES

- ◆ American Chemical Society Virtual Academic Leadership Training Workshop: Participant, 2021
- ◆ Western Oregon University, Department of Chemistry, Seven Year Program Review, External Reviewer, 2021
- ◆ “Recovering What was Stolen by Embracing the Process of Rebuilding” Reviewer, ADVANCE Journal, 2021
- ◆ Dr. Athenia Oldham, Department of Biology, University of Texas of the Permian Basin Tenure and Promotion to Associate Professor Application External Reviewer, January 2021
- ◆ “Why Disparity Persists: A Voice from the Race-Gender-Technology Movement” by Dr. Kimberly Scott, Book Proposal Reviewer, Oxford University Press, 2020
- ◆ “Emotional Intelligence and Effective Communication” Workshop, Southern Oregon University Continuing Education, October 17, 2019
- ◆ “New to Online: Essentials Part 1, Getting Started” Workshop, Online Learning Consortium, September 9-15, 2019
- ◆ “Executive Presence: Navigating Leadership Transitions” HERS Webinar by Bethany Zecher Sutton, Leadership Coach and Executive Search Consultant, May 9, 2019
- ◆ “Executive Presence: Best Practices in Responding to Difficult Questions” HERS Webinar by Deborah Davis, SpeechOne; April 11, 2019
- ◆ Campus Compact Oregon Summer Institute: Cultural Competency on Campus, 2018
- ◆ Higher Education Resource Services (HERS) Leadership Institute, 2018
- ◆ HERS Clare Boothe Luce STEM Program, 2018
- ◆ National Science Foundation: Advancing the Careers of Women in Science, Technology, Engineering, and Mathematics at Predominantly Undergraduate Institutions through Professional Networks/ASCEND (Advancing STEM Careers by Empowering Network Development) Meeting, 2017
- ◆ National Science Foundation Upping your Game Refresher Workshop: Participant, Committee on the Advancement of Women Chemists, 2017
- ◆ Organic Chemistry for Biology Majors and Pre-Meds One Semester Textbook Proposal Reviewer, W. W. Norton and Company, September 30, 2016
- ◆ “Chemical Educators: Safety Risks and Your Personal Liability” American Chemical Society Webinar by Neal Langerman, Ph.D., Chemical Safety Expert, Advanced Chemical Safety and Henry CiFuentes, Hays Affinity; September 30, 2016
- ◆ “Optimize Class Size Through Data-Informed Decisions” Education Advisory Board Academic Performance Solutions Webinar; September 29, 2016
- ◆ New Chairs Workshop, Southern Oregon University: Participant, July 2016
- ◆ Women’s Leadership Conference, Southern Oregon University: Participant, May 2016
- ◆ Diversity Advocates Training Workshops: Participant, March 2016
- ◆ “Digital for Organic Chemistry” McGraw-Hill Education Webinar by Ian Thomas, Ph.D., University of Minnesota, December 8, 2015
- ◆ Journal of Chemical Education: Reviewer, 2005-present
- ◆ “Harnessing Multidimensional Chromatography in Pharmaceutical Analysis” C&EN Webinar by C.J. Venkatramani, Ph.D., Senior Scientist, Small Molecule Analytical Chemistry and Quality Control, Genentech, Inc.; October 27, 2015
- ◆ “Science Communication in the Digital Media Age” C&EN Webinar by Nathan T. Allen, Ph.D., Moderator of reddit.com r/Science and Research Synthetic Organic Chemist, Angus Chemicals; June 11, 2015
- ◆ “Transforming the Undergraduate Chemistry Lab Using a Cloud Based Electronic Laboratory Notebook” C&EN Webinar by Brian Gilman, Head of Strategic Marketing, PerkinElmer and Layne Morsch, Ph.D., Associate Professor of Organic Chemistry, University of Illinois Springfield; June 11, 2015

