



## Michael Amlung, PhD

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Dr. Amlung is an Assistant Professor in the Department of Psychiatry & Behavioural Neurosciences at McMaster. He is also a faculty affiliate with the Peter Boris Centre for Addictions Research and the Michael G. DeGroot Centre for Medicinal Cannabis Research at McMaster. He also actively collaborates as a Research Psychologist with the Concurrent Disorders Program at St. Joseph's Healthcare Hamilton where he coordinates a multidisciplinary team of scientists, clinicians, and learners. He received a PhD in Psychology and completed a postdoctoral fellowship in addictions research prior to joining the faculty at McMaster.

Dr. Amlung's research seeks to understand the neurobiological and behavioural correlates of pathological decision-making and motivation, particularly in the context of addiction and other unhealthy behaviors. Much of his work draws on concepts from behavioral and neuro-economics to examine impaired self-control and motivation to use alcohol and other drugs in individuals with addictions. He is also interested in the intersection between addiction and other mental health disorders, including research and clinical collaborations in the areas of concurrent disorders and schizophrenia. Some of his most recent work has focused on understanding changes in attitudes and preferences related to cannabis use in response to federal legalization of cannabis in Canada.

His lab uses a variety of methods, including brain imaging (functional magnetic resonance imaging), brain stimulation (transcranial direct current stimulation), alcohol cue exposures in the Peter Boris Centre for Addictions Research's simulated bar laboratory, and other behavioural methods. Finally, his collaborative work with the Concurrent Disorders Program has led to the establishment of a comprehensive clinical screening battery for concurrent disorders that has been used to screen >1000 patients at SJHH and recently expanded to several other clinics at the hospital.

Dr. Amlung is highly active in mentoring students and other trainees. His lab is an active training environment for graduate students in the McMaster Neuroscience Graduate Program, undergraduate student researchers, and postdoctoral fellows. Dr. Amlung's students are the primary driving force for many of the lab's studies and are essential to the lab's success. In the Department of Psychiatry and Behavioural Neurosciences, Dr. Amlung is also active in faculty development and research involvement, including co-facilitating the Department Leadership Program, coordinating the Department's research seminar series, and conducting scholarship on faculty and resident engagement in research.

### Recent Publications (\*\*Indicates Student or Postdoctoral Mentee)

**Amlung, M., & MacKillop, J.** (In Press) Availability of legalized cannabis reduces demand for illegal cannabis among Canadian cannabis users: Evidence from a behavioural economic substitution paradigm. *Canadian Journal of Public Health*.

\*\*Patel, H., & **Amlung, M.** (In Press). Elevated cannabis demand is associated with driving after cannabis use in a crowdsourced sample of adults. *Experimental & Clinical Psychopharmacology*.

**Amlung, M.,** Reed, D.D., \*\*Morris, V., Aston, E.R., Metrik, J., & MacKillop, J. (2018) Price Elasticity of Illegal vs Legal Cannabis: A Behavioral Economic Substitutability Analysis. *Addiction*, 114, 112-118.

\*\*Morris, V., \*\*Patel, H., \*\*Vedelago, L., Reed, D.D., Metrik, J., Aston, E., MacKillop, J., & **Amlung, M.**, (2018) Elevated behavioral economic demand for alcohol and co-users of alcohol and cannabis. *Journal of Studies on Alcohol and Drugs*, 79, 929-934.

\*\*Naish, K., \*\*Vedelago, L., MacKillop, J., & **Amlung, M.** (2018). Effects of neuromodulation on cognitive performance in individuals exhibiting addictive behaviors: A systematic review. *Drug and Alcohol Dependence*, 192, 338-351.

\*\*Vedelago, L., **Amlung, M.**, \*\*Morris, V., Petker, T., Balodis, I., McLachlan, K., Mamak, M., Moulden, H., Chaimowitz, G., & MacKillop, J. (In Press). Technological Advances in the Assessment of Impulse Control in Offenders: A Systematic Review. *Behavioral Sciences & The Law*.

### **Recent Awards and Honors**

2019 Distinguished Scientific Early Career Contributions Award, Society of Addiction Psychology

2019-2021 Intramural Grant, Lambert Center for Medicinal Cannabis and Hemp

2018-2020 Research Grant, National Institute on Alcohol Abuse and Alcoholism

2017 Constantine Douketis New Researcher Award, Research Institute at St. Joseph's Healthcare Hamilton