

# Crystal Lederhos Smith, PhD

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## EDUCATION

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Doctorate of Philosophy, Prevention Science, Fall 2019

Washington State University

Dissertation: *Risk and Protective Factors in Adolescent Marijuana and Tobacco Co-use: An examination using variable- and person-centered methods.*

Master of Science, *Summa Cum Laude*, Family and Consumer Sciences, Spring 2012

University of Idaho

Thesis: *Intergenerational Transmission of Feeding Practices and Styles: Adult-controlled or cooperative feeding in parent-child relationships across generations.*

Bachelor of Arts, *Summa Cum Laude*, Psychology, Spring 2008

Gonzaga University

## PROFESSIONAL POSITIONS

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### Assistant Professor

Washington State University Elson S Floyd College of Medicine – Spokane, WA, July 2023-Present

Washington State University Prevention Science Program – Pullman, WA, May 2024-Present

Lead PI: Laboratory for Innovations in Therapeutics, Jan 2024-Present

Program Director: Analytics and PsychoPharmacology Laboratory, Sept 2023-Jan 2025

### Assistant Research Professor

Washington State University – Spokane, Washington, January 2020-July 2023

Program Director: Analytics and PsychoPharmacology Laboratory, Sept 2020-2023

### Adjunct Faculty

Gonzaga University – Spokane, Washington, August 2019-December 2020

### Clinical Research Supervisor

Washington State University – Spokane, Washington, May 2014-January 2020

*Responsibilities:*

- Supervise research studies, study coordinators, and research assistants
- Assist with grant development and writing
- Assist in designing, implementing, and evaluating protocol for studies
- Develop databases: enter, evaluate, and analyze clinical data using quantitative and qualitative methods
- Prepare manuscripts for journals and presentations for conferences
- Develop/maintain connections with community partners such as hospitals and clinics
- Contact, screen, consent, and engage with participants throughout studies

### Research Assistant

Washington State University – Program of Excellence in Addictions Research, Spokane, Washington, 2013-2014

#### Research Project Involvement:

- Contingency Management for Methamphetamine and Prescription Opioid Use Utilizing Sleep Actigraphy and Psychomotor Vigilance Tasks - A Pilot Study (Washington State University, PI: McPherson)
- Nurses' Perceptions of Mothers Who Abuse Opioids During Pregnancy and Post Labor (Washington State University, PI: Michelle Shaw)

### **Mental Health Specialist & Research Educator**

Kootenai Behavioral Health – Youth Acute Unit, Coeur d'Alene, Idaho, 2011-2014

#### **Responsibilities:**

- Train and supervise new employees as a preceptor
- Develop and teach research courses to hospital staff
- Lead educational groups and provide one to one support for patients
- De-escalate patients who have become upset or violent, suicidal, or homicidal

### **Psychosocial Rehabilitation Specialist & Service Coordinator**

Mental Wellness Clinic of Coeur d' Alene, Coeur d' Alene, Idaho, 2008-2011

#### **Responsibilities:**

- Supervise staff and facilitate staffing meetings
- Assist clients in meeting psychiatric, medical, social, and familial health goals
- Act as a resource for patients who became suicidal or homicidal
- Write care plans and periodic reviews per Medicaid requirements

### **Research Assistant**

US Army Research Institute of Environmental Medicine, Spokane, Washington & Little Rock, Arkansas, 2008

#### **Research Project Involvement:**

- Jet Fuel Exposure Among Military Personnel (US Army Research Institute of Environmental Medicine, PI: Proctor)

### **Subject Pool Coordinator and Research Assistant**

Gonzaga University, Spokane Washington, 2008

## **TEACHING**

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<b>2022-present</b> Lecturer	Introduction to Quantitative Methods, Med Scholar 500 Large Group Presentation Elson S. Floyd College of Medicine, Washington State University, Spokane, WA Medical School Course
<b>2020-2021</b> Instructor	Epidemiology and Biostatistics for Health Professions, Nursing 554 College of Nursing, Washington State University, Spokane, WA Graduate Level Course
<b>2020</b> Facilitator	Evidence Based Medicine Small Group Facilitation, FMS 502 Elson S. Floyd College of Medicine, Washington State University, Spokane, WA Medical School Course
<b>2018, 2020, 2021</b> Instructor	Analytical Foundations for Health Sciences, Nursing 526 College of Nursing, Washington State University, Spokane, WA Graduate Level Course

<b>2020-2021</b> Instructor	Association, Group Differences and Regression Techniques, Nursing 527 College of Nursing, Washington State University, Spokane, WA Graduate Level Course
<b>2018-2020</b> Instructor	Lifespan Development, Psychology 357 Gonzaga University, Spokane, WA Undergraduate Level Course
<b>2018</b> Co-Instructor	Analytical Foundations for Health Sciences, Nursing 526 College of Nursing, Washington State University, Spokane, WA Graduate Level Course
<b>2017</b> Guest Lecturer	Biostatistics Lab, Special Topics in Health Policy and Administration, HPA 599 Health Policy and Administration, Washington State University, Spokane, WA Graduate Level Course
<b>2014</b> Instructor	Evidence Based Practice: Formulating PICOT Questions and Evaluating the Evidence Kootenai Health, Coeur d'Alene, Idaho Professional Continuing Education Course

#### RESEARCH GRANTS AND CONTRACTS AS PI or CO-I (ACTIVE)

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<b>NIH/NIDA</b> 1/01/25–12/31/29 Role: PI	<b>K01DA060359 (PI: Smith) (\$951,600)</b> <i>Pharmacogenomic Testing to Optimize Opioid Use Disorder Treatment: Acceptability and Feasibility Trial.</i> The objective of this study is to develop educational materials on pharmacogenomics relative to opioid use disorder treatment and complete an acceptability and feasibility trial of pharmacogenomics in opioid use disorder treatment.
<b>WSU ADARP</b> 07/01/24 – 6/30/26 Role: PI	<b>Grant # Not Available (PI: Smith) (\$30,000)</b> <i>Off Target Effects of Varenicline and Contingency Management in Multi-substance Users; Effects on cannabis use in smokers with alcohol use disorder.</i> The objective of this study is to examine off-target effects of varenicline administration on cannabis use and craving in smokers with alcohol use disorder.
<b>Washington State</b> 10/01/23–10/01/25 Role: Co-Investigator / Biostatistician	<b>No Grant Number Available (PI: Sackett) (\$1,480,000)</b> The Center for Novel Therapeutics in Addiction Psychiatry; University of Washington <i>Psilocybin-Assisted Psychotherapy for Co-Occurring AUD and PTSD (Psi-PS): A Clinical Trial</i> This is a placebo-controlled, randomized clinical trial funded by the state of Washington to explore the safety and feasibility of psilocybin, paired with psychotherapy to treat Veterans and First Responders with both PTSD and AUD. While there is increasing interest in psilocybin and other psychedelics for individual pathologies, there is a growing need to explore the effects of

psilocybin on co-occurring disorders. Funding (additional \$75,000) will extend into 2026 with phase 2.

**NIH/NIDA**

03/01/25 – 02/29/32

Role: Biostatistician

**2 UG1DA013714-24 (MPI: Roll, Hatch-Maillette)** (\$6,000,000; WSU \$349,026)*Clinical Trials Network: Pacific Northwest Node*

The goal of this project is to conduct studies of the therapeutic effect of behavioral, pharmacological, and combined/integrated treatment interventions in rigorous, multi-site clinical trials to determine the effectiveness across a broad range of community-based treatment settings and diversified populations, and to ensure the transfer of research results to physicians, clinicians, providers, policy makers, and patients.

**NIH/NIOGMS / Northwest Indian College**

04/01/21-07/31/26

Role: Co-Investigator

**1 S06GM142130 (PI: McDonell)** (\$928,913 subaward)*Association Between Cannabis and Pain Outcomes in a Tribally Operated Clinic*

We will conduct a quantitative and qualitative mixed methods study to assess how cannabis impacts pain intensity and interference in a sample of n=350 patients seeking care at the Qwibil clinic.

**Institute of Educational Sciences (IES)**

09/01/22 – 08/31/27

Role: Co-Investigator

**Grant # Not Available (PI: Salazar)** (\$3,822,174)*Multi-Site Randomized Controlled Trial of Better Futures Postsecondary Access Intervention for Youth in Foster Care*

The goal of this study is to assess the efficacy of the Better Futures program in increasing postsecondary enrollment, persistence, performance, and progress through a fully powered, multi-site randomized controlled trial.

**RESEARCH GRANTS/CONTRACTS AS PI or CO-I (PENDING AND UNFUNDED; 2024, 2025)****NIH/NIDA**

07/01/26 – 06/30/31

Role: Co-Investigator

**UG1 DA013714 (PI: Sackett)** (\$4,051,323)*Ketamine Assisted Buprenorphine Induction (CTN CONCEPT)*

The goal of this study is to complete an RCT to evaluate the addition of ketamine to the initiation of buprenorphine treatment for opioid use disorder. Submitted 9/15/25

**NIH/NIDA**

04/01/26 – 03/31/28

Role: Co-Investigator

**R21 (PI: Fitzpatrick, Hatch)** (\$6,230,026)*Measuring the Impact of New Harm Reduction Tools on Syringe Service Program and Co-Located Healthcare Engagement (aka The AMPS UP Study – Alternative Materials to Promote Safer Use and Participation)*

The goal of this study is to evaluate the impact of pipe distribution through syringe services programs to increase client engagement and uptake of co-located services to improve HIV and substance use disorder care.

