

# Gaylen Fronk

she/her/hers • [gfronk@wisc.edu](mailto:gfronk@wisc.edu) • Madison, WI

## **EDUCATION**

- In progress Ph.D., Clinical Psychology, University of Wisconsin-Madison  
*Proposed Dissertation: Machine learning-assisted treatment selection for smoking cessation*
- 2019 M.S., Clinical Psychology, University of Wisconsin-Madison
- 2016 B.S., Psychology with Honors, Davidson College, *Magna Cum Laude*  
*Honors Thesis: The effects of exercise interventions on drug self-administration in rats*

## **SCHOLARLY PUBLICATIONS (13)**

### First-Authored Publications

- Fronk GE\***, Hefner K\*, Gloria R\*, & Curtin JJ (2022). Central stress response among heavy marijuana users. *Psychology of Addictive Behaviors*, 36(8), 1023-1035. [[DOI](#)] [[OSF](#)]
- Schultz ME\*, **Fronk GE\***, Jaume-Felicios N, Magruder K, & Curtin JJ (2022). Stressor-elicited craving and smoking during a smoking cessation attempt. *Journal of Psychopathology and Clinical Science*, 131(1), 73-85. [[DOI](#)] [[OSF](#)] [[Preregistration](#)]
- Fronk GE**, Sant'Ana SJ, Kaye JT, & Curtin JJ (2020). Stress allostasis in substance use disorder: Promise, progress, and emerging priorities in clinical research. *Annual Review of Clinical Psychology*, 16, 401-430. [[DOI](#)] [[OSF](#)]

\*These authors contributed equally as co-first authors.

### Co-Authored Publications

- Wyant K, Sant'Ana SJ, **Fronk GE**, & Curtin JJ (in press). Machine learning models for temporally precise lapse prediction in alcohol use disorder. *Journal of Psychopathology and Clinical Science*. [[Preprint](#)] [[OSF](#)]
- Cohen TR, **Fronk GE**, Kiehl K, Curtin JJ, & Koenigs MR (in press). Clarifying the relationship between mental illness and recidivism using machine learning: A retrospective study. *PLOS ONE*.
- Wyant K, Moshontz H, Ward S, **Fronk GE**, & Curtin JJ (2023). Acceptability of personal sensing among people with alcohol use disorder: Observational study. *JMIR mHealth and uHealth*, 11:e41833. [[DOI](#)] [[OSF](#)]
- Moshontz H, Colmenares AJ, **Fronk GE**, Sant'Ana SJ, Wyant K, Wanta SE, ... & Curtin JJ (2021). Prospective prediction of lapses in opioid use disorder: Protocol for a personal sensing study. *Journal of Medical Internet Research: Research Protocols*, 10(12):e29563. [[DOI](#)] [[OSF](#)]
- Bradford DE, Shireman JM, Sant'Ana SJ, **Fronk GE**, Schneck SE, & Curtin JJ (2022). Alcohol's effects during uncertain and uncontrollable stressors in the laboratory. *Clinical Psychological Science*, 10(5), 885-900. [[DOI](#)] [[OSF](#)]
- Kaye JT, **Fronk GE**, Zgierska AE, Cruz MR, Rabago D, & Curtin JJ (2019). Acute prazosin administration does not reduce stressor reactivity in healthy adults. *Psychopharmacology*, 236(11), 3371-3382. [[DOI](#)] [[OSF](#)]
- Bradford DE, **Fronk GE**, Sant'Ana SJ, Magruder KP, Kaye JT, & Curtin JJ (2018). The need for precise answers for the goals of precision medicine in alcohol dependence to succeed. *Neuropsychopharmacology*, 43, 1799-1800. [[DOI](#)]
- Smith MA, **Fronk GE**, Abel JM, Lacy RT, Bills SE, & Lynch WJ (2018). Resistance exercise decreases heroin self-administration and alters gene expression in the nucleus accumbens of heroin-exposed rats. *Psychopharmacology*, 235(4), 1245-1255. [[DOI](#)]
- Robinson AM, **Fronk GE**, Zhang H, Tonidandel S, & Smith MA (2017). The effects of social contact on cocaine intake in female rats. *Drug and Alcohol Dependence*, 177, 48-53. [[DOI](#)]

Smith MA, **Fronk GE**, Zhang H, Magee CP, & Robinson AM (2016). Acute bouts of wheel running decrease cocaine self-administration: Influence of exercise output. *Pharmacology, Biochemistry and Behavior*, 150-151, 94-99. [\[DOI\]](#)

## **MANUSCRIPTS (preprints, preregistrations, under review, and in preparation)**

### First-Authored Manuscripts

**Fronk GE**, Piper ME, Baker T, & Curtin JJ (in prep). Machine learning-assisted treatment selection for smoking cessation.