PROFESSIONAL ACTIVITIES, continued

- ◆ “Advances in FTIR – How New Technology is Changing Infrared Analysis” C&EN Webinar by Frederic Prulliere, MBA, FTIR Business Development Manager, Agilent Technologies; May 1, 2015
- ◆ “Picking the Right Screening Strategy” C&EN Webinar by Dave Swinney, Ph.D., CEO, Institute for Rare and Neglected Diseases Drug Discovery; April 30, 2015
- ◆ “Making Plastic Greener Through Next Generation Polymers” C&EN Webinar by Marc Hillmyer, Ph.D., Professor and Director, Center for Sustainable Polymers, University of Minnesota; April 8, 2015
- ◆ “Organic Chemistry: Principles and Mechanisms” Webinar by Joel Karty, Ph.D., Associate Professor of Chemistry, Elon University; March 30, 2015
- ◆ “Fragment-Based Drug Design Strategies” C&EN Webinar by Daniel A. Erlanson, Ph.D., Co-Founder and President, Carmot Therapeutics, Inc.; March 19, 2015
- ◆ “Strategies to Improve Solubility of Drug Candidates” C&EN Webinar by Michael A. Walker, Ph.D., Senior Principle Scientist, Bristol-Myers Squibb; February 26, 2015
- ◆ “Raising Your Digital Profile” Workshop by Donnie Maclurcan, Ph.D., Affiliate Professor of Social Science, Southern Oregon University; February 6, 2015
- ◆ “Natural Product Chemistry: Benefits of Pterostilbene on Health, Memory, and Anxiety” C&EN Webinar by Agnes Rimando, Ph.D., USDA Agricultural Research Service; February 5, 2015
- ◆ “Designing Better Drug Candidates” C&EN Webinar by Paul D. Leeson, Ph.D., Director, Paul Leeson Consulting Ltd.; Richard Connell, Ph.D., Vice President of External Research Solutions, Pfizer; January 29, 2015
- ◆ Oregon State University: Interviewee, “Survey of Educational Techniques in Organic Chemistry Classrooms in Oregon,” November 24, 2014
- ◆ “Teach Students How to Learn: Metacognition is the Key!” Webinar by Sandra Yancy McGuire, Ph.D., Louisiana State University; November 20, 2014
- ◆ “The Future of Drug Discovery: Challenges, Risks, Rewards” C&EN Webinar by Jeff Zablocki, Ph.D., Gilead Sciences; Richard Connell, Ph.D., Vice President of External Research Solutions, Pfizer; October 30, 2014
- ◆ University of Alberta: External Evaluator of Dossier for Tenure and Promotion to Associate Professor of Organic Chemistry, Summer 2014
- ◆ 243rd National American Chemical Society Conference: Symposium Organizer and Presider, “Reaching Out: Chemistry Outreach Programs for High School and Community College Students,” San Francisco, California, August 2014
- ◆ Schrödinger Virtual Screening with Glide Molecular Modeling Workshop: Participant, University of California, San Francisco, Summer 2014
- ◆ National Science Foundation Medicinal Chemistry Workshop: Participant, Chemistry Collaborations, Workshops & Communities of Scholars, University of Minnesota Center for Drug Design, Summer 2013
- ◆ Iota Sigma Pi Members-at-Large Reentry Award: Selection Committee Member, Winter 2013
- ◆ National Science Foundation ADVANCE Project: Advancing the Careers of Women in Science, Technology, Engineering, and Mathematics at Predominantly Undergraduate Institutions through Professional Networks: Grant and Conference Participant, 2012-2016
- ◆ Vernier Software & Technology, Beaverton, Oregon: Chemical Polarimeter Consultant and Product Tester, 2011-2012
- ◆ Fifth Edition Organic Structures from Spectra Textbook by Field, Sternhell, and Kalman: Reviewer, 2011
- ◆ Southern Oregon University Annual Hands-On Forensic Chemistry Workshop: Organizer/Presenter, 2005-2011
- ◆ National Science Foundation Process Oriented Guided Inquiry Learning Workshop: Participant, POGIL Project, June 2008

PROFESSIONAL ACTIVITIES, continued

- ◆ National Science Foundation NMR Spectroscopy Workshop: Participant, Center for Workshops in Chemical Sciences, Spring 2007
- ◆ Second Edition Organic Chemistry Textbook by Clayden, Greeves and Warren: Consultant, 2007
- ◆ National Science Foundation Leadership Workshop: Participant, Committee on the Advancement of Women Chemists, 2006
- ◆ National Science Foundation Strategic Persuasion Workshop: Participant, Committee on the Advancement of Women Chemists, 2003
- ◆ New Faculty Mentor Program: Participant, Southern Oregon University, 2001-2002
- ◆ National Institutes of Health Survival Skills and Ethics Trainer of Trainers Conference: Participant, University of Pittsburgh, 2001
- ◆ Graduate Student Association Teaching Workshop Series: Participant, Rice University, 2000
- ◆ Cain Foundation Academic Course Development Workshop: Participant, Rice University, 2000
- ◆ JumpStart: A Women's Mentoring Network: Speaker/Participant, Rice University, 1999
- ◆ Chemistry Graduate Student Association: Member, Rice University, 1996-present
- ◆ Schlumberger Initiative for Women: Meeting Coordinator/Member, Rice University, 1996-1999
- ◆ Managerial Chemistry for Executives, Office of Executive Development: Advisor, Rice University, 1997
- ◆ Graduate Student Organization: Organic Chemistry Division Representative, UC Berkeley, 1994-1995
- ◆ Department of Chemistry External Review Committee: Senior Undergraduate Advisor, UT Austin, 1993
- ◆ Natural Sciences Council: Cabinet Assistant/Member, University of Texas at Austin, 1989-1993