Submitted 7/5/25

- NIH/NIDA** **R43/R44 SBIR (PI: McPherson)** (\$1,095,914)  
 12/01/25 – 11/30/28 *Clinical Decision Support Tool (CDS) Utilizing Artificial Intelligence (AI) for the Treatment of Opioid Use Disorder (OUD)*  
 Role: Sr./Key Personnel  
 The goal of this study is to use AI to build an clinical decision support tool for medical providers to enhance their ability to effectively treat OUD.  
 Submitted 2/6/25
- NIH/NIDA** **R34 (PI: Burduli)** (\$688,500)  
 1/01/26 – 12/31/28 *Building Provider Competency to Enhance Perinatal Outcomes in OUD*  
 Role: Co-Investigator  
 This R34 project will be developing and pilot testing an online training tool, competency assessment, and adherence checklist for medical providers to optimally support perinatal women experiencing opioid use disorder.  
 Submitted 2/17/25
- NIH/NIAAA** **R01 (PI: McPherson)** (\$3,853,459)  
 04/01/25 – 03/31/30 *Daridorexant for the Treatment of Alcohol Use Disorder Using the Addictions Neuroclinical Assessment Framework*  
 Role: Co-Investigator  
 The goal of this study is to complete a double-blind, placebo-controlled RCT to evaluate the ability of DX to significantly decrease alcohol use among treatment-seeking AUD adults.  
 Submitted 8/12/24 - Denied 8/6/25  
 Resubmission in progress
- NIH/NIDA** **UG1 DA013714 (PI: Saxon)** (\$5,565,371)  
 07/01/25 – 06/30/30 *The Effectiveness of Supplemental Hydromorphone on Methadone Treatment Retention (CTN CONCEPT)*  
 Role: Co-Investigator  
 The goal of this study is to complete an RCT to evaluate the addition of oral hydromorphone to methadone during the 6-week initiation and stabilization phase of methadone maintenance therapy compared to traditional initiation with methadone alone.  
 Submitted 11/11/24 - Denied  
 Revision in progress for submission to another mechanism.
- NIH/NIDA** **R01 (PI: McPherson)** (\$3,423,310)  
 04/01/26 – 03/31/31 *Digital Contingency Management to Scale Health Disparate Community-Based Naloxone Carriage Promotion Programs*  
 Role: Co-Investigator  
 This proposal will develop (Years 1-2) and test (Years 3-6) an app based take-home naloxone promotion program that utilizes CM to increase naloxone carriage rates among community members among disparate communities. The solution will build on an existing commercial CM administration platform and a digital health app designed to track and objectively verify take-home naloxone carriage rates among diverse communities.  
 Submitted 8/8/25 - Denied

**NIH/NICHD**

01/01/25 – 12/31/29  
Role: Co-Investigator

**R01 (PI: Ross) (\$3,142,052)**

*Transitional Food Properties and the Impact on Eating Behaviors and Oral Management in Children with Down Syndrome*

The project will employ a large home-use test to link transitional food textures with eating behaviors and sensory responsiveness of children with DS to develop evidence-informed guidance to introduce food textures that match the child's skills. The proposed work will lead to a reduction in challenging eating behaviors and increased acceptance of foods and provide the first public health guidance that address food texture sensitivities for this population.

Submitted 2/5/24 - Denied

**NIH/NIDA**

07/01/25 – 06/30/30  
Role: Co-Investigator

**UG1 DA013714 (PI: Fitzpatrick, Hatch) (\$6,230,026)**

*Measuring the Impact of New Harm Reduction Tools on Syringe Service Program and Co-Located Healthcare Engagement (aka The AMPS UP Study – Alternative Materials to Promote Safer Use and Participation; CTN CONCEPT)*

The goal of this study is to evaluate the impact of pipe distribution through syringe services programs to increase client engagement and uptake of co-located services to improve HIV and substance use disorder care.

Submitted 2/5/25 - Denied

**NIH/NIDA**

01/01/25 – 12/31/30  
Role: Co-Investigator

**R61/R33 (MPI: Bengisu, McPherson, Rodin) (\$5,280,000)**

*A digital contingency management platform to implement scalable health disparate community-based naloxone promotion programs*

This project will engage with communities at high risk of overdose deaths to develop a technology delivered naloxone promotion program using contingency management, build a scalable technology infrastructure to collect and share data with communities and to implement naloxone promotion program across multiple communities and test the feasibility of the program.

Submitted 3/20/24 - Withdrawn due to technical issue

**NIH/NIDA**

07/01/24 – 06/30/27  
Role: Co-Investigator

**R43/R44 SBIR (PI: McPherson) (\$1,397,112)**

*Digital Software Therapeutic for Opioid Disorder Patients on Buprenorphine/Naloxone*

This Fast-Track project will of tailor (Phase I) and test (Phase II) a \$40, 4G cellular-enabled smart container and communication platform designed to monitor and increase BUP/NAL adherence with the assistance of a “helper” (e.g., professional care team member, counselor, family member) to increase medication adherence, increase treatment engagement and reduce use of non-prescribed substances.

Submitted 2/6/24 - Denied

**NIH/NIDA**

4/1/25 – 3/31/30  
Role: Co-Investigator

**R01 (PI: Saskin) (\$3,314,161)**

*Daridorexant for adherence to buprenorphine*

Double-blind, placebo-controlled study to evaluate the effect of daridorexant on buprenorphine adherence in patients with opioid use disorder undergoing medication-assisted treatment.

**Office of Minority Health**

08/01/24 – 07/31/29

Role: Co-Investigator

**Grant # Not Available (PI: Eastlund) (\$772,878)***Mobile Medical Unit*

The goal of this project is to increase the insured rate of undocumented people in the Tri-Cities area.

Submitted 5/15/2024

**RESEARCH GRANTS AND CONTRACTS AS PI or CO-I (COMPLETED)**

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**NIH/NIDA**

10/01/23–9/30/24

Role: Supplement MPI

**5UG1DA013714-21 Supplement (MPI: Roll, Hatch-Maillette; Supplement MPI: Smith, McPherson, Saxon) (\$97,557)**

*Cocaine Craving and Use Outcomes Secondary Analysis of a Randomized Study to Test the Safety and Effectiveness of Buprenorphine in the Presence of Naltrexone for the Treatment of Cocaine Dependence.*

Supplement to the Clinical Trials Network for a secondary data analysis of CTN 0048, "A randomized study to test the safety and effectiveness of buprenorphine in the presence of naltrexone for the treatment of cocaine dependence." The primary goal of this investigation is to examine relationships between cocaine craving and multiple substance use outcomes while accounting for heterogeneity in both craving and use patterns over time.

**NIH/NHGRI**

11/02/22-10/31/23

Role: Supplement MPI

**1U01HG011167-01 Supplement (PI: Limdi/Cimino, Supplement MPI: Smith, May) (\$128,711)**

*Integrating Genomic Risk Assessment for Chronic Disease Management in a Diverse Population*

Participation in genomic screening and research are often lower among populations whose historical interactions with both the biomedical research community and with broader social institutions have fostered distrust. Using qualitative content analysis, we will examine the Ethical, Legal and Social Implications of this distrust. We will then conduct a nationwide survey to determine whether there are statistically significant differences in trusted sources of a) medical and b) genomic screening information.

**WSU ADARP**

07/01/22 – 12/31/23

Role: Co-Investigator

**Grant # Not Available (PI: Austin) (\$30,000)**

*Mitigation of Disinformation Effects on Substance Use*

This study will provide necessary preliminary evidence and will demonstrate productive relationships and publications among members of a recently formed multidisciplinary group of scholars, thus increasing the potential to attract external funding to further examine the hypothesized theoretical model in larger, longitudinal studies, and to test subgroup-targeted interventions to decrease substance use risks.

<p><b>Department of Veteran's Affairs (VA)</b> 10/01/20 – 09/30/23 Role: Co-Investigator</p>	<p><b>ORH-15531 (PI: Lovejoy) (\$300,662)</b> <i>Collaborative Pain Care for Rural Veterans with Substance Use Disorders</i> This program will yield a manualized pain treatment program that can be delivered to rural Veterans receiving VHA care across the U.S. through the VA Office of Rural Health Rural Promising Practices program or other implementation mechanism. An implementation tool kit will also be developed to aid future VHA sites that wish to adopt this collaborative pain program within their health care systems and medical centers.</p>
<p><b>WSU ADARP</b> 01/01/21-07/31/22 Role: MPI</p>	<p><b>Grant # Not Available (MPI: Smith/McPherson) (\$30,000)</b> <i>Genetic and environmental influences on the relationships between smoking and cannabis co-use and smoking and alcohol co-use and their association with chronic pain: a twin study.</i> The objective of this study is to better understand the role of genetic and environmental factors on the associations between the co-use of alcohol and tobacco (in the form of cigarette smoking) and cannabis and tobacco (in the form of cigarette smoking) with chronic pain.</p>
<p><b>NIH/NIDA</b> 02/01/21-06/30/21 Role: Co-Investigator</p>	<p><b>3K01DA051780-01S1 (Burduli) (\$17,453)</b> <i>Supplement to Effective Caregiving for Neonatal Abstinence Syndrome: Development of an Instructional Mobile Technology Platform for High-Risk Pregnant Women</i> This study involves adaptation of an existing mobile NAS tool for clinician training and decision support to high-risk pregnant women, based on the recommendations on the management of NAS by neonatology experts, NAS care providers, and mothers with NAS-affected babies gathered through a series of interviews.</p>
<p><b>WSU ADARP</b> 2019-2021 Role: Co-Investigator</p>	<p><b>Grant # Not Available (PI: Barbosa-Leiker) (\$25,000)</b> <i>Perceptions of risks and benefits of marijuana use during pregnancy in urban and reservation-based American Indian women</i> The primary goal of this study is to understand the perceptions of pregnant urban and reservation-based American Indian women.</p>
<p><b>WSU ADARP</b> 11/28/17 – 06/30/19 Role: Co-Investigator</p>	<p><b>Grant # Not Available (MPI: Shaw, Katz) (\$22,500)</b> <i>Youth Perceptions of Marijuana Use: A Grounded Theory Exploration</i> The primary goal of this project is to learn more about youth perceptions of marijuana use directly from youth in the community to better understand the current culture and beliefs surrounding marijuana.</p>
<p><b>WSU ADARP</b> 01/01/18 – 06/01/19 Role: Co-Investigator</p>	<p><b>Grant # Not Available (PI: McPherson) (\$25,000)</b> <i>Predictors of Cannabis and Tobacco Co-Use Using the Population Assessment of Tobacco and Health (PATH) Study</i> The major goal of this project is to examine patterns of marijuana use and how it overlaps with use of tobacco among adolescents. Our goal is to examine potential moderators and mediators in a longitudinal examination of cannabis and tobacco co-use using a large, publicly available dataset.</p>

