

2020 PSYCHIATRY UNDERGRADUATE RESEARCH PROGRAM AND LEARNING EXPERIENCE (PURPLE)

The 2020 **P**sychiatry **U**ndergraduate **R**esearch **P**rogram and **L**earning **E**xperience (**PURPLE**) is designed to introduce undergraduates to child and adolescent psychiatry through participation in mentored research activities. Applicants will have the opportunity to learn about the CU Department of Psychiatry's research mission: to promote brain health for all, for life. This year, the program will be held at locations on the University of Colorado Anschutz Medical Campus and the Children's Hospital of Colorado from May 26th to August 14th, 2020. An outline of the research activities is listed on page three.

Specifically, PURPLE seeks to:

1. Provide undergraduates with basic research skills
2. Introduce undergraduates to careers in behavioral health, psychiatry, and psychology
3. Give undergraduates the tools to successfully apply to graduate school and/or job opportunities

Program Overview: During the program, each student will be paired with a faculty mentor (and their research group) to complete a research project (refer to pages four through 12 for faculty mentor profiles). Students are expected to commit approximately 25 hours per week to the research program. Work schedules are flexible and will be arranged in advance with faculty mentors. However, students are still expected to be on site for 25 hours per week during the 12-week program. Upon completion of the research program, students are required to formally present their work to the department and their peers in the form of oral and poster presentations.

Please note that based on feedback from previous cohorts, this is an intensive program requiring a significant time commitment. If selected, students should plan their other summer commitments accordingly.

Applicant Eligibility: This year, we are recruiting **nine** highly qualified undergraduate students for the 12-week program. Competitive applicants will: A) Have a cumulative GPA of >2.75; B) have taken at least one college statistics course; and C) have an interest in pursuing graduate school or careers related to behavioral health, psychiatry, or psychology.

Student Stipend: A stipend of \$2,800 will be provided to each selected student. Transportation, housing, and living expenses are not included. Selected students must make their own transportation and living arrangements prior to the start of the summer research program.

The application deadline is Monday, March 16th, 2020 by midnight (MST). Submissions received after this deadline will not be accepted. See page two for application details.

APPLICATION PROCESS

Application Materials: Interested applicants are required to submit the following materials:

- 1) A one-page cover letter expressing your interest in PURPLE. Please address the following:
 - a) Why are you applying to PURPLE?
 - b) What are your career goals and how will this program help you realize these goals?
 - c) With which mentors do you most wish to work, and why?
 - d) What unique abilities, attributes or skills do you bring to PURPLE?
- 2) An unofficial academic transcript
- 3) An updated resume or CV
- 4) A letter of recommendation from a program advisor or faculty member who can speak to your professionalism, work ethics, academic performance, and any other qualities you possess that are pertinent to this summer research program
- 5) OPTIONAL: A second letter of recommendation from an individual who can speak to your ability to succeed in this program. This is not required, but in some cases may allow us to more holistically understand your strengths and abilities (e.g., you have a letter from both a professor and an employer, you are a double major and have letters from two professors in different fields, you have a second letter from a volunteer organization leader, etc.).

Please submit the above documents using [this link](http://j.mp/39AsR72) or web address by Monday, March 16th, 2020 (midnight MST): <http://j.mp/39AsR72>

Letters of recommendation can be submitted via the above link or emailed directly by your recommender(s) to: PURPLE@ucdenver.edu

Applications that do not follow the above instructions will not be reviewed.

Timeline: Successful applicants will be notified by email if selected to interview with faculty mentors via teleconferencing in April 2020. All applicants will be notified of final application decisions, regardless of selection status, by end of April 2020.

CONTACT INFORMATION

The information in this packet serves as general guidance to the 2020 PURPLE program. Individual faculty mentors and the program director reserve the right to modify the activities and scope of the program as described herein. If you have further questions about this program, please contact the program director:

Emmaly Perks, MA, CCRP
Director, PURPLE
PURPLE@ucdenver.edu
303-724-4067

PROGRAM OUTLINE

During PURPLE, selected students will be paired with a faculty mentor to conduct a mentored research project. Students will also: 1) attend in-class sessions to learn basic research and effective scientific communication skills, 2) receive coaching on professional development skills and applying to graduate school, and 3) complete clinical shadowing opportunities. Research and didactic activities may include but are not limited to the following:

Competency	Individual Tasks	Learning Goals
Scientific Thinking and Using Tools of the Discipline	<ul style="list-style-type: none"> Literature search and writing a literature review Developing a research proposal Pitching your ideas to funders Shadowing study visits 	<ul style="list-style-type: none"> Practice the scientific method from the proposal stage through implementation and closeout Gain skills with various scientific tools
Data Manipulation	<ul style="list-style-type: none"> Data collection and data entry Data analysis Data visualization 	<ul style="list-style-type: none"> Familiarity with data manipulation techniques, including basic statistics Develop skills in collecting, analyzing, summarizing and reporting data
Scientific Communication	<ul style="list-style-type: none"> Designing a scientific poster and oral presentation Presenting research to a scientific audience Writing up results 	<ul style="list-style-type: none"> Develop confidence in communicating research outcomes to a real-world audience
Career and Graduate School Preparation	<ul style="list-style-type: none"> Workshops on various research skills, graduate school and career preparation Directed readings Panel discussions Campus and facilities tours Clinical shadowing 	<ul style="list-style-type: none"> Prepare for careers and graduate education in behavioral health, psychiatry, and psychology Gain exposure to the major concepts and controversies in the discipline Explore potential job and educational pathways
Collaboration and Networking	<ul style="list-style-type: none"> Collaborate with diverse teams, cohort members, and faculty Networking with notable thinkers in the discipline 	<ul style="list-style-type: none"> Professionally present your personal brand Learn to work with diverse teams Connect with real scientists doing the work of the discipline

Students in previous cohorts have indicated **this is an intensive program requiring a significant time commitment.** If selected, students should plan their other summer commitments accordingly.

MENTOR PROFILE



Patrick Romani, PhD

- Dr. Romani is an assistant professor at the CU School of Medicine and the clinical director for the Intensive Services Division within the Pediatric Mental Health Institute at Children's Hospital Colorado. Dr. Romani's research interests include evaluation of variables contributing to staff member injury and delivery of behavior-analytic services via telehealth. Dr. Romani has published 24 times in peer-reviewed journals
- Interested students will participate in a study to evaluate variables that contribute to staff-member injury on a general psychiatric inpatient unit. Specific tasks will include data entry, learning to conduct statistical analyses, and shadowing clinical care on the psychiatric inpatient unit.
- Students will be able to:
 - Participate in data entry
 - Attend lab meetings
 - Meeting with clinical providers (e.g., psychiatry, social work) to learn about their jobs,
 - Shadowing direct clinical care on three different inpatient units (Eating Disorder, General Psychiatric Unit, and Neuropsychiatric Special Care Unit).
- Learn more: <https://www.childrenscolorado.org/doctors-and-departments/physicians/r/patrick-romani/>

MENTOR PROFILE



Allison Dempsey, PhD

- Dr. Dempsey is a licensed psychologist who specializes in working with infants born with complex medical conditions and their families. Her research focuses on detection and intervention of parental stress and coping from pregnancy through early childhood and developmental outcomes in this population.
- There are a range of topics in which students could participate, including:
 - Examining feasibility and limited effectiveness of an exposure intervention to decrease procedural anxiety related to Cesarean deliveries among women with fetal anomalies. The student would assist in collection, analysis, and summarization of data related to this small pilot study that will likely begin in January 2020. Preliminary data will be available for analysis in Summer 2020.
 - Parent-reported developmental and behavioral outcomes of children born with twin-twin transfusion syndrome. This study involves surveying parents of children born with this rare complication about their children's outcomes in childhood. It is anticipated that the IRB for this project will be submitted in early 2020, so data collection will be underway and available for preliminary analyses in summer 2020.
- Students will be able to:
 - Shadow members of the behavioral health team in their various clinical activities in the fetal care center and NICU.
 - Attend team meetings that include discussion of current patients and program initiatives.
 - Attend and participate in research meetings (journal clubs, research project discussions).
- Learn more: <https://www.childrenscolorado.org/doctors-and-departments/physicians/d/allison-dempsey/>

MENTOR PROFILE



Monique Germone, PhD, MA

- Monique Germone, PhD, BCBA is an Assistant Professor at the University of Colorado, Denver and a Clinical Psychologist at Children's Hospital Colorado in the Departments of Psychiatry and Pediatrics. Clinically, she provides psychosocial support to children and families with celiac disease, as well as psychotherapy for children with developmental disabilities. Her current research interest is improving medical care.
- Dr. Germone currently has two projects that the student can choose from and create their own project. The projects are:
 - Mental health and psychosocial data collected from children with celiac disease and their caregivers.
 - Quality improvement data collected from a retrospective chart review of children with Down syndrome and celiac disease.
- Students will be able to:
 - Attend a weekly one-hour research team meeting with the entire celiac research team
 - Shadowing the medical and research teams in the celiac center (Tuesdays and Fridays, 1/2 day clinics)
 - Conduct data analysis
- Learn more: https://www.cudoctors.com/Find_A_Doctor/Profile/22240