SOUTHERN OREGON UNIVERSITY SERVICE ACTIVITIES

- ◆ SOU 150th Anniversary Planning Committee: Alumni and Donor Outreach: Fall 2021
- ◆ SOU Foundation Big Idea Resiliency Committee: Spring 2021
- ◆ STEM Division Office Specialist 2: Search Committee Chair, 2020
- ◆ STEM Division Biology/Chemistry Laboratory Preparator Search Committee: Member 2019
- ◆ AVP for Budget and Planning Search Committee: Member, 2018
- ◆ President's Athletic Advisory Council: Member, 2018 – present
- ◆ Faculty Sick Leave Bank Task Force: Organizer and Leader, 2017-2018
- ◆ Center for Instructional Support New Faculty Mentor Program: Faculty Mentor, 2016-2019
- ◆ SOU Raider Orientation and Registration: Chemistry Department Representative, Meet Your Faculty – 1st Year Events, 2016
- ◆ Ada Lovelace Day: “Increasing Diversity in STEM,” Panel Member, 2014
- ◆ SOU X Factor Pursuits and Accomplishments, 2013 - present:
 - Created Faculty Ombuds Office
<https://inside.sou.edu/faculty-ombuds/index.html>
 - Created Faculty Career and Life Benefits and Resources Webpage
<https://inside.sou.edu/hrs/faculty-benefits.html>
 - Increased the number of lactation rooms on campus
https://inside.sou.edu/assets/hrs/Lactation_Breaks-1.pdf
 - Advocated for increased workplace flexibility
CBA Article 20A1 and <https://inside.sou.edu/hrs/workplace-flexibility.html>
 - Advocated for loading for excessive advising
CBA Article 19C2l
 - Created the Distinguished Faculty Teaching Award
<https://inside.sou.edu/hrs/distinguished-staff-awards/Distinguished-Teaching-Award.html>
 - Created the Distinguished Faculty Service Award
<https://inside.sou.edu/hrs/distinguished-staff-awards/Distinguished-Service-Award.html>
 - Led to the creation of an Outstanding Staff Award for SOU Staff
<https://inside.sou.edu/hrs/distinguished-staff-awards.html#2018>
 - Proposed and obtained Faculty Senate approval for tenure clock, annual review, and colleague evaluation extensions
SOU Faculty Bylaws Section 5.220
<https://inside.sou.edu/assets/stem/math/senate/docs/constitution/Section5-bylaws-final.pdf>
 - Proposed (and adopted by Senate) that all teaching, scholarship, and service activities carried out since a faculty member's last promotion apply towards a future promotion application
SOU Faculty Bylaws Section 5.212cde
<https://inside.sou.edu/assets/stem/math/senate/docs/constitution/Section5-bylaws-final.pdf>
 - Submitted a Faculty Sick Leave Sharing Bank Proposal (Organized and led Sick Leave Bank Task Force) – resulted in adoption of Hardship Leave Sharing Policy for faculty and staff
APSOU CBA 2015-2018 Memorandum of Understanding
<http://ap-sou.org/>
 - Established weekly Faculty Walks Program
 - Submitted a Dual Career Support Proposal
 - Led selection of Faculty Ombuds, 2016, 2018, 2020
 - Established xfactor@sou.edu Email
 - Established X-Factor Advisory Board
 - Conducted Faculty Climate Survey

SOUTHERN OREGON UNIVERSITY SERVICE ACTIVITIES, continued

- ◆ SOU X Factor: Advancing the Careers of SOU's Underrepresented Faculty: Co-Founder and Co-Organizer, Meetings and Workshops: May 2013; September 2013; June 2014, and September 2014; March 2015, June 2015, January 2016, December 2016, June 2017, October 2017, November 2018, June 2019, December 2020, February 2021, May 2021
- ◆ Association of Professors, Southern Oregon University: Past-President, 2013; President, 2012; Collective Bargaining Team Member, 2011; President-elect, 2011; Treasurer, 2009-2010
- ◆ Southern Oregon Arts and Research Conference: Chemistry Laboratories Tour Leader, 2011
- ◆ Diversity Hire Search Committee: Member, 2010-2011
- ◆ Raider Registration for Freshman and Transfer Students: Advisor, 2009
- ◆ University Budget Committee: Member, 2008-2010
- ◆ Faculty Personnel Committee: Member, 2008-2010
- ◆ R.E. McNair Post-Baccalaureate Achievement Program: Advisory Council Member, 2007-2010
- ◆ College of Arts and Sciences Dean Search Committee: Member, 2008-2009
- ◆ College of Arts and Sciences Associate Dean Search Committee: Member, 2006-2007
- ◆ School of Sciences Tour Leader for Student Recruitment: 2006
- ◆ School of Sciences Personnel Committee: Chemistry Department Representative, 2005-2006
- ◆ ScienceWorks Hands-On Museum: SOU Chemistry Liason, 2005-2007
- ◆ Library Advisory Committee: Member, 2005-2007
- ◆ Environmental Education Masters Thesis Committee: Member, 2005
- ◆ Family Picnic: Volunteer, 2005
- ◆ Academic Standards Committee: Member, 2004-2005
- ◆ Academic Policies Committee: Member, 2003-2004
- ◆ Provost Search Committee: Member, 2002-2003
- ◆ Biotechnology Center: Co-Director, 2002-2003
- ◆ Competitive Scholarship Task Force: Member, 2001-2003
- ◆ Faculty Phone Campaign: Participant, 2002
- ◆ Pre-Pharmacy Student Advisor: 2002-2007, 2008-2012
- ◆ Preview Day: Chemistry Department Representative, 2002, 2004, 2005, 2010, 2013, 2014, 2015