**Educational Service District (ESD) 101 and Spokane Regional Health Department** **Grant # Not Available (PI: Shaw) (\$7,733)**  
 Subcontract to Educational Service District (ESD) 101 and Spokane Regional Health Department  
*Youth Substance Use Cessation Online Tool Needs Assessment*  
 2015  
 The goal of this project is to evaluate an online substance use cessation tool.  
 Role: Co-Investigator

**Northeast Washington Educational Service District 101** **Grant # Not Available (MPI: Barbosa-Leiker, Shaw) (\$30,475)**  
 Sponsored Project Agreement  
*Online Alternative to Suspension for Tobacco, E-Devices, and Marijuana Infractions.*  
 2015  
 The goal of this project is to evaluate changes in suspension rates based on use of an online substance use cessation tool.  
 Role: Co-Investigator

## RESEARCH GRANTS AND CONTRACTS – ROLE OTHER THAN CO-I

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**NIH/NCI** **R01 CA252185 (McPherson) (\$3,345,705)**  
 04/01/21-03/31/26  
 Role: Program Director  
*An Addictions Neuroclinical Assessment Based Treatment for Smokers with an Alcohol Use Disorder*  
 Our aim is to investigate the combined implementation of two highly promising treatments for comorbid alcohol and nicotine addiction – contingency management and varenicline – as a high-intensity intervention to treat drinking and smoking simultaneously.

**NIH/NIAAA** **R01 AA028796 (McPherson) (\$3,159,687)**  
 09/15/20-07/31/25  
 Role: Program Director  
*Zonisamide for the Treatment of Alcohol Use Disorder in the Addiction Neuroclinical Assessment*  
 Our aim is to investigate zonisamide as a novel therapy for the treatment of alcohol use disorder using objectively verified urinary abstinence with EtG cups among patients with an alcohol use disorder who will also receive standard, bibliotherapy treatment.

**NIH/NHGRI** **1U01HG011167-01 (Limdi/Cimino) (\$ 6,756,456)**  
 2020-2022  
 Role: Qualitative Analyst  
*Integrating Genomic Risk Assessment for Chronic Disease Management in a Diverse Population*  
 In the United States, 60% of adults have at least one chronic disease such as heart disease, cancer, and diabetes and 40% have two or more. Although research has identified genomic signatures of common diseases, these genomic risk assessments are not used in clinical care to identify, and if appropriate, pre-treat patients at high risk for developing disease. The project aims to establish methods to implement genomic risk assessment and management in clinical care is the vital first step to leverage the power of genomics to prevent disease.

**Department of Veteran's Affairs (VA)** **I01 HX002518 (Lovejoy) (\$1,096,213)**  
 01/01/19-12/31/23  
 Role: Biostatistician  
*Chronic Pain Management and Patient-Centered Outcomes Following Discontinuation of Long-Term Opioid Therapy*  
 The objective of this study is to characterize patient experiences with the opioid discontinuation process and examine acute, intermediate, and long-term changes in quality-of-life following discontinuation of long-term opioid therapy.

**NIH/NIDA**

09/30/19-09/29/22

Role: Research  
Supervisor**R44 DA977631 (McPherson, LeBrun) (\$1,840,869)***Connected Pharmacy Platform to Improve Adherence to New Buprenorphine-Naloxone Prescription Treatment of Opioid Use Disorder*

This Fast Track proposal is designed to test, modify, and refine a novel medication adherence tool designed specifically for individuals receiving buprenorphine/naloxone.

**NIH/NIAAA**

04/02/19-04/01/21

Role: Research  
Supervisor**R41 AA026793 (McPherson, McDonell, Johnson) (\$225,232)***Automated Contingency Management System for Reduction of Alcohol Use*

The primary goal of this work is to develop and beta test a mobile app designed to track and manage progress through a heavy drinking protocol that includes contingency management as its primary treatment modality along with biochemical validation through serial submission of breath samples.

**NIH/NIDA**

9/25/17 – 09/24/21

Role: Research  
Supervisor**N44 DA171210 (Johnson, Yuan) (\$999,006) (WSU: \$335,000)***Neonatal Abstinence Syndrome (NAS) Primer, Reference and Decision Support Tool.*

The primary goal of this work is to develop and beta test a mobile assessment tool of neonatal abstinence syndrome among hospital providers.

**WSU ADARP**

2018-2019

Role: Qualitative Data  
Analyst**Grant # Not Available (Barbosa-Leiker) (\$25,000)***Cannabis use during pregnancy: first look at effects on maternal-child health.*

The primary aim of this project is to understand the perceptions of pregnant and postpartum women who use cannabis during pregnancy.

**NIH/NIDA**

01/01/17 – 12/31/18

Role: Research  
Supervisor**N44 DA162246 (Yuan, Johnson) (\$996,035) (WSU: \$217,000)***A Shared Decision-Making Tool to Prevent Substance Abuse*

The primary goal of this work is to develop and beta test a mobile assessment tool that will assist primary care providers in the delivery and referral of SBIRT-linked services.

**NIH/NIA**

07/01/13 – 06/31/17

Role: Research  
Supervisor**R01 AG042467 (Corbett) (\$1,269,992)***Chronic Care Management Model Translation to Multimorbid Aging Adults at FQHCs.*

The primary goal of this project is to test the effectiveness of home visiting on chronic conditions experienced by elderly adults for reducing acute care utilization and increasing patient activation.

**Craig H. Neilsen  
Foundation**

04/01/14 – 03/31/17

Role: Research  
Supervisor**288318 (Dyck) (\$30,000)***Comparison of Two Psycho-educational Family Group Interventions for Persons with SCI and their Caregivers.*

This study aims to evaluate a structured evidence-based group treatment for spinal cord injury called Multi-Family Group intervention for improving psychosocial outcomes in patients with spinal cord injury and their caregivers.

<p><b>WSU ADARP</b> 09/01/14 – 08/01/16 Role: Research Supervisor</p>	<p><b>Grant # Not Available (McPherson) (\$29,992)</b> <i>Combined Behavioral Treatment Analog Trial for Alcohol and Nicotine Co-Addiction.</i> The major goal of this project is to test whether contingency management (CM) targeting both alcohol and nicotine in a treatment analog investigation can make for an efficacious, and easily transportable modality of treatment for alcohol and nicotine co-addiction.</p>
<p><b>WSU ADARP</b> 01/01/13-09/30/15 Role: Research Supervisor</p>	<p><b>120294-001 (Dyck/Skaer) (\$30,000)</b> <i>Multiple Family Groups, Mindfulness, and the Management of Chronic Pain</i> The goal is to integrate multiple family groups and mindfulness training as a treatment for chronic pain patients at risk for opiate misuse and their spouses.</p>
<p><b>Inland Northwest Community Foundation</b> 2016-2017 Role: Research Supervisor</p>	<p><b>Grant # Not Available (Wilson) (\$5,000)</b> <i>Evaluation of “A Way Forward” Chronic Pain Peer Program</i> The goal of this project is to systematically evaluate the efficacy and acceptability of a small group peer program focused on assisting people in decreasing their reliance on opioid pain medications.</p>
<p><b>Bureau of Justice Assistance (BJA)</b> 10/01/10 – 09/30/15 Role: Research Supervisor</p>	<p><b>2010DDBX0661 (Roll) (\$334,448)</b> <i>Washington State University Center for the Study of Addiction: Methamphetamine, Prescription and Other Drugs of Abuse</i> The major goal of this project is to improve our program’s ability to analyze and respond to the need to develop effective strategies to deal with the increasing problem of prescription opiate abuse, as well as enhance the program’s infrastructure by helping fund equipment, materials, and researchers who will focus on the treatment and prevention of prescription abuse and dependence.</p>

**PEER REVIEWED PUBLICATIONS** (\*denotes student/fellow author; # denotes senior author)

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**Google Scholar Data (as of 5/12/2025)**

**Total Citations = 958**

**h-index = 13**

**i10 index = 19**

Palombo, P., Schmidt, A., Akana, N., Ryan, R., Hovland, S., Stark, B.C., Bowen, A., Rodin, N., Chaytor, N., McDonell, M., Burduli, E., Layton, M., Roll, J., **Smith, C.L.**, Miguel, A.Q.C., McPherson, S. (under review). A Double-Blind Randomized Clinical Trial of Zonisamide and Contingency Management for Alcohol Use Disorder Treatment (ZARRA) Protocol. *Contemporary Clinical Trials*. Submitted 9/17/2025.

