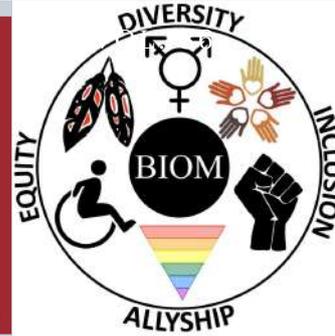


THE BIOMEDER



The official newsletter of the Department of Biomedical Sciences



In this issue....

BRAD NAMED TOP VET VACCINATOR!

CHAPPEL AND SCHOFIELD MEMORIAL LECTURER SPEAKERS ANNOUNCED!

ALICIA IN THE ONTARION

SARAH LEPAGES' NEW JOB!!

EDIBLES AND PETS...BEWARE!

FAVETTA LAB UPDATES

PERREAU LAB UPDATES

MBS STUDENTS VISIT CLINICS!

DEPT PUBLICATIONS

Spring is here!

It finally feels warm enough to call it Spring.

I hope everyone takes some time off this Summer to recharge and relax. We have been through ALOT the past 24 months, but we have been incredibly resilient, productive and maintained our high teaching and research standards. Our metrics in terms of graduate student numbers, publications, grant funding and student evaluations are on par with pre-COVID levels.

I am proud of each and every one of our amazing faculty, staff and graduate students for the role they play in this logarithmic growth and success. **Well done Biomed, keep up the great work!**

Dr. Brad Hanna named top Veterinary Vaccinator (...of humans!)



Mike Scolaro (DVM student) and **Brad Hanna** at the end of one of their shifts at the Fergus Sportsplex mass vaccination clinic.

Ever wonder who has jabbed the most arms locally in the battle against the spread of COVID-19? Wonder no more.

In a report headed to the WDG Public Health board of directors for information, the health unit gives a nod to the top vaccinators in the area, breaking them down by profession. They are:

Physician - Dr. Sidney Brodovsky, who administered 5,689 doses

Nurse Practitioner - Katy Wilton, who administered 1,673 doses

Veterinarian – **Dr. Brad Hanna**, who administered 529 doses.

In all, 209 physicians and 44 nurse practitioners participated in the vaccination campaign between the launch of vaccines in Ontario at the start of last year and the end of March. Though several other professions were involved in the effort – EMS responders, midwives and various levels of nursing – the contributions of individuals aren't highlighted in the report.

There were 168,756 collective doses given at 72 pharmacies throughout WDG, the report notes. The largest amount happened at Hartsland Zehr's in Guelph, with 7,831 doses. That's followed by Shoppers Drug Mart in Fergus (5,925).

Well done Brad!!

Chappel and Schofield Memorial Lecturers named



It gives me great pleasure to announce that this year's **Chappel Memorial Lecture** will be given by **Dr. Laszlo Radvanyi**, President and Scientific Director for the Ontario Institute for Cancer Research (OICR). Laszlo has been instrumental in helping OVC shape our strategic direction forward in cancer research as well as consult on the proposed Institute for Translational Health and Clinical research.



This year's Schofield Memorial Lecture will be presented by **Dr. Baljit Singh**, former Biomed (PhD graduate from Dr. Atwal's lab). Baljit is the former Dean of the Veterinary School in Calgary and is the current VP Research at USask.

Stay tuned for the presentation announcements this Fall!

Alicia in the Ontarion

THE STRUGGLES AND TRIUMPHS OF WOMEN IN STEMM

An International Women's Day event by GenEQ urges institutions to promote greater participation of women in the sciences



A talk hosted by **Dr. Alicia Viloría-Petit** for International Women's Day was featured on page 3 of the *Ontarion* (https://issuu.com/ontarion/docs/192.4_web/s/15320971).

The event was hosted by **Dr. Alicia Viloría-Petit**, a professor for the University of Guelph's biomedical sciences program. Viloría-Petit says she has always loved science, and decided to pursue a medical education after her grandfather was diagnosed with lung cancer. She now studies the process of metastasization, or how cells from cancerous tumours can spread throughout the body and infect vital organs.

"[Women] have been struggling for a long time to achieve our place in society," said Viloría-Petit to *The Ontarion*. "We organized this event as a way to support them and show the community an example of a person that represents this type of struggle and achievement and how we can, as women, work together."