SOUTHERN OREGON UNIVERSITY CHEMISTRY DEPARTMENT SERVICE ACTIVITIES_____

- ◆ Department of Chemistry Organic Chemist Faculty Search Committee: Member, 2022
- ◆ Department of Chemistry Analytical Chemist Faculty Search Committee: Member, 2021
- ◆ Led preparation of Department of Chemistry Academic Program Review, 2021
- ◆ Department of Chemistry Remote Graduation Celebration: Organizer and Host, 2020
- ◆ Department of Chemistry Biochemist Faculty Search Committee: Member, 2020
- ◆ Tour Guide: SOU Foundation Board of Trustees, 2020
- ◆ Organizer, Host, and Tour Guide: Crater High School, 2020
- ◆ Department of Chemistry Biochemist Adjunct Faculty Search Committee: Chair, 2019-2020
- ◆ Host: Chemistry New Student Orientation Welcome Session and Tour, 2018
- ◆ Departments of Biology and Chemistry Laboratory Preparator Search Committee: Member, 2018 & 2019
- ◆ Department of Chemistry Physical Chemist Faculty Search Committee: Member, 2017
- ◆ Department of Chemistry Physical Chemist Adjunct Faculty Search Committee: Chair, 2016-2017
- ◆ Department of Chemistry Organic Chemist Faculty Search Committee: Member, 2016-2017
- ◆ Host and Experiment Instructor: College of the Siskiyous, 2017
- ◆ Host, Tour Guide, and Experiment Organizer and Instructor: Kings Valley Charter High School, 2016
- ◆ Updated Chemistry Department Policy: Safety in the Advanced Chemistry Laboratories, 2016
- ◆ Ronald E. McNair Post-Baccalaureate Achievement Program, Chemistry Faculty Mentor, 2016-2018
- ◆ Department of Chemistry Inorganic Chemist Faculty Search Committee: Member, 2015-2016
- ◆ Alumni Ambassador Day: Chemistry Department Faculty Host, 2015
- ◆ Developed Chemistry Department Recommendation Letter Advice and Requirements Handout, 2015
- ◆ Majors/Minors Fair: Chemistry Department Representative, 2013
- ◆ Co-wrote Department's Program Prioritization Document, 2013
- ◆ Co-wrote Department's Promotion and Tenure Guidelines and Requirements, 2012
- ◆ Led development and implementation of Department's ELU Bank, 2011-2012
- ◆ Updated Department's Senior Portfolio Requirements Handout, Exit Form and Contact Form, 2011
- ◆ Annual Southern Oregon University Hands-On Forensic Chemistry Workshop: Organizer/Experiment Developer, 2005-2007, 2009-2011
- ◆ Friday Science Seminar Committee: Department Representative, 2004-2006
- ◆ Majors Fair: Chemistry Department Organizer, 2003
- ◆ Department Tour Leader for Student Recruitment: 2002, 2006, 2013
- ◆ Sharkey Scholarship Committee: Chemistry Department Representative, 2002-2003
- ◆ Sigma Xi Nominations Committee: Chemistry Department Representative, 2003, 2004
- ◆ Chemistry Majors Advisor: 2001-present
- ◆ Department Personnel and/or Colleague Evaluation Committees: Chair and/or Member, 2001-present

RESEARCH ADVISING

- “Extraction and HPLC Analysis of Catechins,” Stefan Schink, Laboratory Research Capstone, 2020-2022.
- “Quantitative Analysis of Drug Safety, Efficacy and Pharmacokinetics of Sugammadex, a Non-depolarizing Neuromuscular Reversing Agent, Utilizing Liquid Chromatography with Tandem Mass Spectrometry (LC-MS-MS),” Allyssa Wilhite, Literature Research Capstone, 2020-2021.
- “Antimalarial Properties of Artemisinin: Mechanism of Action and Anti-Resistance Efforts,” Danielle Green, Literature Research Capstone, 2019-2020.
- “The Use of Natural Products as Chemotherapeutic Agents: An alternative method for the treatment of cancer,” Maria Rojas, Literature Research Capstone, 2019-2020.
- “Identification of Psychoactive Anxiolytic Natural Products,” Ritikaa Kumar, Literature Research conducted in collaboration with Dr. Melissa Birkett, 2019-2020.
- “Determination of Chemical Attractants of Snake Prey: GC-MS Analysis of Hydrocarbon Swabs of Goldfish,” Tammy Hoffman, Laboratory Research conducted in collaboration with Dr. Mark Krause, 2019-2020.
- “Isolation and Characterization of *Pseudoalteromonas luteoviolacea* Antimicrobial Agents by Bioassay-Guided Fractionation,” Gabriel Braet, Laboratory Research Capstone, 2018-2020.
- “Determining Anti-Cancer Properties of *Mahonia aquifolium* using Crown Gall Disease and Chick Chorioallantoic Membrane Assays,” Nathaniel Hamel, Laboratory Research Capstone, 2018-2020.
- “Investigation of Antitumor Properties of Terpenoids from *Mahonia aquifolium*,” Sangbin Kim, Laboratory Research Capstone, 2017-2019.
- “Spectroscopic Characterization and Elucidation of β -Sitosterol as an Indicator of Climate Change and NMR Refinement,” Curtis Catron, Laboratory Research Capstone, 2016-2018.
- “Antioxidative Activity of Dietary Compounds and Probiotic Bacteria,” Galen Goode, Laboratory Research Capstone, 2016-2018.
- “Evaluation of Deep Eutectic Solvents as Extraction Media for Flavonoids in *Mahonia aquifolium*,” Ray Schireman, Laboratory Research Capstone, 2016-2018.
- “Determination of the Antitumor Properties of Terpenoids Isolated from *Mahonia aquifolium*,” Ashley Eldridge, Laboratory Research Capstone, 2015-2017.
- “Natural Products as Antioxidant Agents,” Daisy Proksch, Laboratory Research Capstone, 2015-2017.
- “Natural Product Isolation of Terpenoids from *Mahonia aquifolium* and Testing of *Agrobacterium tumefaciens* Induced Tumor Assay,” Joshua Cook, Laboratory Research Capstone, 2015-2016.
- “Physiological Pathways of Therapeutic Medications Used in the Treatment of Bipolar Disorder,” Chris Shawl, Literature Research Capstone, 2013-2014.

RESEARCH ADVISING, continued

“Investigation of Anticarcinogenic Constituents Present in *Mahonia aquifolium*,” Samantha Cobb, Laboratory Research Capstone, 2012-2014.