Palombo, P., Akana, N., Bowen, A., Schmidt, A., Ryan, R., Hovland, S., Stark, B.C., Rodin, N., Chaytor, N., McDonell, M., Burduli, E., Layton, M., Roll, J., **Smith, C.L.**, Miguel, A.Q.C., McPherson, S. (under review). The Pharmaceutically Enhanced Reinforcement for Reduced Alcohol and Smoking (PERRAS) Study: Protocol for a Randomized Clinical Trial. *Contemporary Clinical Trials*. Submitted 5/13/2025.

- \*Comfort, A., Martin, C., Parker, H., **Smith, C.S.**, Anderson, C. (Revising 8/1/2025) Septic Shock and Respiratory Distress: Two Pediatric Acute Care Simulation Cases for Pre-Clerkship Medical Students.
- Smith, C.L.**, McPherson, S.M., Rodin, N., Hovland, S., Akana, N., Miguel, A.Q.C., Marsden, J., Saxon A.J. (under review). Quality of life and treatment effectiveness direct and indirect effects on cocaine abstinence outcomes during cocaine use disorder treatment. *Drug and Alcohol Dependence*. Revise and Resubmit in progress - requested by 1/10/2026.
- Smith, C.L.**, Cooper B.R., Miguel, A.Q.C., Roll, J., Hill, L., Akana, N.A., McPherson, S. (under review) The Moderating Effect of Family Factors on Youth Risk for Tobacco and Cannabis Co-use. *Child and Adolescent Substance Use*. Revise and Resubmit in progress - requested by 2/7/2026.
- 53) **Smith, C.L.**, Stark, B.C., Kobalter, M., Barks, M.C., Nakano-Okuno, M., \*Romesburg, E. W., Limdi, N., May, T. (in press) Factors Influencing Trustworthiness and Perceived Biases of Medical Information and Genetic Testing for Black and White Americans. *PLOS Genetics*.
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- 13) McPherson, S., Burduli, E., **Smith, C.L.**, Herron, J., Oluwoye, O., Hirchak, K., Orr, M.F., McDonell, M., & Roll, J. (2018). A review of contingency management for the treatment of substance use disorders: Adaptation for underserved populations, use of experimental technologies, and personalized optimization strategies. *Substance Abuse and Rehabilitation*, 9, 43. DOI: <https://doi.org/10.2147/sar.s138439>
- 12) McPherson, S. M., Burduli, E., **Smith, C.L.**, Brooks, O. Orr, M.F., Barbosa-Leiker, C., Hoesktra, T., McDonell, M., Murphy, S., Layton, M. Roll, J. (2018). Predictors of tobacco and alcohol co-use from ages 15 to 32: The Amsterdam Growth and Health Longitudinal Study. *Experimental and Clinical Psychopharmacology*. DOI: <https://doi.org/10.1037/pha0000203>
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- 10) **Smith, C.L.**, Skaer, T.L., Orr, M., Barbosa-Leiker, C. Howell, D.N., Dyck, D.G. (2017) Development of Multi-family Group and Mindfulness treatment for chronic pain: Preliminary outcomes. *Musculoskeletal Disorders and Treatment*, 3(4). DOI: <https://doi.org/10.23937/2572-3243.1510042>
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## BOOK CHAPTERS

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- 3) **Smith, C.L.**, Colletto, S., May, T. (2023) Protection of Privacy in Genomic Medicine. In Kenneth Ramos (ed.), *Comprehensive Precision Medicine*. Elsevier.
- 2) Nakano-Okuno M., **Smith C.L.**, and May T., “Risks and Benefits of the Direct-to-Consumer Genetic Testing in the Reproductive Context,” in: Hostiuc S. (ed.) (2023), *Clinical Ethics at the Crossroads of Genetic and Reproductive Technologies*, Academic Press.
- 1) Dyck, D., Becker, B., **Smith, C.L.** (2022) Spinal Cord Injury: Multiple Family Group (MFG) Education and Support. *Neuroscience of Spinal Cord Injury*. Book Chapter. Elsevier Inc., London, England. ISBN: 9780323991988

## INVITED PRESENTATIONS

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- 3) **Smith, C.L.** (2025, September) *The Laboratory for Innovations in Therapeutics: Exploring the Frontiers of Pharmacogenomics, Cannabis, Opioids, and Psychedelics*. Oral presentation for the Center for Dissemination & Implementation at Stanford, Half Moon Bay, CA.
- 2) **Smith, C.L.**, Sackett, N., Stark, B.C., \*Romesburg, E., \*Dinh, V., Roll, J. (2023, December). *Getting Real: Studying Psychedelic Use in Naturalistic Environments*. Invited presentation at Horizons Northwest, Portland, Oregon.
- 1) **Smith, C.L.**, Sackett, N., Stark, B.C., \*Romesburg, E., \*Dinh, V., Roll, J. (2023, May). *Investigating the Therapeutic Potential of Psychedelics*. Invited Presentation at Technology Alliance Discovery Series, Seattle, Washington.

## ORAL PRESENTATIONS

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- 35) **Smith, C.L.**, Schmidt, A., Stark, B.C, Wilson, J., Sinyard, M. (2025, June) *A Community Treatment Pilot of Addiction and PTSD Using a Life Coaching, Psychedelics Administration, and Community Connection Framework*. Presentation as part of symposium, *Psychedelics: Latest Science, Future Challenges and Solutions for Evidence-Supported Treatments*. Symposium presented at the annual meeting of the College on Problems of Drug Dependence (CPDD), New Orleans, LA.
- 34) \*Laroya, C.J., Bindler, R., Lewis, J., **Smith, C.L.**, Wilson, M. (2024, May). *Utilization of Cannabis and Cannabis Products in Persons with Pain Receiving Treatment at an Interventional Pain Clinic*. Presented at the Northwest Pharmacy Convention, Coeur d'Alene, ID.
- 33) McPherson S.M., \*Hall, L., Miguel, A.Q.C., **Smith, C.L.** (2024, March). *Cigarette Smoking, Alcohol, Co-Use and Associations with Chronic Pain: A Washington State Twin Registry Investigation*. Symposium presented at the Society for Research on Nicotine and Tobacco scientific conference, Edinburgh, Scotland.
- 32) Shogan, M., **Smith, C.L.**, Johnson, RK., \*Bowden, T., McPherson, SM., (2022, September). *Facilitating caregiver competency in an ESC family setting using videos and care diaries on a bedside mobile*

device. Presented at Academy of Neonatal Nurses, Fall National Neonatal, Advanced Practice and Mother Baby nurses Conferences, Palm Springs, California.

- 31) **Smith, C.L.**, Shogan, M., Johnson R.K., Bowden, T, Hurley, S., McPherson, S. (2022, June). *Supporting Perinatal Women with Opioid Use Disorder and Their Newborns Experiencing Neonatal Abstinence Syndrome: Development of a Neonatal Abstinence Syndrome (NAS) Primer, Reference and Decision Support Tool*. Symposium presented at the annual meeting of the College on Problems of Drug Dependence (CPDD), Minneapolis, MN.
- 30) Burduli, E., \*Winquist, A., **Smith, C.L.**, Brooks, O., \*Chiou, M., \*Balsiger, D., Shogan, M., McPherson, S., Barbosa-Leiker, C., Jones, H. (2022, June). *Supporting Perinatal Women with Opioid Use Disorder and Their Newborns Experiencing Neonatal Abstinence Syndrome: Impressions from Perinatal Women and Healthcare Providers*. Symposium presented at the annual meeting of the College on Problems of Drug Dependence (CPDD), Minneapolis, MN.
- 29) **Smith, C.L.**, Michie, M., East, K., Sabatello, M., May, T. (2022, June) *Development of a Consortium on Best Practices Related to Genomics and Adoption*. Panel presentation at the 5<sup>th</sup> Annual ELSI Congress, Virtual.
- 28) **Smith, C.L.**, Brents, L., Carlson, B., Reece, S., Toumbourou, J. (2022, May). *Is Cannabis Legalization Increasing Birth Defects and Cancers?* Round Table presented at the Society for Prevention Research 30<sup>th</sup> Annual Meeting, Seattle, WA.
- 27) Zaccari, B., Maloy, P., Wu, T., Reis, S., McPherson, S.M., **Smith, C.L.**, Goerlic, A., Jacobson, N., Gulati, A., Pleasant, T., Lovejoy, T. (2022, May). *Preliminary Effectiveness of a Synchronous Telehealth Intervention for Rural Patients with Chronic Pain and Substance Use Disorder Treatment: Results of a Single-arm Pilot Trial*. Paper presented at the 2022 National Rural Health Association Annual Conference.
- 26) Barbosa-Leiker, C., Brooks, O., **Smith, C.L.**, Burduli, E., & Gartstein, M. (2021, January). *Daily Cannabis Use During Pregnancy and Postpartum: Patient, Provider, and Budtender Perspectives*. Invited speaker at the 2021 Public Health Cannabis and Vaping Summit, Nevada Public Health.
- 25) Barbosa-Leiker, C., Brooks, O., **Smith, C.L.**, Burduli, E., & Gartstein, M. (2020, September). *Daily Cannabis Use During Pregnancy and Postpartum: Patient, Provider, and Budtenders Perspectives*. Invited keynote plenary at the National Public Health-Marijuana Virtual Summit 2020.
- 24) **Smith, C.L.**, McPherson, S. (Chair), Mikulich-Gilbertson, S. (Co-Chair) (2020, June) *Youth risk profiles and their prediction of distal marijuana/cannabis co-use presentation during the Design and Analysis Workshop*. Workshop presented at The College on Problems of Drug Addiction Annual Meeting; virtual.
- 23) Barbosa-Leiker, C., Burduli, E., **Smith, C.L.**, Brooks, O., \*Mehta, R.P., Orr, M. & Gartstein, M. (2019, September). *Daily Cannabis Use During Pregnancy and Parenthood*. Invited national podium presentation for SAMHSA's Technical Expert Panel on the Harms and Risks of Marijuana Use, Rockville, MD
- 22) Burduli, E., McPherson, S., Mamey, M. R., **Smith, C.L.**, & Roll, J. (2019, March). *Missing data methodologies for vulnerable populations: substance use disorder randomized clinical trials*. Oral presentation, International Convention of Psychological Science (ICPS), Paris, France.