While having talented women host and speak at the event helps to bring awareness to the achievements of women in STEMM, it is still up to institutions to take the initiative and implement changes to reduce gender gaps.

Namely, institutions can promote the participation of women at all levels, including education, environment, research, and administration. This would entail having more women amongst students, faculty, and committees in science-based programs and initiatives.

Viloría-Petit says she thinks the University of Guelph is going in the right direction in regards to these points. Namely, having Dr. Charlotte Yates as president and vice-chancellor of the university, which promotes the participation of women in the highest levels of leadership at the school.

Dr. Sarah LePage named Head of Cell & Gene Therapy Training Program



Congratulations to **Dr. Sarah LePage** on accepting a full-time position with the Centre for Commercialization in Regenerative Medicine (CCRM) and there new **Head of Cell and Gene Therapy Training Programs**.

It is truly bitter-sweet, as Sarah has been a pillar of our teaching program in Biomed. Over the past 4 years, she has been responsible for teaching upto 8 courses per year, and her teaching evaluations have been stellar (she was named "honorary class President for her teaching in VETM program). *We thank you for all your hard work in contributing to our reputation for teaching excellence, much appreciated Sarah!*

CONGRATS SARAH!!!

Edibles most common culprit for cannabis-induced toxicosis

The legalization of cannabis has led to an increase in toxicosis in pets, a link University of Guelph researchers determined in new research published today in *PLOS ONE* (highlighted by PLoS One in press release).

Canada had one of the highest rates of cannabis use in the world before legalization in 2018, said lead researcher **Dr. Jibrán Khokhar**, professor in the Department of Biomedical Sciences at the Ontario Veterinary College.

Since legalization, he said, the uptick is not necessarily the result of humans increasing their use of cannabis but could reflect more reporting to veterinarians when animals are exposed.

Researchers surveyed more than 200 North American veterinarians (191 of them Canadian) who self-reported over a span of three months in 2021. They found dogs were the animal most often ingesting cannabis.

Most pet owners did not know where their animals encountered it, according to the data, although some vets reported exposure from discarded joints, human feces, cannabis-infused butter or oil, and compost.

The research was featured in several publications, including the Wall Street Journal, CNN, NBC News and Popular Science.

Read the full commentary here: <https://news.uoguelph.ca/2022/04/reports-of-toxicosis-in-pets-on-the-rise-since-cannabis-legalization-u-of-g-study-finds/>

CONGRATS JIBRAN!

Updates from Dr. Jibran Khokhar's lab

Dr. Jibran Khokhar recently gave four invited talks:

1. **Khokhar, J. 2022.** *Talking to Teens about Drugs: Found in Reverse Translation? Prevention Training and Technical Assistance Center, Hamden (Virtual)*
2. **Khokhar, J. 2022.** *Cannabis and Psychosis., Canadian Consortium for the Investigation of Cannabinoids Cannabinoids in Clinical Practice Conference. Toronto.*
3. **Khokhar, J. 2022.** *Schizophrenia and Substance Use Disorders: Cracking the Chicken-Or-Egg Problem, University of Copenhagen Center for Translational Neuromedicine Open Neuroscience Series (Virtual).*
4. **Khokhar, J. 2022.** *Schizophrenia and Substance Use Disorders: Cracking the Chicken-Or-Egg Problem, University of Manitoba Pharmacology Seminar Series (Virtual).*

Jibran also moderated the **CIHR Health Effects of Vaping Virtual Forum.**

Hayley Thorpe also won the **Trainee Spotlight Award** at the Consortium for the Investigation of Cannabinoids in Clinical Practice Conference, and gave a talk titled: "*Cell adhesion molecule 2 deletion reduces impulsivity and voluntary cannabinoid intake, and impairs physiological response to THC in mice*"

CONGRATS JIBRAN, HALEY!

Updates from Dr. Melissa Perreault's lab

Dr. Melissa Perreault recently gave two invited talks:

1. **Howard University, Washington D.C.** “*Sex, stress, and circuits: Sex-specific approaches in depression research*”
2. **Hotchkiss Brain Institute, University of Calgary.** “*Sex and circuits: A systems approach for the identification of biomarkers of disease states and in target identification*”

Melissa was awarded an **NSERC Alliance (Co-Applicant)** to study the biological impacts of *Lionsmane mushrooms* in the brain.