“Investigation of Alkaloid Constituents of *Mahonia aquifolium*,” Sydney Paulsen, Laboratory Research Capstone, 2012-2014.

“Isolation and Identification of Beneficial Soil Microbes,” Mark Weir, Laboratory Research Capstone, 2012-2014.

“Use of Heteronuclear Multiple Bond Correlation NMR Spectroscopy to Identify Organic Compounds,” Sarah Wagner, Laboratory Research Capstone, 2012-2013.

“Acquisition and Analysis of HMBC Data of Unknown Organic Compounds,” Shelby Temple, Laboratory Research Capstone, 2011-2013.

“Development of an HSQC 2D NMR Pulse Program for Use in the Identification of Unknown Organic Compounds,” Ashley Britten, Laboratory Research Capstone, 2010-2012.

“Catechins of *Mahonia aquifolium*: Techniques and Strategies for Detection, Isolation, Structure Elucidation and Measurement of Antioxidant Activity,” Jon Hatfield, Laboratory Research Capstone, 2010-2012.

“Secondary Metabolites Isolated from *Mahonia aquifolium* with an Emphasis on Terpene and Terpenoid Content,” Jesse Korber, Laboratory Research Capstone, 2010-2012.

“Investigation of the Alkaloid Content of *Mahonia aquifolium*,” Kristen Birmingham, Laboratory Research Capstone, 2009-2011.

“Isolation and Characterization of Natural Products from *Mahonia aquifolium*,” James Roberston, Laboratory Research Capstone, 2009-2011.

“Acquisition and Analysis of GC-MS and ^1H , ^{13}C , DEPT 135, COSY and HMQC NMR Spectral Data of Small Organic Molecules,” Susan Ramos-Hunter Laboratory Research, Fall 2009.

“Understanding the Telomerase Mechanism as a Cancer Diagnostic and Therapeutic Tool,” Matt Edinger, Literature Research Capstone, 2008-2010.

“Development of a Green Organic Chemistry Experiment,” Travis Ringo, Laboratory Research Capstone, 2008-2009.

“Potential Benefits of Anthocyanins for Type 2 Diabetics via Inhibition of α -Glucosidase and α -Amylase,” Britton Castor, Literature Research Capstone, 2005-2007.

“Development of Luminescence Demonstrations for Hands-On Science Museums,” Tiffany Smith, Laboratory Research Capstone, 2005-2007.

“UV-Induced DNA Damage,” Mae Arrington, Literature Research Capstone, 2004-2006.

RESEARCH ADVISING, continued

“Chemical Composition and Antibacterial Activity of Bay Laurel and Myrtle Essential Oils Against *Escherichia coli* DH5- α ,” Danielle Paradis, Laboratory Research Capstone, 2004-2006.

“Mechanistic Study of the Biochemical Response of Sweet Taste Receptors,” Gretchen Handke, Literature Research Capstone, 2003-2005.

“Deamidation of Asparagine Amide Side Chains in Pentapeptides,” Bethany Robinson, External Laboratory Research Capstone, 2003-2005.

“Correlation Between Interleukin-6 and Alzheimer’s Disease,” Sheena Rolston, Literature Research Capstone, 2003-2005.

“Development of a Guided-Inquiry Ring-Closing Metathesis Experiment,” Michelle Maynor, Laboratory Research Honors Capstone, 2003-2004.

“Development of Organic Chemistry Class Demonstrations,” Michelle Maynor, Laboratory Research, 2003-2004.

“Isolation and Structure Elucidation of a Cytotoxic Compound from Marine Microalgae,” Michelle Maynor, External Laboratory Research Capstone, 2002-2004.

“Development of a Guided-Inquiry Organic Chemistry Laboratory Experiment: Enzymatic Reduction of β -Ketoesters Using Baker’s Yeast,” Krystle Clark, Laboratory Research Capstone, 2002-2004.

“Role of DNA Methyltransferases in Cancer,” Kelly Flascher, Literature Research Capstone, 2002-2004.

“Glutamate Response of NMDA Receptors,” Jilleen Pfaaf, External Laboratory Research Capstone, 2002-2004.

“Gene Therapy: Stem Cell Transplantation,” Paul Oetinger, Literature Research Capstone, 2001-2003.

“Source Identification of Ivory Using Polymerase Chain Reaction,” Amber Runnels, External Laboratory Research Capstone, 2001-2003.

“Genetic Variation in Mitochondrial DNA of North American Black Bears from Idaho,” Laura Olson, External Laboratory Research Capstone, 2001-2002.

STUDENT RESEARCH CONFERENCE PRESENTATIONS

“Determination of Antitumor properties of Terpenoids isolated from *Mahonia aquifolium*,” Southern Oregon Arts and Research Conference Poster Session, 2019. Faculty Research Mentor: Sangbin Kim, Laboratory Research Poster Presentation.

“Spectroscopic Characterization and Elucidation of β -Sitosterol as an Indicator of Climate Change,” Southern Oregon Arts and Research Conference Poster Session, 2018. Faculty Research Mentor: Curtis Catron, Laboratory Research Poster Presentation.

“Antioxidant Activity of Dietary Antioxidants and Probiotic Bacteria,” Southern Oregon Arts and Research Conference Poster Session, 2018. Faculty Research Mentor: Galen Goode, Laboratory Research Poster Presentation.