MENTOR PROFILE



Aviva Olsavsky, MD

- Dr. Olsavsky's work in the SIMBA (Stress in Moms and Babies) lab studies how mothers' stressful early experiences impact maternal processing of infant cues using behavioral and neuroimaging methods. After a BA from Harvard, Aviva completed medical school and residency at UCLA, child psychiatry training at Children's Colorado, and NIMH and CU research fellowships. Since adverse early experiences are common, understanding changes in brains of mothers will help us design interventions to help mothers and children, affecting two generations at once. Clinically, Aviva provides psychiatric consultation to the Young Mothers Clinic at Children's Hospital, an OB/primary care clinic for teen mothers.
- Projects may be titrated to a student's interests, career goals, and the skills that they would like to learn. The data Dr. Olsavsky currently has for analysis include maternal speech samples related to their relationships with their partner and baby, mother-infant observational data, medical and diagnostic data about the peripartum period for mothers, and neuroimaging data for one task that examines how mothers engage in approach behaviors toward their infants and another baby-related social reward task.
- Students will be able to:
 - Participate in weekly meetings with Aviva for project management and career advice
 - Shadowing mother-infant research visits
 - Skills building with tutorials in data cleaning and management, analytic methods, interviewing and diagnostic methods, research ethics
 - Opportunities to be included in national conference abstract submissions, depending on the level of longer-term involvement in lab work.
- Learn more: <https://www.childrenscolorado.org/doctors-and-departments/physicians/o/aviva-olsavsky/>

MENTOR PROFILE



Christine Garver-Apgar, PhD

- Dr. Garver-Apgar is an Assistant Professor and Research Psychologist. Her research interests span both basic psychological science and applied community-based research and evaluation. As a behavioral scientist, she applies principles of evolutionary medicine, psychology, and psychiatry to the study of individual differences in human health and development. She is interested in how early childhood adversity impacts neurocognitive development and health behaviors. She also directs community-based research and evaluation projects with the goal of implementing and evaluating innovative strategies to support healthy behavior change. Areas of focus include tobacco cessation, chronic disease prevention, health disparities, family interventions, and provider wellness.
- Students will be able to participate in one of two projects:
 - An investigation of how experiencing adversity during childhood may change the way our brains develop - altering the way people make decisions, respond to stress, and regulate emotions later in life, and whether these developmental impacts may influence health behaviors within low-income families (sleep, nutrition, tobacco use, etc.). In conjunction with our RAISE Families for Health Program, PURPLE students would have an opportunity to assist with participant recruitment and data collection (including hair samples for cortisol analysis) at a nurse-run integrated care clinic.
 - Burnout among healthcare providers is a serious and growing problem. We are investigating medical student and resident wellness by collecting self-reported "Professional Quality of Life" data from medical residents at the end of their first year. PURPLE students will have an opportunity to assist with disseminating an online survey to former CU Anschutz medical students (now residents) and analyzing data for changes in symptoms of burnout and compassion fatigue.
- Learn more: <https://som.ucdenver.edu/Profiles/Faculty/Profile/20617>

MENTOR PROFILE



Amber McDonald, PhD, LCSW, MSW

- Dr. McDonald's research and professional practice is entirely rooted in understanding and providing effective prevention and intervention strategies for youth who've experienced trauma. Dr. McDonald has extensive experience in trauma informed systems of care, forensic interviewing, treatment of complex trauma, and program and curriculum development. She has spent the last 15 years honing her skills in mental and behavioral health and has had the opportunity to share her skills across the United States and internationally. Dr. McDonald is committed to integrating the most current empirical literature into her practice and frequently provides training to others where she is tasked with translating data and evaluative results to others in a comprehensive and digestible fashion. Dr. McDonald is one of the Deputy Directors for the Stress, Trauma, Adversity, Research and Treatment (START) Clinic in the Department of Psychiatry.
- Dr. McDonald is a social worker thus all her work is filtered through a social justice and equity lens. This is important for students to know as working with Dr. McDonald will consist of discussing and challenging systems of oppression.
- Students will:
 - Have the option to be involved in trauma-informed systems of care evaluation or in the evaluation of the effectiveness of a SAMHSA funded first responder family program.
 - Shadow training and consultation that is provided by the mentor and attend meetings
 - Assist in the development of evaluation and behavioral health tools and programming.
- Learn more: <https://medschool.cuanschutz.edu/psychiatry/programs/STARTcenter>

