



CHU Sainte-Justine
Research Center
*Mother and Child
University Hospital Center*

For the love of children

Université 
de Montréal

August 1, 2018

Subject: Postdoctoral and doctoral fellowship positions (2018-2019)

- 1) Postdoctoral Training in Longitudinal Neuroimaging Data Analysis
- 2) Doctoral Studentship in Longitudinal Neuroimaging Data Analysis
- 3) Postdoctoral Training in Prevention Implementation Research
- 4) Clinical Postdoctoral Trainee in Personality-Targeted Interventions and Knowledge Transfer.

Dear Colleagues,

I am pleased to announce that I am currently accepting applications for 3 post-doctoral positions and two doctoral studentships in my research team. I would be very grateful if you would circulate this document within your department.

The candidates will be based at the Research Centre at CHU Ste-Justine, affiliated with the Research Unit on Children's Psychosocial Maladjustment (GRIP), the Université de Montréal's Department of Psychiatry, and the Montreal Neurological Institute (MNI) at McGill University, depending on the research activities of the candidate. My team consists of a multi-national, multi-disciplinary group of bright and enthusiastic young researchers. The ConrodVenture Lab brings together trainees with various professional and educational backgrounds, including mathematics, clinical psychology, psychiatry, medicine, educational psychology, public health and sociology.

I am inviting motivated graduates in the fields of developmental psychology or clinical psychology, counselling, or related clinical fields, public health/implementation science, or computational neuroscience with strong track-records in research to join my team. Stipends begin at \$45 000 CDN per year for postdoctoral students and \$25,000 CND for graduate students, are 1-year appointments and will start any time after September 2018, with possibility of renewal for up to 3 years, depending on project and performance.

Interested candidates are to contact: Patricia Conrod, PhD, Department of Psychiatry, Université de Montréal, CHU Sainte Justine, 3175 Côte-Ste-Catherine, Centre de Recherche, Montreal, Quebec, H3T 1C5, Canada, Email: patricia.conrod@recherche-ste-justine.qc.ca

Applications will be accepted until the positions are filled.

1) Post Doctoral Researcher in Longitudinal Neuroimaging Data Analysis:

This candidate should have a PhD in fields of study that focus on computational methodologies, statistics, neuroimaging data analysis or neurodevelopment. The candidate will have access to a number of very large

multisite imaging studies, adolescent cohort studies and prevention trials, which include rich and repeated behavioural and neuroimaging assessments. Some datasets include genetics functional imaging measures, so candidates with related experience will be favoured. The candidate will be encouraged to use these datasets to study the organisational structure of psychopathology in youth and the different developmental trajectories relevant to mental health outcomes. They will also be encouraged to analyse the effects of psychosocial interventions on these outcomes or to conduct studies that are maximally multi-modal in focus. Possible topics include Machine learning analytics, computational modelling of learning and decision making, and multi-level modeling of longitudinal or neuroimaging datasets.

Essential skills: spoken and written English, MSc or PhD in health research or developmental research with demonstrated strengths in computational modeling and statistical analyses.

For sample research by postdoctoral trainees on my team:

Baker TE, Lesperance P, Tucholka A, Potvin S, Larcher K, Zhang Y, Jutras-Aswad D, Conrod P. [Reversing the Atypical Valuation of Drug and Nondrug Rewards in Smokers Using Multimodal Neuroimaging](#). *Biol Psychiatry*. 2017 Dec 1;82(11):819-827. doi: 10.1016/j.biopsych.2017.01.015. Epub 2017 Jan 27. PMID: 28314439.

Castellanos-Ryan N, Struve M, et al., Neural and cognitive correlates of the common and specific variance across externalizing problems in young adolescence. *Am J Psychiatry*. 2014 Dec 1;171(12):1310-9. PubMed PMID: 25073448.

