



THE BIOMEDER

UNIVERSITY
of GUELPH

The official newsletter of the Department of Biomedical Sciences



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REMINDERS

Happy New Year!!

I hope you all had a relaxing, restful and peaceful holiday season. Even with social distancing, I hope you were able to connect with family and friends, albeit virtually. I hope you are all energized and ready for the start of the Winter semester. I look forward to working with you all on your teaching and research needs.

As this pandemic continues, it may seem like there is no end in sight to our struggle to return to "normal". I am truly inspired by our hard working staff and students that have continued to support our daily research and teaching activities. **You are truly our "front line workers" and deserve our heartfelt gratitude!**

I urge you to continue to focus on all the great accomplishments that we were able to achieve this past year, despite the pandemic. All the best in 2021...hey, it can only get better from here, right?!

Stay safe and stay strong BIOMED!!

Welcome to Dr. Melissa Perreault!

It is my extreme pleasure to inform you that **Dr. Melissa Perreault** has joined our Biomed family!

Dr. Melissa Perreault obtained her PhD in behavioural neuroscience in the Department of Psychiatry and Behavioural Neuroscience at McMaster where her studies focused on opioid-dopamine interactions in obsessive-compulsive disorder. She continued her postdoctoral studies in neuropharmacology in the laboratory of Dr. Susan George at the University of Toronto, with a focus on the dopamine D1-D2 receptor heteromeric complex and its role in addiction and schizophrenia.



During this period, she also spent time as a visiting researcher in the laboratory of Dr. Anthony Grace, Distinguished Professor of Neuroscience, at the University of Pittsburgh where she was trained in in vivo systems electrophysiology. Dr. Perreault began her appointment as Assistant Professor at the University of Guelph in January 2017 with promotion to Associate Professor in July 2021.

In her laboratory, she uses pharmacological, pharmacogenetic and behavioural techniques combined with systems electrophysiology to evaluate how neuronal network communication is impaired in animal models, and to understand the cell signaling pathways responsible for the network disruption. In this regard she has two main lines of research. The first involves understanding sex differences in the mechanisms regulating systems function and treatment responses in autism and depression. The second is associated with the mechanistic processes underlying the cognitive impairments in schizophrenia and Alzheimer's disease.

In addition to her research, Dr. Perreault is a citizen of the Métis Nation of Ontario and is an avid supporter of equity, diversity, inclusion and Indigenization.

Welcome Melissa, we all look forward to learning more about your exciting research!

Welcome to "new" Biomeders!

This month, our Biomed family grew by a few more graduate students and postdoctoral fellows. Please join me in congratulating and welcoming:

Hesham Farag (Tami Martino) and **Chloe Graham** (Matt Vickaryous) transferred to the *PhD* program ...*congrats!*

Marangaby Mahamat - *PhD* - Jon LaMarre (starts S'21)

Laura Forhan - *MBS* - Pawel Bartlewski

Cassidy Van Stiphout - *MBS* - Alicia Vilorio-Petit

Aquilla Reid-John, *MBS* - Giannina Descalzi

Hannah Emami-Alagha, *MBS* - Pawel Bartlewski

Syed Adnan Ali - *MBS* - Shayan Sharif



**HANNAH EMAMI-
ALAGHA**



AQUILA REID-JOHN



LAURA FORHAN



**CASSIDY VAN
STIPHOUT**

Two new postdoctoral fellows joined Jibrán Khokhar's lab, **Dr. Richard Quansah Amissah** and **Dr. Hakan Kayir** (below)



Welcome everyone!

Jibran's Presentations

This month, **Dr. Jibran Khokhar** was a part of panel at the SfN Virtual Connectome 2021 called "Diversity Builds a Better Neuroscience".