“Evaluation of Deep Eutectic Solvents as Extraction Media for Flavonoids from *Mahonia aquifolium*,” Southern Oregon Arts and Research Conference Poster Session, 2018. Faculty Research Mentor: Ray Schireman, Laboratory Research Poster Presentation.

“Antitumor Properties of Terpenoids Isolated from *Mahonia aquifolium*,” Southern Oregon Arts and Research Conference Poster Session, 2017. Faculty Research Mentor: Ashley Eldridge, Laboratory Research Poster Presentation.

“*Mahonia aquifolium* Flavonoids as Antioxidant Agents,” Southern Oregon Arts and Research Conference Poster Session, 2017. Faculty Research Mentor: Daisy Proksch, Laboratory Research Poster Presentation.

“Analyzing the Structure of an Unknown Compound using FT-NMR Spectroscopy,” Southern Oregon Arts and Research Conference Poster Session, 2016. Ronald E. McNair Faculty Mentor: Nikole Gomez, Poster Presentation.

“Natural Product Isolation and Characterization of Terpenoids from *Mahonia aquifolium*,” Southern Oregon Arts and Research Conference Poster Session, 2016. Faculty Research Mentor: Joshua Cook, Laboratory Research Poster Presentation.

“Isolation, Characterization, and Bioactivity of Terpenoids Isolated from *Mahonia aquifolium*,” Southern Oregon Arts and Research Conference Poster Session, 2014. Faculty Research Mentor: Samantha Cobb, Poster Laboratory Research Poster Presentation.

“Bioactivity-Guided Natural Product Isolation: Synergy-Directed Fractionation of *Mahonia aquifolium*,” Southern Oregon Arts and Research Conference Poster Session, 2014. Faculty Research Mentor: Sydney Paulsen Poster, Laboratory Research Poster Presentation.

“Identification and Quantification Of Enzymatic Activity Among Plant Growth Promoting Rhizobacteria Expressing 1-Aminocyclopropane-1-Carboxylate Deaminase,” Southern Oregon Arts and Research Conference Poster Session, 2014. Faculty Research Mentor: Mark Weir, Laboratory Research Poster Presentation.

“Acquisition and Analysis of HMBC NMR Data of Unknown Organics for Organic Lab,” Southern Oregon Arts and Research Conference Poster Session, 2013. Faculty Research Mentor: Shelby Temple, Laboratory Research Poster Presentation.

STUDENT RESEARCH CONFERENCE PRESENTATIONS, continued

“Use of Heteronuclear Multiple Bond Correlation Nuclear Magnetic Resonance Spectroscopy to Identify Organic Spectroscopy Unknowns,” Southern Oregon Arts and Research Conference Poster Session, 2013. Faculty Research Mentor: Sarah Wagner, Laboratory Research Poster Presentation.

“Catechins of *Mahonia aquifolium*: Detection, Isolation and Antioxidant Characterization,” Southern Oregon Arts and Research Conference Poster Session, 2012. Faculty Research Mentor: Jon Hatfield, Laboratory Research Poster Presentation.

“Isolation of Secondary Metabolites from *Mahonia aquifolium*,” Southern Oregon Arts and Research Conference Poster Session, 2012. Faculty Research Mentor: Jesse Korber, Laboratory Research Poster Presentation.

“Isolation and Characterization of Natural Products from *Mahonia aquifolium*,” Southern Oregon Arts and Research Conference Poster Session, 2011. Faculty Research Mentor: James Roberston, Laboratory Research Poster Presentation.

“Isolation and Identification of Alkaloids from *Mahonia aquifolium*,” Southern Oregon Arts and Research Conference Poster Session, 2011. Faculty Research Mentor: Kristen Birmingham, Laboratory Research Poster Presentation.

RESEARCH SEMINARS ORGANIZED

“Cannabis and Cannabinoid Science – Past, Present and Future,” Jason Wilson, M.S., Owner, Natural Learning Enterprises, LLC, 2021.

“Electrochemical charge-storage in the context of aqueous power sources: Next-generation Zn-ion batteries with enhanced rechargeability and high-rate operation via 3D nanostructured electrodes and mixed salt electrolytes,” Megan B. Sassin, Ph.D., Research Chemist, US Naval Research Laboratory, 2021.

“Fixing CO₂ in anaerobic bacteria and a glimpse at the Chemistry of Color in Art,” Lisa Warner, Ph.D., Boise State University, 2019.

“Direct Determination of Transition Metal, Lanthanide, and Actinide M-X Bond Dissociation Energies: The First Step to Enhance Catalytic Material Design,” Jason Sorensen, Ph.D. Candidate, University of Utah, 2019.

“Using Infrared Spectroscopy to Solve Forensic, Industrial, and Biomedical Problems, i.e. “Why do I need to know all that stuff they’re talking about in Spec?” Mary Carrabba, Ph.D., Rogue Spectroscopy, LLC, 2019.

“Pier Pressure: The Social Brain of Fish,” Sarah Stednitz, Ph.D. Candidate, University of Oregon, Institute of Neuroscience, 2018.

“Dynamics and Structure of Ionic Liquids: Sustainable Solvents of the Future,” Heather Bailey, Ph.D. Candidate, Stanford University, Physical Chemistry Division, 2018.

“My Path in Science,” Jacob C. Miner, Ph.D., Post Doctorate Research Associate, Los Alamos National Laboratory Theoretical Biology and Biophysics Division, 2017.

“Crosslinking Chemistry for Polyethylene Cable Applications,” Thomas H. Peterson, Ph.D., Principal Research Scientist, The Dow Chemical Company, Organics, Polymers, and Organometallics Division, 2017.