- 21) Barbosa-Leiker, C., Gartstein, M., Burduli, E., **Smith, C.L.**, Brooks, O., \*Mehta, R.P. & Orr, M. (2019, April). *Daily Cannabis Use During Pregnancy and Parenthood*. Podium presentation at the Western Institute of Nursing's 52<sup>nd</sup> Annual Communicating Nursing Research Conference, San Diego, CA
- 20) Barbosa-Leiker, C., Gartstein, M., Burduli, E., **Smith, C.L.**, Orr, M., Brooks, O, & \*Mehta, R.P. (2018, October). *Cannabis Use During Pregnancy and Parenthood*. Invited oral presentation, Women in Government, Washington DC.
- 19) Lovejoy, T.I., **Smith, C.L.**, Dobscha S.K., Morasco, B.J., Meath, T.H.A., Demidenko, M.I., McPherson, S. (2018, April) *Changes in pain intensity following discontinuation of long-term opioid therapy*. Paper presented at the Society of Behavioral Medicine 39<sup>th</sup> Annual Meeting & Scientific Sessions. New Orleans, LA
- 18) Shaw, M.R., Katz, J., Wilson, M., **Smith, C.L.**, Barbosa-Leiker, C. (2018, October). *Perception of Harm of Marijuana Among Youth*. Podium Presentation at the Building a Healthy Youth Symposium, Spokane WA.
- 17) Barbosa-Leiker, C., Burduli, E., **Smith, C.L.**, Orr, M., Gartstein, M., Brooks, O., & Mehta, R.P. (2018, October). *Cannabis Use During Pregnancy and Parenthood*. Invited oral presentation, Women in Government, Washington DC.
- 16) Shaw, M.R., Wilson, M., & **Smith, C.L.** (2018, September). *Youth Perceptions of Marijuana Use: Review of the Literature*. Presented to the Spokane Regional Health District, School District, and Community Partners, Spokane WA.
- 15) Barbosa-Leiker, C., Burduli, E., **Smith, C.**, Orr, M., Gartstein, M., Brooks, O., & Mehta, R.P. (2018, September). *Daily Cannabis Use During Pregnancy and Parenthood*. Invited oral presentation, Washington State Academy of Sciences, Seattle WA.
- 14) \*Dizon, E., Bayly, B., \*Shrestha, G., **Smith, C.L.**, \*Tekle, S., Rhoades Cooper, B. (2018, September) *Debate Team Meets Data Science: Tips & tricks learned from navigating the SPR Cup*. Presented at the Prevention Science Colloquium, Pullman WA.
- 13) \*Dizon, E., Bayly, B., \*Shrestha, G., **Smith, C.L.**, \*Tekle, S., Rhoades Cooper, B. (2018, May) *Optimizing the Power of Positive Relationships: Which preschool teachers benefit most from a professional development coaching intervention?* Presented at the Society for Prevention Research, Washington D.C. Winning presentation for the Annual Sloboda and Bukoski SPR Cup.
- 12) **Smith, C.L.** (2018, April) *Cannabis and Tobacco Co-Use*. Presented at the Prevention Science Colloquium, Pullman WA.
- 11) Lovejoy, T., **Smith, C.L.**, Dobscha, S.K., Morasco, B., Meath, T., & Demidenko, M. (April 2018) *Changes in pain intensity following discontinuation of long-term opioid therapy*. Presented at the Society of Behavioral Medicine Conference, New Orleans, LA.
- 10) Schwartz, C.R., Carollo, S., Brinker, D., Hahn, L., & **Smith, C.L.** (2017, October) *Interdisciplinary student learning: Perspectives gained from outreach in underserved communities in the amazon region of Peru*. Focused discussion at the Seventh International Conference on Health, Wellness, & Society, Denver, CO.

- 9) Wilson, M., **Smith, C.L.**, & Burduli, E. (2017, September) *A Way Forward: Pilot test of a pain peer group program for people with persistent pain*. Presented at the American Society for Pain Management Nursing Conference, Phoenix, AZ.
- 8) **Lederhos, C.**, Smith, J., Roll, J., & McPherson, S. (2016, March) *Baseline urinalysis as a mediator between education level and treatment outcomes in two contingency management clinical trials*. Invited oral presentation at the Washington State University Nursing Research First Friday, Spokane, WA.
- 7) Skaer, T., Dyck, D., & **Lederhos, C.**, (2015, November) *Developing Multi-Family Group and Mindfulness practices for chronic pain and high risk opioid misuse*. Presented to the Translational Addiction Research Center Seminar, Spokane, WA.
- 6) McPherson, S., Mamey M. R., Brooks, O., **Lederhos, C.**, Murphy, S., Barbosa-Leiker, C., & Roll, J. (2015, June). *Much ado about 'missing'? : The importance of missing data sensitivity analyses to evaluate treatment effects*. Workshop presented at the College on Problems of Drug Dependence (CPDD), Phoenix, AZ.
- 5) **Lederhos, C.**, Brooks, O., Lamp, A., Barbosa-Leiker, C., Hoekstra, T., Murphy, S. Layton, M., Roll, J., & McPherson, S. (2015, March). *Sex differences in alcohol and tobacco use in a young adult population*. "Outstanding Scholar Invited Address" podium presentation at the Inland Northwest Research Symposium, Spokane, WA.
- 4) **Lederhos, C.** (2015, February) *Relationships in linear change for tobacco smoking and alcohol consumption over time*. Wiley Research Exposition 1<sup>st</sup> place winner, Pullman, WA.
- 3) Shaw, M., **Lederhos, C.**, Haberman, M., Howell, D., & Roll, J. (2014, May) *Nurses' perceptions of caring for opiate abusing pregnant and post-partum women*. Podium presentation at the Boise Veterans Affairs 5th Annual Nursing Research Day, Boise, ID.
- 2) McPherson, S., Brooks, O., **Lederhos, C.**, & Mamey, M.R. (2014, November) *Addiction science*. Presentation at the Prevention Science Colloquium, Washington State University. Pullman, WA.
- 1) **Lederhos, C.** (2011, April) *Intergenerational transmission of feeding practices*. Presented at the Innovation Showcase, University of Idaho, Moscow, ID.

## **POSTER PRESENTATIONS**

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- 70) \*Pelagio, A., McPherson, S., Rodin, N., Schmidt, A., Hovland, S.E., Akana, N.A., Saxon, A., Miguel, A., **#Smith, C.L.** (2025, June) *Associations of Concurrent Cannabis use on Cocaine use During Buprenorphine and Naltrexone Treatment*. Poster presented at the annual meeting of the College on Problems of Drug Dependence (CPDD) New Orleans, Louisiana.
- 69) \*Eslami, N.P., Barreto, K., \*Dahl, G., \*Gnaneswaran, S., \*Sanderson, E., \*Pelagio, A., \*Morris, M., \*Tran, J., Keever, A., McPherson, S., Madruga, C., **Smith, C.L.**, Miguel, A.Q.C. (2025, June) *Homelessness Prior to Inpatient Substance Use Treatment Intake is Associated with Worse Health, Social, and Legal Indicators*. Poster presented at the annual meeting of the College on Problems of Drug Dependence (CPDD) New Orleans, Louisiana.