**Fronk GE**, Papp A, Wyant K, Sant'Ana SJ, & Curtin JJ (in prep). Dynamic assessment of self-efficacy predicts future alcohol use during early recovery.

### Co-Authored Manuscripts

Wyant K, Yu J, **Fronk GE**, & Curtin JJ (in prep). Machine learning models for lagged predictions in alcohol use disorder.

Peng Z, He Q, **Fronk GE**, Curtin JJ, & Li JJ (in prep). Using machine learning in prospective predictions of ADHD in the ABCD study.

Moshontz H, **Fronk GE**, Sant'Ana SJ, & Curtin JJ (in prep). Quantifying optimization bias in model evaluation when using cross-validation in psychological science: A Monte Carlo simulation study. [\[Preprint\]](#) [\[OSF\]](#)

## **FELLOWSHIPS & AWARDS**

2022 –	National Research Service Award National Institute on Drug Abuse (F31 DA056144) Direct Costs: \$140,259
2020 – 2021	Seed Grant UW-Madison Center for Human Genomics & Precision Medicine Direct Costs: \$50,000
2019 – 2021	Learning Understanding Cognition Intelligence Data Science (LUCID) Fellowship National Science Foundation Research Traineeship (DGE-1545481) Direct Costs: \$116,213
2019	Student Research Grants – Conference Presentation, UW-Madison (\$600)
2018, 2023	Hertz Foundation Travel Award, UW-Madison Department of Psychology (\$750-1,000)
2016	William Gatewood Workman Psychology Award, Davidson College (\$100)
2015	Davidson Research Initiative, Davidson College (\$4,800)
2014, 2015	Dr. Lou Ortmeyer Award, Davidson College

## **ACADEMIC & COMMUNITY ORAL PRESENTATIONS (11)**

**Fronk GE**, Tomko R, Newberger N, & Treloar Padavano H (2024). Prevention, intervention, and continuing care across phases of use and recovery. Chair for accepted Symposium to be presented at the 12<sup>th</sup> annual meeting of Collaborative Perspectives on Addiction, Denver, CO.

**Fronk GE**, Papp A, Wyant K, Sant'Ana SJ, & Curtin JJ (2024). Dynamic assessment of self-efficacy predicts future alcohol use. Accepted presentation for the 12<sup>th</sup> annual meeting of Collaborative Perspectives on Addiction, Denver, CO.

- Fronk GE** (2023). Improving treatments for substance use disorders. *Introduction to Psychotherapy Course* (Guest Lecture), UW-Madison Department of Psychology, Madison, WI.
- Fronk GE** (2023). Certainty in uncertain times. *Professional Development Course* (Guest Lecture), UW-Madison School of Pharmacy, Madison, WI.
- Fronk GE** (2023). Applying for NRSA/F31 fellowships. Presented at the *UW-Madison Sexual Violence Research Initiative*, Madison, WI.
- Fronk GE** (2022). Treatment selection & adaptive continuing care for substance use disorders. Presented at the *UW-Madison Clinical Research Symposium*, Madison, WI.
- Fronk GE**, Moshontz H, & Curtin JJ (2021). Using high-throughput computing to develop precision mental health algorithms. Presented at the 18<sup>th</sup> annual *HTCondor Week* (virtual).
- Fronk GE** & Curtin JJ (2021). Machine learning-assisted precision mental health for smoking cessation. Presented at the 9<sup>th</sup> annual meeting of *Collaborative Perspectives on Addiction* (virtual).
- Fronk GE** & Curtin JJ (2019). Patient-level prediction in smoking cessation. Presented at the 34<sup>th</sup> annual *First Year Project Symposium*, Madison, WI.
- Fronk GE** & Curtin JJ (2019). Machine learning-assisted precision medicine for smoking cessation. Presented at the 2<sup>nd</sup> annual *eLUCID8 Conference*, Madison, WI.
- Fronk GE** & Curtin JJ (2019). Machine learning-assisted precision medicine for smoking cessation: Protocol. Presented at the *UW-Madison Clinical Research Symposium*, Madison, WI.