“GIRK Channels, Fluorophores, and Proteomics: Probing Complex Systems with Chemical Biology,” Susan J. Ramos-Hunter, Ph.D., Post Doctorate Research Associate, Pacific Northwest National Laboratory Biological Sciences Division, 2017.

“Medical Applications of Magnetic Resonance Spectroscopy,” Brian C. Tryon, M.D., Medical Director, Deaconess Medical Center, Spokane, WA, 2017.

“Using Infrared Spectroscopy to Solve Forensic, Industrial, and Biomedical Problems,” Mary Carrabba, Ph.D., Rogue Spectroscopy, LLC, 2017.

“Japanese macaque encephalomyelitis: A Primate Model of Multiple Sclerosis,” Kristin Fitzpatrick, B.S., Research Assistant, Oregon Health and Science University, 2016.

“Materials Chemistry: How Structure Creates Function,” Michael H. Bartl, Ph.D., Associate Professor, University of Utah, Department of Chemistry, 2014.

“Chemistry in Commercial Beer Brewing,” Craig McPheeters, Proprietor and Master Brewer, Bricktowne Brewing Company, 2014.

RESEARCH SEMINARS ORGANIZED, continued

“Environmental, Epigenetic, and Genetic Factors Contributing to Human Neural Tube Defect Risk,” Deidre Krupp, Ph.D. Candidate, Department of Molecular Genetics and Microbiology, Duke University, 2013.

“Introduction to Commercial Beer Brewing,” Craig McPheeters, Proprietor and Master Brewer, Bricktowne Brewing Company, 2012.

“Pioneering New NMR Applications,” Jonas Buser, Pharmaceutical Scientist, Eli Lilly and Co., 2012.

“Medical Applications of Magnetic Resonance Spectroscopy,” Brian C. Tryon, M.D., The Medford Radiological Group, P.C., 2012.

“Infrared Microspectroscopy: Combining Spectroscopy and Microscopy to Solve Forensic, Industrial, and Biomedical Problems,” Mary Carrabba, Ph.D., Assistant Professor, Southern Oregon University, 2012.

“From SOU to Eli Lilly,” Recorded interview between Hala Schepmann and Jonas Buser, Pharmaceutical Scientist, Eli Lilly and Co., 2011.

“Forensic Science – Straight from the Lab,” Brady Boothe, Forensic Scientist, Oregon State Police, 2011.

“Drug Delivery Systems,” Jim Christie, Ph.D., Adjunct Professor, Southern Oregon University, 2007.

“Molecular Mechanisms of Myotonic Dystrophy: A Toxic RNA Molecule,” Andy Berglund, Ph.D., Associate Professor, University of Oregon, Institute of Molecular Biology, 2006.

“Misconceptions in Science,” Martha J. Kurtz, Ph.D., Associate Professor, Central Washington University, Department of Chemistry, 2006.

“Thermo-Mechanical Properties of Aluminum Alloy 6111,” George Quainoo, Ph.D., Assistant Professor, Southern Oregon University, 2006.

“Applications of Raman Spectroscopy in Criminal Investigations,” Mary Carrabba, Ph.D., Assistant Professor, Southern Oregon University, 2006.

“Architectural Colors: Manipulating Light in Photonic Crystals,” Michael H. Bartl, Ph.D., Assistant Professor, University of Utah, Department of Chemistry, 2006.

“Natural Product Synthesis: The World’s Best Jigsaw Puzzle,” Rich Carter, Ph.D., Associate Professor, Oregon State University, Department of Chemistry, January 2006.

“Recovery and Conservation of the Confederate Submarine HL Hunley Using Laser Scanning,” Doug DeVine, Founder and Owner, Pacific Survey Supply, Medford, Oregon, 2004.

“Searching for Novel Pharmaceuticals from Tropical Marine Algae and Cyanobacteria,” Bill Gerwick, Ph.D., Professor, Oregon State University, College of Pharmacy, 2003.

“Absorption and Biotransformation of Drug Molecules: Challenges to Drug Delivery,” Rosita Rodriguez, Ph.D., Assistant Professor, Oregon State University, Department of Pharmaceutical Sciences, 2002.

WORKSHOPS AND INFORMATIONAL SEMINARS ORGANIZED

“Summer of Science: Learn how SOU’s STEM students spent their summer to help inform your Summer 2022 planning!,” Panelists: Jack Diab, Megahn Distifeno, May Helms, Colton Noyes, Alejandro Robles, and Robert Running, 2021.

“Alumni Healthcare Panel Discussion,” Panelists: Taylor Anderson, MD; Caitlin Diefendorf, Allopathic Medical Student; Kari Kobayashi, PA-C; Samantha Randahl, NMD; Chris Shawl, DO, 2021.

“Picture a Scientist Virtual Panel Discussion II,” Panelists: Alma Rosa Alvarez, PhD, Professor of English; Alison Burke, PhD, Professor of Criminology and Criminal Justice; Brie Paddock, PhD, Associate Professor of Biology; Jacki Strenio, PhD, Assistant Professor of Economics; Susan Walsh, PhD, Provost and Vice President for Academic Affairs, Professor of Communication. Office of the Provost and STEM Division, Southern Oregon University, 2021.