- 68) \*Mills, S., Wilson, M., \*Parsons, A., Bender, N., **Smith, C.L.**, & Bindler, R. (2024, July) *Using Phenomenography to Understand Native American Perspectives on Cannabis Use for Pain Management*. Poster presented at the Research Society on Marijuana; Toronto, ON, Canada.
- 67) McPherson S.M., **Smith, C.L.**, Hovland, S., Akana, N.A., Miguel A., Rodin, N., Saxon, A. (2024, June). *Cocaine Craving and Use Outcomes in a Randomized Study to Test the Safety and Effectiveness of Buprenorphine and Naltrexone for the Treatment of Cocaine Dependence*. Presented at the College on Problems of Drug Dependence 85<sup>th</sup> Annual Scientific Meeting. Montreal, Quebec, Canada.
- 66) \*Laroya, C.J., Bindler, R., Lewis, J., **Smith, C.L.**, Wilson, M. (2024, May) *Utilization of Cannabis and Cannabis Products in Persons with Pain Receiving Treatment at an Interventional Pain Clinic*. Poster presented at: 2024 Northwest Pharmacy Convention; Coeur d'Alene, ID.
- 65) Barks, MC, Stark, BC, Kobalter, M, Nakano-Okuno, M., \*Romesburg, E, Limdi, N, May, T, **#Smith, CL.** (2024, October) *Key Contextual Factors Involved with Participation in Medical and Genomic Screening and Research for African American and Caucasian Americans: A qualitative inquiry*. Poster to be presented at the American Public Health Association Conference, Minneapolis, MN.
- 64) **Smith, C.L.**, McPherson, S., Rodin, N., \*Hasan, M., Saxon, A. (2024, June) *Relationships Between Craving, Quality of Life, Health, and Cocaine Abstinence, With the Treatment Effectiveness Assessment in a Sample of People in Cocaine Dependence Treatment*. Poster presented at the annual meeting of the College on Problems of Drug Dependence (CPDD) Montreal, Quebec, Canada.
- 63) \*León, G., \*Bae, J., \*Coles, C., **Smith, C.L.**, McPherson, S., Miguel, A.Q.C. (2024, June) *Alcohol and Tobacco Co-Addiction in Opioid Use Disorder Treatment: A Comparative Analysis of Demographics and Clinical Profiles*. Poster presented at the 47<sup>th</sup> Annual Research Society on Alcohol Scientific Meeting. Minneapolis, MN.
- 62) \*Bae, J., \*León, G., \*Coles, C., **Smith, C.L.**, McPherson, S., Miguel, A.Q.C. (2024, June) *Baseline Demographic & Clinical Profile Differences in Individuals Initiating Medication for Opioid Use Disorder Treatment: Exploring the Role of Alcohol and Tobacco Smoking Co-Addiction*. Poster presented at College on Problems of Drug Dependence 86<sup>th</sup> Annual Scientific Meeting. Montreal, Quebec, Canada.
- 61) \*Coles C, \*Batts C, \*Bae J, \*León G, **Smith, C.L.**, McPherson, S., Miguel, A.Q.C. (2024, June) *Demographic and Clinical Differences Between Individuals Initiating Medication-Assisted Opioid Treatment with a Positive versus a Negative Stimulant Urinalysis Result*. Poster presented at College on Problems of Drug Dependence 86<sup>th</sup> Annual Scientific Meeting. Montreal, Quebec, Canada.
- 60) Bender, N., Matheson, M., \*Mills, S., \*Parsons, A., Bindler, R.J., Liams-Hauser, K., Owens, M., Negley, S., Smith, E.T., **Smith, C.L.**, McDonell, M., Wilson, M. (2024, May) *Implementing decolonizing research methods in an academic partnership with a tribally owned clinic*. Poster presented at the 36th Annual National Conference on Race & Ethnicity in Higher Education (NCORE 2024). Honolulu, HI.
- 59) \*Comfort, A., Martin, C., Parker, H., **Smith, C.L.**, Anderson, C. (2024, April) *Pediatric Acute Care Simulations in Pre-Clerkship Medical Education*. Poster presented at the Council on Medical Student Education in Pediatrics (COMSEP) New Orleans, LA.

- 58) Hovland, SE, Stark, BC, Kobalter, M, Barks, MC, Nakano-Okuno, M, \*Romesburg, EW, Limdi, N, Schmidt, A, **#Smith, C.L.** (2024, March) *Online Recruitment and Data Collection: How Prevalent is False Information?* Poster presented at WSU Spokane Inland Northwest Research Symposium, Spokane, WA.
- 57) \*Coles C, \*Batts C, \*Bae J, \*León G, **Smith, C.L.**, McPherson, S., Miguel, A.Q.C. (2024, March) *Impact of Stimulant Co-Use on Opioid Use Disorder Treatment Outcomes: A secondary analysis study.* Presented at the Inland Northwest Research Symposium, Spokane, WA.
- 56) Reynolds G, Rodin NM, **Smith CL**, McPherson SM. (2023, December) *Secondary analysis of opioid use disorder patients receiving adherence device assisted treatment with Suboxone and the relationship between opioid cravings and illicit opioid use.* Poster presented at the Midyear Meeting of the American Society of Health System Pharmacists (ASHP) Anaheim, CA.
- 55) Smith E.T., Brigman M., Bindler, R.J., \*Mills S., \*Parsons A., Matheson M., Owens M., Lozeau S., liams-Hauser K., Lyons A.J., Bender N., **Smith C.L.**, Wilson M., McDonell M.G. (2023, March) *Building an academic-community partnership to facilitate federally funded research at a Tribally owned clinic.* Poster presented at: Center for Native American Research and Collaboration's (CNRC) Indigenous Research Conference, Pullman, WA, and Washington State University's (WSU) Showcase, Pullman, WA.
- 54) McPherson, S.M., **Smith, C.L.**, \*Hall, L., Miguel, A., Bowden, T., Keever, A., Schmidt, A., Olson, K., Rodin, N., McDonell, M.G., Roll, J.M., LeBrun J. (2023, June). *Mobile Medication Adherence Platform for Buprenorphine (MAP4BUP): A Phase I Feasibility, Usability and Efficacy Randomized Clinical Trial.* Poster presented at the annual meeting of the College on Problems of Drug Dependence (CPDD) Denver, CO.
- 53) Shogan, M., **Smith, C.L.**, Johnson, RK., Bowden, T., McPherson, SM., (2022, September) *Innovative Education and Validation of Nurse Competency for Eat, Sleep, Console Care Utilizing Mobile Technology.* Poster presented at the National Association of Neonatal Nurses, Las Vegas, NV
- 52) Somohano V, **Smith C.L.**, McPherson S, Morasco B, Zaccari B, Lovejoy J, Saha S, Ono S, & Lovejoy T. (2022, June) *Trust in Provider Mediates the Relationship Between Shared Decision Making and Opioid Misuse in a Nationally Representative Sample of U.S. Veterans Prescribed Long-Term Opioid Therapy for Chronic Pain.* Poster presented at the College on Problems of Drug Dependence conference (CPDD) annual meeting, Minneapolis, MN.
- 51) **Smith, C.L.**, Keever, A., Bowden, T., \*Smoodly, G., Olson, K., McDonell, M.G., Roll, J., McPherson, S. (2022, May). *Patient Feedback on a Mobile Medication Adherence Platform for Opioid Relapse Prevention.* Poster presented at the Society for Prevention Research 30<sup>th</sup> Annual Meeting, Seattle, WA.
- 50) Colletto, S.A., **Smith, C.L.**, & May, T. (2022, March). *Discordance between family health history and genetic screening.* Poster presented at the Washington State University Academic Showcase, Pullman, WA.
- 49) \*Felker AA., **Smith C.L.**, McPherson SM. (2022, March) *Pilot study: Motivation behind receiving a COVID-19 vaccine in people who are currently receiving the vaccine.* Poster presented at the Inland Northwest Research Symposium, Spokane, WA.

- 48) Bowden, T., **Smith, C.**, Keever, A., Olson, K., McDonell, M., Roll, J., \*Smoodly, G., LeBrun, J., & McPherson, S. (2022, March). Technology Assisted Adherence to Buprenorphine for Opioid Use Disorder: A Patient Feedback Survey. Poster presented at the Washington State University Academic Showcase, Pullman, WA.
- 47) \*Winqvist, A., **Smith, C.L.**, Brooks, O., Barbosa-Leiker, C., & Burduli, E. (2022, April). Provider Perspectives: Supporting Perinatal Women with Opioid Use Disorder. Poster presented at Western Institute of Nursing Conference 2022, Portland, OR.
- 46) \*Hoppe, A., \*Spellacy, D., & **Smith, C.L.** (2022, March). The Unifying Force of Covid-19 on Decreasing Birth Weight Across Ethnicities, Income Class, and Marital Status. Poster presented at the Inland Northwest Research Symposium (INRS), Spokane, WA; virtual.
- 45) \*Spellacy, D., \*Hoppe, A., & **Smith, C.L.** (2022, March). Implications of social support for perinatal people and healthy pregnancies in the setting of the COVID-19 pandemic. Poster presented at the Inland Northwest Research Symposium (INRS), Spokane, WA; virtual.
- 44) **Smith, C.L.**, Rodin, N., McDonell, M., Johnson, K., Miguel, A., \*Hwang, J., McPherson, S. (2021, June). Automated Reinforcement Management System (ARMS): Focused provider feedback. Presented at the College on Problems of Drug Dependence (CPDD) Annual Meeting; virtual.
- 43) Burduli, E., **Smith, C.L.**, Bowden, T., Johnson, R. K., Shogun, M., McPherson, S. (2021, June). *Neonatal Abstinence Syndrome Primer, Reference, and Decision Support Tool for Providers: A Phase II Training Pilot*. Presented at the annual meeting of the College on Problems of Drug Dependence (CPDD), virtual.
- 42) Bowden, T., Shogun, M., Johnson, R.K., **Smith, C.L.**, \*Hurley, S., McPherson, S. (2021, March). Neonatal Abstinence Syndrome (NAS) Primer, Reference and Decision Support Tool: ESC Care Diary. Presented at the Inland Northwest Research Symposium, Spokane, WA.
- 41) \*Eppich, K.E., Scott D.F., Gray C., **Smith, C.L.**, Johnston, M. (2021, September) 100% long-term survivorship of a modular femoral stem. Presented at the 41<sup>st</sup> SICOT Orthopaedic World Congress, Virtual Presentation.
- 40) \*Spellacy, D., **Smith, C.L.**, Brooks, O., Barbosa Leiker, C. (2020, October) Impactful social changes related to the COVID-19 pandemic in prenatal women. Presented at the European Society for Prevention Research Annual Conference, online event.
- 39) Barbosa-Leiker, C., Brooks, O., **Smith, C.L.**, Burduli, E., & Gartstein, M. (2020, June). What do budtenders tell pregnant women? Perceptions of risks and benefits of marijuana use during pregnancy from the budtender perspective. Presented at The College on Problems of Drug Addiction Annual Meeting; virtual.
- 38) Miguel, A.Q., Simões, V., Yamauchi, R., Roll, J. **Smith, C.L.**, Mari, J., McPherson, S.M (2020, May). Feasibility of Incorporating Contingency Management in a Public Treatment for Crack Users Who Are Homeless in Brazil: A Pilot Study. Presented at the Association of Behavioral Analysis International 46<sup>th</sup> Annual Convention, Washington D.C.
- 37) **Smith, C.L.**, Lovejoy, T., Holloway, J., Morasco, B., Dobscha, S., \*Tham, P., McPherson, S. (2019, October). Predicting pain intensity following discontinuation of long-term opioid therapy among

patients with and without substance use disorders. Presented at the Lisbon Addictions Conference, Lisbon, Portugal.