2) Doctoral Studentship in Longitudinal Neuroimaging Data Analysis:

This candidate should have a BSc or MSc in fields of study that focus on computational methodologies, statistics, neuroimaging data analysis or neurodevelopment. The candidate will have access to a number of very large multisite imaging studies, adolescent cohort studies and prevention trials, which include rich and repeated behavioural and neuroimaging assessments. Some datasets include genetics functional imaging measures, so candidates with related experience will be favoured. The candidate will be encouraged to use these datasets to study the organisational structure of psychopathology in youth and the different developmental trajectories relevant to mental health outcomes. They will also be encouraged to analyse the effects of psychosocial interventions on these outcomes or to conduct studies that are maximally multi-modal in focus. Possible topics include Machine learning analytics, computational modelling of learning and decision making, and multi-level modeling of longitudinal or neuroimaging datasets.

Essential skills: spoken and written English, MSc or PhD in health research or developmental research with demonstrated strengths in computational modeling and statistical analyses.

For sample research by doctoral students on my team:

Bourque J, et al. [Functional Neuroimaging Predictors of Self-Reported Psychotic Symptoms in Adolescents](#). *Am J Psychiatry*. 2017 Jun 1;174(6):566-575. doi: 10.1176/appi.ajp.2017.16080897 Epub 2017 Mar 21. PMID:28320226

Bourque J, Baker TE, Dagher A, Evans AC, Garavan H, Leyton M, Séguin JR, Pihl R, Conrod PJ. [Effects of delaying binge drinking on adolescent brain development: a longitudinal neuroimaging study](#). *BMC Psychiatry*. 2016 Dec 13;16(1):445. PMID: 27955636

3) Postdoctoral Training in Prevention Implementation Research: The CIHR-Canadian Underage Substance Use Prevention Trial (CUSP).

Aims: As countries move towards decriminalising substance use, effective adolescent drug prevention has become a central focus of modern national drug strategies. However, evidence-based drug prevention is not widely practiced and available to young people. As a result, despite having made great strides in reducing adolescent binge-drinking rates, illicit substance use remains significantly above national targets for health promotion and disease prevention in the United States and Canada. There is also an emerging crisis of prescription drug misuse and related overdose deaths in North America, but programmes validated for the prevention of prescription drug misuse in young people are currently

lacking. The Preventure Programme is a targeted school-based cognitive-behavioural intervention delivered to adolescents with personality-risk factors for substance use disorders (e.g., impulsivity, sensation seeking, hopelessness) and has been shown to be effective in reducing and preventing the uptake of illicit substance use and binge drinking by 30%-80%. The programme has also been shown to be effective in reducing prescription drug misuse among drug dependent individuals. We now propose a hybrid effectiveness/implementation-facilitation trial of school-based personality-targeted interventions when implemented more broadly across 3 new communities in Canada. Three sites linked to CIHR's Canadian Research Initiative in Substance Misuse (CRISM) Network will assist in recruiting 9 schools each, to be randomised to one of three intervention conditions. This trial will rapidly test a large-scale implementation model that could be applied to other areas of addiction and mental health in Canada, and internationally.

I am recruiting a postdoctoral researcher who has experience conducting research using population-based surveys, clinical trial designs, or longitudinal cohort designs to help manage the pan-Canadian CUSP trial. This is an excellent opportunity for a trainee to gain valuable experience managing large, community-based, multi-site randomised trials.

This candidate will gain valuable training in:

- a. Launching and coordinating a multi-site intervention trial, including ethics applications and protocol development.
- b. Developing standard operating and training protocols for conducting youth-oriented intervention research
- c. Analyse data related to program implementation, publish the research protocol and findings based on the data from the trial.

Essential skills: spoken and written English, MSc or PhD in health research and experience in trial or project management.

For sample publications by former postdoctoral students on my team, see:

O'Leary-Barrett M, Mâsse B, Pihl RO, Stewart SH, Séguin JR, **Conrod PJ**. [A cluster-randomized controlled trial evaluating the effects of delaying onset of adolescent substance abuse on cognitive development and addiction following a selective, personality-targeted intervention programme: the Co-Venture trial](#). *Addiction*. 2017 Oct;112(10):1871-1881. doi: 10.1111/add.13876. Epub 2017 Jul 17. PMID: 28544009.