“Picture a Scientist Virtual Panel Discussion I,” Panelists: Alison Burke, PhD, Professor of Criminology and Criminal Justice; Arielle Halpern, PhD, Assistant Professor of Biology and Environmental Education; Christopher Lucas, Senior Instructor of Communication; Priscilla Oppenheimer, Adjunct Faculty, Computer Science; Jacki Strenio, PhD, Assistant Professor of Economics; and Maggie Vanderberg, PhD, Associate Professor of Computer Science. Friday Science Seminar Series, Southern Oregon University, 2021.

“Meet an Alumna,” Heather Bailey, Ph.D. Candidate, Stanford University, Physical Chemistry Division, 2018.

“STEM Professional Communications Workshop II: Content Planning, Design and Use of Visuals, Question and Answer Sessions,” Stacy Ferratti Communications Trainer and Coach, 2017.

“Industrial Career Paths for Chemists at The Dow Chemical Company,” Thomas H. Peterson, Ph.D., Principal Research Scientist, The Dow Chemical Company, Organics, Polymers, and Organometallics Division, 2017.

“Medical Applications of Magnetic Resonance Spectroscopy,” Brian C. Tryon, M.D., Medical Director, Deaconess Medical Center, Spokane, WA, 2017.

“STEM Professional Communications Workshop I: Delivery Skills, Audience Analysis, and Presentation Openings,” Stacy Ferratti Communications Trainer and Coach, 2017.

“Have you considered becoming a chemistry teacher or working in a chemical industry?” Britton Castor, M.A.T., AP Biology, AP Chemistry, & AP Environmental Science Teacher, Kings Valley Charter School, previously Research and Development Senior Chemistry Associate with AVI BioPharma Inc. (currently Sarepta Therapeutics), 2016.

“Naturopathic Medicine: A Holistic Approach Worth Pursuing” Piper Dobner, Chemistry B.S., SOU Class of 2012; Naturopathic Doctoral Student, National College of Natural Medicine; Integrative Medicine Research Master of Science Graduate Student, Helgott Research Institute, 2015.

“My Experience Working at PeaceHealth Laboratories” Tim Kee, ACS Forensic Chemistry B.S., SOU Class of 2014; Toxicology Lab Assistant Technical in Drug Testing Services, PeaceHealth Laboratories, 2015.

“Supporting SOU's Female Faculty and Facilitating their Professional Advancement and Promoting Institutional Support for Career-Life Balance” Organizers/Facilitators: Carol Ferguson, Ph.D., Hala Schepmann, Ph.D. and Erin Wilder, Ed.D. SOU Instructional Institute Workshop, 2014.

WORKSHOPS AND INFORMATIONAL SEMINARS ORGANIZED, continued

“What Works for Women at Work” by the Tools for Change Project; SOU X-Factor Meeting Co-Organizer, 2014.

“Thinking of Pursuing a Graduate Degree in Chemistry?” Michael H. Bartl, Ph.D., Associate Professor, University of Utah, Department of Chemistry, 2014.

“Three Decades of Research at the National Institutes of Health: Chemistry and Medicine” Paul Torrence, Ph.D., Emeritus Professor of Chemistry and Biochemistry, Northern Arizona University, 2013.

“Have you considered becoming a chemistry teacher or working in a chemical industry?” Britton Castor, B.S., AP Biology & AP Chemistry Teacher, Kings Valley Charter School, previously Research and Development Senior Chemistry Associate with AVI BioPharma Inc. (currently Sarepta Therapeutics), 2013.

“SOU X-Factor: Advancing the Careers of SOU’s Female Faculty” Facilitators: Carol Ferguson, Ph.D. and Hala Schepmann, Ph.D. Panelists: Alma Rosa Alvarez, Ph.D, Anne Chambers, Ph.D, Melissa Geppert, Ph.D, Laurie Kurutz, Ph.D, and Erin Wilder, Ed.D. SOU Instructional Institute Workshop, 2013.

“SOU X-Factor: Advancing the Careers of SOU’s Female Faculty” Carol Ferguson, Ph.D. and Hala Schepmann, Ph.D., STEM Faculty Meetings, 2013.

“Pharmacy: Diverse Opportunities to Improve Health and Wellness,” Gary DeLander, Ph.D., R. PH., Executive Dean and Chair, Department of Pharmaceutical Sciences; Angela Austin Haney, Ed.M., Director of Student Services, Oregon State University, 2013.

“Magnetic Resonance Imaging On-Site Tour,” Brian C. Tryon, M.D., The Medford Radiological Group, P.C., 2012.

“Have you considered becoming a Physician Assistant: Physician Assistant Graduate School Informational Session,” Kari Kobayashi, Graduate Student, Department of Physician Assistant Studies, Idaho State University, 2011.

“Become a Doctor of Pharmacy: Pharm. D. Admissions Workshop,” Jeffrey T. Ruder, Academic Advisor, College of Pharmacy, Oregon State University, 2011.

“Thinking of Going to Pharmacy School: Professional Pharmacy Program Informational Session,” Lindsay Christensen, Pharm.D., Director of Experiential Education and Sarah Brown, Pharm.D., Assistant Professor, School of Pharmacy, Pacific University, 2010.

“Have you considered becoming a Physician Assistant: Physician Assistant Graduate School Informational Session,” Kari Kobayashi, Graduate Student, Department of Physician Assistant Studies, Idaho State University, 2010.

“Thinking of Going to Pharmacy School: Professional Pharmacy Program Informational Session,” Gary DeLander, Ph.D., R. PH., Chair, Department of Pharmaceutical Sciences, Oregon State University, 2002, 2003, 2006, 2009.