MENTOR PROFILE



Kimberly Sheffield, PhD, MA, BS

- Kim Sheffield, Ph.D. is an Assistant Professor of Psychiatry at the University of Colorado School of Medicine and serves as a Psychologist in the Eating Disorders Program at Children's Hospital Colorado (CHCO). Dr. Sheffield is responsible for providing both individual and family therapy for eating disorder patients. Additionally, she facilitates groups for patients in higher levels of care. Her research focuses on improving outcomes for children and adolescents receiving psychological services across different levels of care. She is particularly interested in the adaptation and implementation of cognitive behavioral therapy and dialectical behavior therapy for varied patient populations.
- The project the student would be involved in during the PURPLE program would be focused on evaluating outcomes for patients receiving eating disorder treatment (inpatient and day treatment) at CHCO. The student will assist with data analyses comparing admission and discharge data collected on patients in higher levels of care. They will be able to investigate treatment outcomes across multiple measures (e.g., weight, anxiety, depression, parenting confidence). The student will learn implementation and management of research studies on an intensive psychiatric unit.
- The student will be able to:
 - Shadow multidisciplinary team members within the Eating Disorders Program (e.g., psychologist, psychiatrist, nutritionist, nurse).
 - Attend multidisciplinary team meetings and assist with ongoing staff trainings on research protocol
 - Data entry and management
- Learn more: <https://www.childrenscolorado.org/doctors-and-departments/physicians/s/kimberly-sheffield/>

MENTOR PROFILE



Bruno Anthony, PhD



Laura Anthony, PhD

- Bruno and Laura Anthony are both psychologists dedicated to the development, implementation, and testing of new interventions to have an immediate impact on Children's lives. These include stigma reduction, family support, and executive function interventions in schools. Students will be co-mentored by both Dr. Bruno Anthony and Dr. Laura Anthony, and their research team.
- Students can choose from the following projects:
 - Evaluation of Mental Health First Aid Trainings
 - Evaluation of Riding for Focus, a school-based biking program for at-risk youth
 - Help adapt school staff trainings for an executive functioning intervention implementation project (project likely to be funded)
 - Run autistic young adult subjects to gain insight into their experiences of being evaluated (for an NIH multi-site trial)
 - Coding of audiotapes for quality indicators for family support sessions (for a different NIMH multi-site trial)
- Students will be able to:
 - Shadow in clinical treatment groups and evaluations
 - Attend weekly research team meetings
 - Shadow community trainings
 - Help build databases in REDCap
 - Possibly data entry and/or analysis
- Learn More:
 - Laura: https://www.cudoctors.com/Find_A_Doctor/Profile/25274
 - Bruno: <https://www.childrenscolorado.org/doctors-and-departments/physicians/a/bruno-anthony/>

MENTOR PROFILE



Joseph Schacht, PhD



Jarrod Ellingson, PhD

- Dr. Joseph Schacht and Dr. Jarrod Ellingson are Associate and Assistant Professors, respectively, in the Division of Substance Dependence. They will co-mentor a student.
- Dr. Schacht is a licensed clinical psychologist and directs the Translational Addiction Imaging Laboratory (TrAIL). He is particularly known for using behavioral genetics, functional neuroimaging, and experimental pharmacology to understand alcohol and drug craving and cue reactivity. His current work, supported by two NIAAA-funded R01s, focuses on evaluating novel medications for the treatment of Alcohol Use Disorder and Attention-Deficit/Hyperactivity Disorder.
- Dr. Ellingson's program consists of two broad aims addressing the causes and effects of substance use: 1) understanding the shared mechanisms of heavy substance use and co-occurring conditions (e.g., depression, health problems) and 2) disentangling the causes and effects of substance use disorders from confounding factors.
- Students will have access to several large existing datasets in order to complete their research project. These datasets include genetic, neuroimaging, and behavioral data from samples of heavy-drinking young adults and matched controls. Through an NIH grant, Dr. Ellingson is investigating treatment mechanisms that might be shared between alcohol use disorder and major depressive disorder. Students interested in this project could conduct a literature review or analyze data from a treatment study for individuals with alcohol use disorder (e.g., potential factors that are associated with improvements in alcohol use and depression). These factors include, but aren't limited to, biomarkers (e.g., inflammatory cytokines), cognitive functioning, and indices of gastrointestinal health (via gut microbiome data).
- Students will be able to:
 - Assist with study subject visits for Dr. Schacht (including functional neuroimaging and alcohol administration laboratory sessions), data entry, and may attend TrAIL lab meetings.
 - Shadow at CeDAR (a residential alcohol treatment program), if permitted by CeDAR policy, and may shadow Dr. Ellingson during research meetings.
- Learn More:
 - Dr. Schacht: https://www.cudoctors.com/Find_A_Doctor/Profile/29753
 - Dr. Ellingson: <https://profiles.ucdenver.edu/display/13027598>