## **POSTER PRESENTATIONS (12)**

- Papp A, **Fronk GE**, Wyant K, Sant'Ana SJ, & Curtin JJ (2024). Accuracy of self-monitoring drinking risk differs across individuals. Accepted poster for the 12<sup>th</sup> annual meeting of Collaborative Perspectives on Addiction (Denver, CO).
- Fronk GE**, Schultz ME, Jaume-Felicios N, Magruder K, & Curtin JJ (2023). Stressor-elicited smoking and craving during a smoking cessation attempt. Poster presented at the 11<sup>th</sup> annual meeting of Collaborative Perspectives on Addiction, Albuquerque, NM.
- Wyant K, Moshontz H, Ward SB, **Fronk GE**, & Curtin JJ (2023). Acceptability of personal sensing among people with alcohol use disorder. Poster presented at the 11<sup>th</sup> annual meeting of Collaborative Perspectives on Addiction, Albuquerque, NM.
- Sant'Ana S, Wyant K, **Fronk GE**, & Curtin JJ (2023). Personal sensing for temporally precise lapse prediction for alcohol use disorder. Poster presented at the 11<sup>th</sup> annual meeting of Collaborative Perspectives on Addiction, Albuquerque, NM.
- Cohen TR, **Fronk GE**, Kiehl K, Koenigs MR, & Curtin JJ (2022). Using machine learning methods to clarify the relationship between mental illness and recidivism. Poster presented at the annual American Psychological Association Convention, Minneapolis, MN.
- Kaye JT, **Fronk GE**, Zgierska AE, Cruz MR, Rabago D, & Curtin JJ (2019). Acute prazosin administration does not reduce stressor reactivity in healthy adults. Poster presented at the 74<sup>th</sup> annual meeting of the Society of Biological Psychiatry, Chicago, IL.
- Fronk GE**, Gloria R, Hefner K, & Curtin JJ (2019). Stress neuroadaptations following heavy marijuana use: Phenomenology and individual differences risk. Poster presented at the 32<sup>nd</sup> annual meeting of the Association for Psychological Science, Washington, DC.
- Fronk GE**, Gloria R, Hefner K, & Curtin JJ (2018). Stress neuroadaptations following heavy marijuana use: Phenomenology and individual differences risk. Poster presented at the 58<sup>th</sup> annual meeting of the Society for Psychological Research, Quebec City, Quebec.

- Kaye JT, **Fronk GE**, Williams HM, Zgierska AE, Cruz MR, Rabago DP, & Curtin JJ (2018). Effects of acute prazosin administration on startle potentiation during unpredictable versus predictable stressors in humans. Poster presented at the 58<sup>th</sup> annual meeting of the Society for Psychological Research, Quebec City, Quebec.
- Smith MA, Robinson AM, **Fronk GE**, Zhang H, & Tonidandel S (2017). The effects of social influence on cocaine self-administration in female rats. Poster presented at the 79<sup>th</sup> annual meeting of the College on Problems of Drug Dependence, Montreal, Quebec.
- Goodwin MG, Shireman JM, **Fronk GE**, Schneck SE, Kayser AD, Bradford DE, & Curtin JJ (2017). Alcohol stress response dampening occurs during unpredictable but not uncontrollable shock stressors. Poster presented at the 40<sup>th</sup> annual meeting of the Research Society on Alcoholism, Denver, CO.
- Fronk GE**, Smith MA, Bills SE, & Lacy RT (2015). The effects of resistance exercise on heroin administration in female rats. Poster presented at the 123<sup>rd</sup> annual meeting of the American Psychological Association, Toronto, Canada.