O'Leary-Barrett M, Topper L, Al-Khudhairy N, Pihl RO, Castellanos-Ryan N, Mackie CJ, **Conrod PJ**. Two-year impact of personality-targeted, teacher-delivered interventions on youth internalizing and externalizing problems: a cluster-randomized trial. *J Am Acad Child Adolesc Psychiatry*. 2013 Sep;52(9):911-20. PubMed PMID: 23972693

Newton NC, **Conrod PJ**, Slade T, Carragher N, Champion KE, Barrett EL, Kelly EV, Nair NK, Stapinski L, Teesson M. [The long-term effectiveness of a selective, personality-targeted prevention program in reducing alcohol use and related harms: a cluster randomized controlled trial](#). *J Child Psychol Psychiatry*. 2016 Sep;57(9):1056-65. doi: 10.1111/jcpp.12558. Epub 2016 Apr 19.

4) Clinical Postdoctoral Trainee in Personality-Targeted Interventions and Knowledge Transfer.

The Preventure Program involves brief cognitive-behavioural interventions targeting these personality traits from a neurocognitive perspective and has proven remarkably effective in reducing alcohol and illicit drug use and mental health symptoms by a notable 30-80%, among high-risk secondary students in multiple published randomised trials (See Conrod et al., 2010; 2013; 2016). Trials with college students have also shown efficacy of the program in reducing alcohol misuse and mental health disorder symptoms and trials with community-recruited adults living with anxiety disorders and drug dependence have also proven the efficacy of the personality-targeted approach, including prescription drugs. A recent summary of the findings from 8 randomised trials of personality-targeted interventions

for SUDs suggests moderate effects sizes (average $d=.37-.47$) across all substance use outcomes, intervention formats and populations targeted. The program was recognized in the U.S. Surgeon General's 2016 Report on Addiction and in the UNESCO/UNODC/WHO Joint Report on Education Sector Responses to the Use of Alcohol, Tobacco and Drugs. In recognition of the strong evidence base in support of personality-targeted interventions, communities from around the world are requesting training on the Preventure Program. We hope to add an enthusiastic, clinician with experience delivering cognitive-behavioural and motivational interventions to young people. Candidates should have a PhD in clinical psychology, Psychiatric Nursing or Social Work, Behavioural Health or related disciplines.

The candidate will gain experiences in developing and executing a knowledge dissemination strategy in relation to an innovative and evidence-based mental health intervention program, and will be trained in:

- a. High fidelity delivery of Preventure interventions with youth.
- b. High fidelity delivery of Preventure training sessions to health and educational professionals
- c. Adapting the intervention and training programme for new contexts.
- d. Incorporating new research findings from ongoing trials into treatment and training protocols.
- e. Contributing to a virtual network of trainees, including providing webinars to update trainees on new findings and protocols related to the Preventure Program.

Essential skills: spoken and written English, professional degree in Psychology, Education, Counselling, or related fields, supervised practice delivering CBT and motivational interventions.

For sample publications by clinical trainees on my team:

Perrier-Ménard E, Castellanos-Ryan N, O'Leary-Barrett M, Girard A, **Conrod PJ**. [The impact of youth internalising and externalising symptom severity on the effectiveness of brief personality-targeted interventions for substance misuse: A cluster randomised trial](#). *Addictive Behaviors*. 2017 Dec;75:138-144. doi: 10.1016/j.addbeh.2017.07.015. Epub 2017 Jul 14. PMID:28734153

O'Leary-Barrett M, Castellanos-Ryan N, Pihl RO, **Conrod PJ**. [Mechanisms of personality-targeted intervention effects on adolescent alcohol misuse, internalizing and externalizing symptoms](#). *J Consulting and Clinical Psychologist*. 2016 May;84(5):438-52. doi: 10.1037/ccp0000082. Epub 2016 Feb 15. PMID: 26881449.

For information on personality-targeted interventions, see:

Conrod PJ. [Personality-Targeted Interventions for Substance Use and Misuse](#). *Current Addiction Reports*. 2016;3(4):426-436. Epub 2016 Nov 4. Review.