- 36) McPherson, S., Burduli, E., **Smith, C.L.**, Kamate, P., \*Dorrian, T., Barbosa-Leiker, C., Hoekstra, T., Roll, J. (2019, October). Sub-groups of tobacco and alcohol co-use trajectories from ages 21 to 32: The Amsterdam Growth and Health Longitudinal Study. Presented at the Lisbon Addictions Conference, Lisbon, Portugal.
- 35) Burduli, E., **Smith, C.L.**, McPherson, S. (2019, October). Development and Application of a Primer and Reference Assessment Tool for Neonatal Abstinence Syndrome: A Phase I Pilot Study. Presented at the Lisbon Addictions Conference, Lisbon, Portugal.
- 34) **Smith, C.L.**, Burduli, E., Brooks, O., Gartstein, M., \*Mehta, R.P., Barbosa Leiker, C. (2019, July) Provider perspectives on mothers using marijuana during pregnancy and postpartum. Presented at the Research Society on Marijuana Annual Conference, Vancouver, WA.
- 33) Lovejoy, T.I., **Smith, C.L.**, Morasco, B., Dobscha, S.K., McPherson, S. (2019, June). Identifying predictors of pain intensity following discontinuation of long-term opioid therapy among patients with and without substance use disorders. Presented at the College of Problems on Drug Dependence Annual Conference, Austin, TX.
- 32) \*Dorrian, T., **Smith, C.L.**, McPherson, S. (2019, April). Chicken or The Egg: A preliminary cross-sectional examination of the relationship between marijuana use and mental health issues among adolescents. Presented at the Inland Northwest Research Symposium, Spokane, WA.
- 31) **Smith, C.L.**, McPherson, S.M. (2019, March) Predictors of Marijuana and Tobacco Co-use in Youth: Exploring the mediating role of age at first use in the Population Assessment of Tobacco Health (PATH). Presented at the WSU Prevention Science Poster Session, Pullman, WA.
- 30) **Smith, C.L.**, \*Dizon, E., Bayly, B., \*Shrestha, G., \*Tekle, S., Cooper, B.R. (2018, September). Which preschool teachers benefit most from professional development coaching: A latent moderation approach? Presented at the Developmental Methods Research Conference, Whitefish, MT.
- 29) **Smith, C.L.**, Burduli, E., Orr, M., \*Martin, S., Finlay, M., Oluwoye, O., McDonell, M.G., Roll, J., & McPherson, S. (2018, June). Crossover associations of alcohol and smoking craving and withdrawal with biochemically verified alcohol and nicotine use in heavy drinking smokers. Presented at the College of Problems on Drug Dependence Annual Conference, San Diego, CA.
- 28) McPherson, S., Burduli, E., Ihle, D., Orr, M., **Smith, C.L.**, & Roll, J. (2018, June). A shared parameter pattern-mixture model as a 'missing not at random' sensitivity analysis for substance use disorder randomized clinical trials. Presented at the College of Problems on Drug Dependence Annual Conference, San Diego, CA.
- 27) Burduli, E., Ihle, D., Orr, M., **Smith, C.L.**, Roll, J., & McPherson, S. (2018, June). Combining the WLSMV estimator with multiple imputation for categorical outcomes in substance use disorder randomized clinical trials. Presented at the College of Problems on Drug Dependence Annual Conference, San Diego, CA.
- 26) Hirchak, K., **Smith, C.L.**, Orr, M., Burduli, E., Skalisky, A., Foote, A., Granbois, A., Ries, R., Roll, J., Buchwald, D., McDonell, M.G., McPherson, S.M. (2018, May). *Contingency Management Intervention Targeting Co-Addiction of Alcohol and Drugs Among American Indian Adults:*

*Rationale, Design and Methodology.* Poster presented at the Society for Prevention Research 26<sup>th</sup> Annual Meeting, Washington, DC.

- 25) **Smith, C.L.**, Corbett, C. (2018, March). *Patient Activation and Medication Adherence.* Poster presented at the Western Institute of Nursing Conference, Spokane, WA.
- 24) **Smith, C.L.**, (2017, October) *Predicting adult overweight status based on recalled parental feeding during childhood.* Poster presented at the Seventh International Conference on Health, Wellness, & Society, Denver, CO.
- 23) **Smith, C.L.**, Shaw, M., Weeks, D.L. Wood, S., Lott, H., Gross, S., Wallace, A.J. & Dyck, D.G. (2017, September). *Multi-family group treatment for persons with spinal cord injury: Participants' perspectives.* Poster presented at the Academy of Spinal Cord Injury Professional Educational Conference and Expo 2017, Denver, CO.
- 22) **Smith, C.L.**, Smith, J., Roll, J., & McPherson, S. (2017, June) *Baseline urinalysis as a mediator between education level and treatment outcomes in two contingency management clinical trials.* Poster presented at the College of Problems on Drug Dependence Annual Conference, Montreal, QC, Canada.
- 21) Orr, M., **Smith, C.L.**, \*Martin, S., \*Finlay, M., Brooks, O., Oluwoye, O., Leickly, E., McDonnell, M., Layton, M., Roll, J., & McPherson, S. (2017, June) *Comparative reinforcement in co-addiction of alcohol and tobacco use.* Poster presented at the College of Problems on Drug Dependence Annual Conference, Montreal, QC, Canada.
- 20) **Smith, C.L.**, \*Petersen, M., Garpestad, T., Butler, C., \*Foster, R., & Corbett, C. (2017, April). *Goal setting in a care planning context: What patients want and what works.* Poster presented (conference finalist) at the Western Institute of Nursing Conference, Denver, CO.
- 19) Colorafi, K., **Smith, C.L.**, Thomas, A.B., & Corbett, C. (2017, April). *Understanding emergency room use among people with multiple chronic conditions.* Poster presented at the Western Institute of Nursing Conference, Denver, CO and Inland Northwest Research Symposium, Spokane, WA.
- 18) **Smith C.L.**, Shaw, M., Weeks, D., & Dyck, D. (2017, March; 2017, April) *Multi-family group treatment for persons with spinal cord injury: Participants' perspectives.* Poster presented at the Inland Northwest Research Symposium, Spokane, WA and the Washington State University Academic Showcase, Pullman, WA.
- 17) Burduli, E., Wilson, M., & **Smith C.L.** (2017, March; 2017, April) *Pilot test of "A Way Forward": A peer group program for people with persistent pain.* Poster presented at the Inland Northwest Research Symposium, Spokane, WA and the Washington State University Academic Showcase, Pullman, WA.
- 16) \*Foster, R., **Smith, C.L.**, \*Petersen, M., & Corbett, C. (2017, March). *Goal setting and interventions in a care planning context.* Poster presented at the Inland Northwest Research Symposium, Spokane, WA.
- 15) \*Petersen, M., **Smith, C.L.**, & Corbett, C. (2017, March). *Contextual barriers encountered by patients with multiple chronic conditions in attaining self-identified health goals.* Poster presented at the Inland Northwest Research Symposium, Spokane, WA.