## **CLINICAL EXPERIENCE**

- 2022 – 2023     Practicum Student, William S. Middleton Veteran’s Hospital PTSD Clinical Team  
 Treating: adult post-traumatic stress disorder  
 Providing: Individual therapy (CPT, PE), group therapy (CPT), adult assessments (SCID-PD, MMPI-2-RF, MCMI-IV, PHQ-9, GAD-7, PCL-5, YBOCS)  
 Supervisors: Dr. Michael Messina, Dr. Katherine Magruder
- 2021 – 2022     Practicum Student, William S. Middleton Veteran’s Hospital Mental Health Clinic  
 Treating: adult anxiety, depression, trauma, substance use disorders  
 Providing: Intake interviews, individual therapy (CBT, MI), adult assessments (PHQ-9, GAD-7, PCL-5, AUDIT-C)  
 Supervisor: Dr. James Lickel
- 2019 – 2023     Practicum Student, Psychology Research and Training Clinic  
 Treating: adult anxiety, depression, substance use disorders  
 Providing: Intake interviews, individual therapy (CBT, MI, CBASP, ACT, Behavioral Activation, Exposure Therapy), child and adult assessments (SCID-CV-5, WISC-V, WIAT, BAI, GAD-7, BDI, CAARS-SL)  
 Supervisors: Dr. Linnea Burk, Dr. Chris Gioia
- 2017 – 2020     Graduate Research Clinician, Psychology Research and Training Clinic  
 Treating: adult alcohol use disorders  
 Performing: adult assessments (SCID-RV-5) and individual therapy (brief MET) for study protocol “Targeting noradrenergic stress mechanisms in alcoholism with doxazosin”  
 Supervisors: Dr. Chris Gioia, Dr. Linnea Burk
- 2018             Graduate Research Clinician, Psychology Research and Training Clinic  
 Treating: adult alcohol use disorders  
 Providing: individual therapy (brief MET) for study protocol “Dynamic, real-time prediction of alcohol use lapse using mHealth technologies”  
 Supervisor: Dr. Chris Gioia

## **RESEARCH EXPERIENCE**

- 2018 –             Graduate Research Assistant  
 Addiction Research Center, UW-Madison  
 Advisor: Dr. John Curtin
- 2016 – 2018     Research Specialist  
 Addiction Research Center, UW-Madison

Advisor: Dr. John Curtin

2014 – 2016 Undergraduate Research Assistant  
Behavioral Pharmacology Lab, Davidson College  
Advisor: Dr. Mark Smith

### **TEACHING & MENTORING**

2024 – Mentor  
Promoting Underrepresented Minorities in Psychology

2022 – 2023 Reader/Grader, Undergraduate course: “Introduction to Psychotherapy”  
Assisting Dr. Rhonda Reinholtz, UW-Madison

2020, 2021 Teaching Assistant (Spring), Graduate course: “Introduction to Applied Machine Learning”  
Assisting Dr. John Curtin, UW-Madison

2019 Mentor, Psychology Research Experience Program (PREP)  
Kendra Wyant, “Facebook for diagnosing alcohol use disorder in undergraduates”

2018 – 2019 Professional Tutor  
Athletic Department, UW-Madison

2016 Teaching Assistant (Spring), Undergraduate course: “Research Methods: Design & Analysis”  
Assisting Drs. Scott Tonidandel & Maurya Boyd, Davidson College

2013 – 2016 Professional Tutor  
Writing Center, Center for Teaching and Learning, Davidson College

2014 Professional Tutor  
Spanish Language, Center for Teaching and Learning, Davidson College

### **PROFESSIONAL DEVELOPMENT & TRAINING**

2022 PTSD Workshop: Providing Cognitive Processing Therapy  
Wisconsin Psychiatric Institute & Clinics

2022 PTSD Workshop: Providing Prolonged Exposure  
Wisconsin Psychiatric Institute & Clinics

2020 Machine Learning: Uncovering Hidden Structure in Data  
ICPSR Summer Program in Quantitative Methods of Social Research

2019 ABCD Workshop on Brain Development and Mental Health  
Sponsored by NIMH

### **PROFESSIONAL SERVICE & AFFILIATION**

2021 – APA Division 50 (Society of Addiction Psychology)  
Member

2020 – 2022 Clinical Area Antiracism & Academic Training Committee  
UW-Madison Department of Psychology  
Member

2020 – 2021 Colloquium Committee  
UW-Madison Department of Psychology  
Member

2019 – 2021 APA Division 28 (Society for Psychopharmacology & Substance Use)

- Student Representative & Social Media Co-Chair (2020 – 2021); Member
- 2015 – Phi Beta Kappa National Honor Society  
Lifetime Member
- 2014 – Psi Chi Psychology Honor Society  
Secretary (2015 – 2016); Lifetime Member

### **REVIEWER SERVICE**

*Clinical Psychological Science* (ad hoc reviewer)

*Experimental and Clinical Psychopharmacology* (ad hoc reviewer)

*Computers in Biology and Medicine* (ad hoc reviewer)

Collaborative Perspectives on Addiction (peer reviewer, 12<sup>th</sup> annual [2024] and 11<sup>th</sup> annual [2023] meetings)

### **REFERENCES**

Contact information for all research advisors and clinical supervisors is available upon request.