Dr. Jibran Khokhar also gave a talk on the World Wide Neuro Platform for the Manitoba Neuroscience Network.

manitoba neuroscience network

Schizophrenia and Substance Use Disorders: Cracking the Chicken or Egg Question

SEMINAR & VISITING SPEAKER SERIES
WORLD WIDE NEURO PLATFORM

DATE
Monday, January 18, 2021
12:00 PM (noon) CST

WORLD WIDE NEURO LINK
To be announced

MEETING ID & PASSCODE
To be announced

SPEAKER
Jibran Y. Khokhar, Ph.D.
Assistant Professor, Department of Biomedical Sciences, University of Guelph

BIO
Dr. Khokhar completed his undergraduate training at Queen's University (with Dr. Eric Dumont), and his PhD in the Department of Pharmacology and Toxicology at the University of Toronto and CAMH, under the supervision of Dr. Rachel Lyndak. During this time, Dr. Khokhar was awarded a CDRF Subsector (in its Special Populations Fellowship). He then completed a post-doctoral fellowship in the Department of Psychiatry at Dartmouth College with Dr. Nan Green. In addition to numerous travel and poster awards, Dr. Khokhar held a CDRF Post-doctoral Fellowship as well as NIH K09R02 Pathway to Independence Award from the National Institute on Alcohol Abuse and Alcoholism. Dr. Khokhar is currently an Assistant Professor in the Biomedical Sciences Department at the University of Guelph.

RESEARCH
Although substance use disorders (SUDs) occur commonly in patients with schizophrenia and significantly worsen their clinical course, the neurobiological basis of SUDs in schizophrenia is not well understood. Therefore, there is a critical need to understand the mechanisms underlying SUDs in schizophrenia in order to identify potential targets for therapeutic intervention. Since drug use usually begins in adolescence, it is also important to understand the long-term effects of adolescent drug exposure on schizophrenia and reward-related behavior and circuitry. This talk will combine pharmacological, behavioral, electrophysiological (local field potential recordings) and pre-clinical magnetic resonance imaging (resting state functional connectivity and magnetic resonance spectroscopy) approaches to study these topics with an eye toward developing better treatment approaches.

OBJECTIVES

1. To provide overview of the health care burden and consequences associated with schizophrenia and substance use.
2. To explain how animal models can be used to assess translational findings from clinical populations toward mechanism elucidation and treatment development.
3. To establish the impact of genetics and age on the effects of drugs of abuse and their long-term consequences.

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Health Sciences Centre Winnipeg | **University of Guelph** | **University of Manitoba**

Bell Let's Talk Day - Jan 28th

*This has been an incredibly trying year to say the least. We made it this far because of our **resilience**, and we will get through this with our continued **patience**.*

For those struggling to find it within themselves to continue to see the light at the end of this dark tunnel, there is always help available (in fact, just down the hall!).



UNIVERSITY OF GUELPH

@UOFG

#BELLETSTALK

DAY IS JAN. 28, A DAY TO JOIN THE GLOBAL MENTAL HEALTH CONVERSATION AND HELP END THE STIGMA OF MENTAL ILLNESS.

#EVERYACTIONCOUNTS

#UOFG HAS SEVERAL FACULTY WHO SPECIALIZE IN MENTAL HEALTH TOPICS & ARE AVAILABLE FOR INTERVIEWS.

LEARN MORE: [HTTPS://UOGUEL.PH/3QHDO](https://uoguel.ph/3QHDO)

Stay strong Biomed!

Publications from around the Dept this month...

Jenkins, B. W. and Khokhar, J. Y., Cannabis Use and Mental Illness: Understanding Circuit Dysfunction Through Preclinical Models. Front Psychiatry (Accepted). 2020.

SCINAPSE Finalists

In BIOM*4300 (Dr. Neil MacLusky's "Scientific Communication" course) a group of students (Kaitlyn, Julia, Tiffany, and Julie) were successful in the **SCINAPSE case competition**. They have received notice that we are to advance to the second round in which they will create a poster of their proposal, to be presented at the University of Ottawa (virtually). In addition, their abstract will be published to the Undergraduate Research in Natural and Clinical Science and Technology (URNCST) journal. They have the opportunity for their entire research proposal to be published in the next round of the competition.

This is the second year in a row that a group from Bio-med made it to the final round. The group two years ago (headed up by Anthony Nguyen, who just got an early interview at U of T medical school) came second overall in the national competition.

Our students should be encouraged to participate more in national competitions as this gets our reputation out as a leading educator in Biomedical sciences!

Biomed Kudos Board

Don't forget to write your inspirational thoughts or send a shout out to someone in the department who went above and beyond, or your favourite recipe, by posting your message on our Kudos board

<https://uoguelph.kudoboard.com/boards/JiF0RjcU>



Please do not hesitate to knock on my door (with your mask!) or contact me by email if you have ANY questions/concerns at tsaleh@uoguelph.ca

Stay safe, stay well

#biomedstrong