- 14) **Lederhos, C.**, Ramsay, S., Fletcher, J., & Branen, L. (2016, May) *Intergenerational transmission of feeding practices and styles: Adult-controlled or cooperative feeding in parent-child relationships across generations*. Poster presented at the Society for Prevention Research, San Francisco, CA.
- 13) Orr, M., **Lederhos, C.**, Skaer, T., Howell, D., Barabosa-Leiker, C., & Dyck, D. (2016, May) *Framework analysis in prevention: Developing communication between researchers and chronic pain patients*. Poster presented at the Society for Prevention Research, San Francisco, CA.
- 12) **Lederhos, C.**, Ramsay, S., Fletcher, J., & Branen, L. (2016, April) *Intergenerational transmission of feeding practices and styles: Adult-controlled or cooperative feeding in parent-child relationships across generations*. Poster presented at the Inland Northwest Research Symposium, Spokane, WA.
- 11) Orr, M., **Lederhos, C.**, Martin, S., Roll, J., & McPherson, S. (2016, April) *A Methodology for Understanding Relative Reinforcement in Co-Addiction Treatment: An Example with Alcohol and Tobacco Use*. Poster presented at the Inland Northwest Research Symposium, Spokane, WA.
- 10) **Lederhos, C.**, Smith, J., Roll, J., & McPherson, S. (2016, March) *Baseline urinalysis as a mediator between education level and treatment outcomes in two contingency management clinical trials*. Poster presented at the Washington State University Academic Showcase, Pullman, WA.
- 9) **Lederhos C.**, Skaer, T., Orr, M., Barbosa-Leiker, C., Howell, D., Dyck, D., & Littleton, A. (2016, March). *Development of Multi-family Group and Mindfulness Treatment for Chronic Pain: Preliminary outcomes*. Poster presented at the Showcase for Undergraduate Research & Creative Activities, Pullman, WA.
- 8) Corbett, C., Kimball, L., Daratha, K., & **Lederhos, C.** (2015, December). *Chronic care management for patients with multiple chronic conditions*. Poster presented at Delta Chi Conference, Spokane, WA.
- 7) **Lederhos, C.**, Brooks, O., Lamp, A., Barbosa-Leiker, C., Hoekstra, T., Murphy, S. Layton, M., Roll, J., & McPherson, S. (2015, June). *Parallel development of longitudinal tobacco smoking and alcohol consumption: The Amsterdam growth and health longitudinal study*. Poster presentation at the College on Problems of Drug Dependence, Phoenix, AZ.
- 6) Brooks, O., **Lederhos, C.**, Lamp, A., Howell, D., White, J., Padowski, J., Layton, M., Moody, D., Roll, J., & McPherson, S. (2015, June). *Physical and subjective response and the pharmacokinetics of e-cigarettes compared to cigarettes in methamphetamine and opioid abusing participants*. Poster presented at the College on Problems of Drug Dependence, Phoenix, AZ.
- 5) **Lederhos, C.**, Brooks, O., Lamp, A., Barbosa-Leiker, C., Hoekstra, T., Murphy, S. Layton, M., Roll, J., & McPherson, S. (2015, March). *Sex differences in alcohol and tobacco use in a young adult population*. Poster presented at the Inland Northwest Research Symposium, Spokane, WA.
- 4) McIlvain, S., & **Lederhos, C.** (2015, April). *Measuring outcomes of stress management education on mental health staff*. Poster presented at the 48<sup>th</sup> Annual Communicating Nursing Research Conference, Albuquerque, NM.
- 3) Corbett, C., Kimball, L., Daratha, K., & **Lederhos, C.** (2015, April). *Chronic care management for patients with multiple chronic conditions*. Poster presented at the 48<sup>th</sup> Annual Communicating Nursing Research Conference, Albuquerque, NM.

- 2) Shaw, M., **Lederhos, C.**, Haberman, M., Howell, D., & Roll, J. (2014, May) *Nurses' perceptions of caring for opiate abusing pregnant and post-partum women*. Poster presented at the Boise Veterans Affairs 5th Annual Nursing Research Day, Boise, ID.
- 1) Brooks, O., **Lederhos, C.**, & Pereira, A. (2014, April) *Barriers of recruiting methamphetamine/ opioid abusing participants outside of treatment settings*. Poster presented at the Western Psychological Association Conference, Portland, OR.

## HONORS/AWARDS

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2025	Elson S. Floyd College of Medicine Outstanding Contribution to Research Award
2025	College of Problems on Drug Dependence (CPDD) 1 <sup>st</sup> place winner: Pitch Your Science Competition
2023	John's Hopkin's Innovations for Substance Use Disorders (I4SUD)
2020	Elson S. Floyd College of Medicine Excellence in Teaching Award
2018	Winning team member, Society for Prevention Research Sloboda and Burkoski Cup
2018	ICPSR Summer Program in Quantitative Methods of Social Research "The Population Assessment of Tobacco and Health (PATH) Study Data User Workshop: Biomarker Restricted-Use Files" Competitive Workshop Attendee
2018	College of Problems on Drug Dependence (CPDD) Travel Award for Early Career Investigators
2017	Washington State University Staff Excellence Award
2011	Gamma Sigma Delta Honor Society, University of Idaho
2008-present	Psi Chi Honor Society
2008	Jerome Nadal, S.J. Award for Outstanding Non-traditional Student, Gonzaga University
2008	Mary Stuart Rogers Award for Community Service, Gonzaga University
2008	Alpha Sigma Lambda Honor Society– Kappa Rho Chapter

## PROFESSIONAL SERVICE AND MEMBERSHIPS: NATIONAL

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### Ad Hoc NIH Grant Reviewing

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2025	Special Emphasis Panel/Scientific Review Group: Accelerating the Pace of Drug Abuse Research Using Existing Data
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### Editorial Responsibilities

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2024-present	Associate Editor & Statistical Editor, Journal of Cannabis Research
2021	Editorial Board Member, Psychology of Addictive Behaviors

### Professional Group & Conference Membership and Committees

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2025-present	Prevention Science & Methodology Group (PSMG) Member
2024-present	College on Problems of Drug Dependence (CPDD) Travel Award Committee Member
2024-present	Member, Clinical Trials Network (CTN) Implementation Strategies Workgroup
2024-present	Member, Association for Faculty Women (AFW)
2023-present	Member, Clinical Trials Network (CTN) Translation & Implementation Special Interest Group
2023-present	Member, College on Problems of Drug Dependence (CPDD)
2023-present	College on Problems of Drug Dependence (CPDD) Selected Mentor, annually
2022-present	Member, Clinical Trials Network (CTN) Steering Committee
2015-present	Member, Association for Women in Science (AWIS)
2021	Member, Society for Prevention Research (SPR) Awards Committee

2019-2023	Member, Society for Prevention Research (SPR) International Committee
2018-2021	Board Member, Early Career Prevention Network, Society for Prevention Research (SPR)
2016-2020	Member, National Prevention Science Coalition (NPSC)

#### **Ad Hoc Journal Reviewing (22 journals)**

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2025	Reviewer, Frontiers in Psychiatry
2024-present	Reviewer, Drug and Alcohol Dependence Reports
2024-present	Reviewer, Substance Abuse Treatment, Prevention, and Policy
2023-present	Reviewer, Addiction
2017-present	Reviewer, American Journal of Drug and Alcohol Abuse
2016-present	Reviewer, Psychology of Addictive Behaviors
2023	Reviewer, Substance Abuse Journal
2023	Reviewer, Addiction Journal
2022	Reviewer, Journal of Substance Abuse Treatment
2020-2021	Reviewer, Journal of Primary Prevention
2020-2021	Reviewer, Drug and Alcohol Dependence
2021	Reviewer, Journal of Pain Research
2020	Reviewer, Youth and Society
2020	Reviewer, Addiction Science & Clinical Practice
2020	Reviewer, American Journal of Preventive Medicine
2019-2020	Reviewer, Addictive Behaviors
2019-2020	Reviewer, Journal of Cannabis Research
2019-2020	Reviewer, Substance Abuse and Rehabilitation
2019	Reviewer, Clinical Interventions in Aging
2019	Reviewer, Tobacco Prevention & Cessation
2015-2017	Reviewer, Drug and Alcohol Review
2016	Reviewer, American Evaluation Association Conference
2015-2016	Reviewer, The Clinical Journal of Pain

#### **PROFESSIONAL SERVICE AND MEMBERSHIPS: WASHINGTON STATE**

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2025-present	Committee Member, State Opioid and Overdose Response Plan (SOORP) Committee
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#### **PROFESSIONAL SERVICE AND MEMBERSHIPS: UNIVERSITY**

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2024-present	Reviewer, Emerging Research Opportunities in Cannabis (EROC) Grants
2022-present	Board Member, Center for Cannabis Policy, Research, and Outreach (CCPRO)
2015-present	Committee Member, WSU Healthy Lifestyle (previously Wellness Committee)
2023-2024	Planning Committee Member, Program of Excellence in Addictions Research (PEAR)
2023-2024	Committee Member, Community and Behavioral Health Faculty Rank Promotion and Tenure (FRPT)
2024	Reviewer, Faculty Excellence Award for Research
2024	Committee Member, CBH Tenure Track Public Health Search Committee: 3 positions
2024	Committee Member, ESFCOM VC Psychiatry Search Committee
2017	Reviewer, Graduate and Professional Student Association Showcase

#### **PROFESSIONAL SERVICE AND MEMBERSHIPS: COMMUNITY**

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2023-present	Community Educator, Substance Use and Harm Reduction Presentations and Educational Engagement to Students and Community Members across the Pacific Northwest, as a Representative of the WSU College of Medicine
1992-present	Annual Volunteer, Care-n-Share Christmas

2019 Substance Use Project Judge, The Community School  
 2014-2016 Member, Kootenai Health Research Round Table

**CONTINUING EDUCATION** (Selected examples)

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2025-2026 Center for Dissemination and Implementation at Stanford (C-DIAS) Fellowship in  
 Addiction Implementation Science, in process  
 2025-2026 Certificate in Medical Ethics: Program started 2025, in process  
 2025 Responsible Conduct of Research Course (3 cr), auditing  
 2025 Expert Panel: Guideline-Driven Pharmacogenomic Testing and the Trajectory of  
 Utilization  
 2025 Introduction to the Principals and Practice of Clinical Research 2024-2025  
 2025 Data Visualization Training  
 2025 Powerful Presentations 2-day training  
 2023 Innovations for Substance Use Disorders (I4SUD) Certificate (John's Hopkins)  
 2023 Fixed and Random Effects Models Course  
 2023 Structural Equation Modelling Methods for Longitudinal Data Course  
 2020 Distance Delivery Mastery Certificate  
 2015 Washington State University Research Administrator Training  
 2014 Write Winning Grants: Proposal Development for the Humanities and the Arts Workshop