Melissa also is the University nominee for both the **One Mind Rising Star Award** and the **J.P. Bickell Foundation Medical Research Grant Competition**.

Also, the **Orientation Booklet for Undergraduate Indigenous Students** she conceived (a DHR-funded project) is now complete! Among others, special thanks goes out to **Jaiden Smith** (Algonquin Métis, Khokhar lab) for assisting with its development. It will now be passed on to the OVC for modification that fits with our own College (currently CBS-specific, but as we are involved in the Bio-Med and Neuro Programs, our students may find this very useful!). There are many pics in it (**attached**), including Jaiden's and it looks as though we have some vet students in there! (Cara Wehkamp made the photo additions).

CONGRATS Mel!

Dr. Laura Favetta's lab updates

The abstract titled: "*BPA and BPF, but not BPS, alter pro- and anti-apoptotic transcript levels in granulosa cells, affecting cell viability*" by **Emilia Kourmaeva**, MSc student, was selected for the **Outstanding Abstract Award** in conjunction with ENDO 2022 in Atlanta, GA. This is a travel award, sponsored by the Endocrine Society in the amount of US \$750. **Congrats Emilia!**

Jaustin Dufuor, MSc student, presented the abstract titled " *Δ^9 -tetrahydrocannabinol Might Counteract the Effects of Cortisol in Granulosa Cells*" at the Society of Toxicology (SOT) conference in San Diego, California at the end of March (see picture below).



Special congratulations to **Alex Kuzma-Hunt** (MSc candidate) who was awarded a **CIHR MSc scholarship** and the **Queen Elizabeth II Graduate Scholarship in Science and Technology (QEII-GSST)**. **Congrats Alex!**

Vivien Truong was accepted into the Master of Genetic Counselling at the University of Manitoba starting in F22. **Congrats Vivien and all the best!**

Dr. Laura Favetta has been selected for the **Mentee Reviewer in Training (RiT)** program for the Spring 2022 CIHR Project Grant competition, part of the Developmental Biology (DEV) committee.

CONGRATS LAURA!

Applied Repro Biotech MBS students visit Fertility Clinics

As part of the experiential learning component of the program, Students in the Applied Reproductive Biotechnologies Stream of the MBS Program visited two IVF Clinics in Southern Ontario. We are excited that this is happening again this year as the Students were not able to shadow any Clinic last year as a result of the pandemic. Thanks to Mike Neal, the Scientific Director of One Fertility Clinic Burlington and Alex Lagunov, Director of Lab Technology and Training at Hannam Fertility Centre, Toronto who both made this happen.

During the visit, students shadowed Embryologist and Andrologist as they performed different assisted reproductive techniques like oocyte retrieval, intracytoplasmic sperm injection (ICSI), assisted hatching, embryo transfer and semen analysis.

After the visit, the students gave amazing feedback. In their words “ *We are grateful for this opportunity*”. “ *It was such a great experience*”. “*We learned so much during the visit*”. “ *The visit exceeded our expectations*”.



Department Publications

Anita K. Luu, Mia Cadieux, **Mackenzie Wong**, Rachel Macdonald, **Robert Jones**, Dongsic Choi, Michelle Oblak, Brigitte Brisson, Scott Sauer, James Chafitz, David Warshawsky, Geoffrey A. Wood and **Alicia M. Vilorio-Petit**. *Proteomic Assessment of Extracellular Vesicles from Canine Tissue Explants as a Pipeline to Identify Molecular Targets in Osteosarcoma: PSMD14/Rpn11 as a Proof of Principle*. [Int J Mol Sci.](#), 2022, 23(6), 3256; <https://doi.org/10.3390/ijms23063256>

Kaitlyn E. Simpson, **Katrina L. Watson** and **Roger A. Moorehead**. *Elevated Expression of miR-200c/141 in MDA-MB-231 Cells Suppresses MXRA8 Levels and Impairs Breast Cancer Growth and Metastasis In Vivo*. [Genes](#) 2022, 13, 691. <https://doi.org/10.3390/genes13040691>

Richard Quansah Amissah, Nadine A. Vogt, Chuyun Chen, Karolina Urban, **Jibran Khokhar**. *Prevalence and characteristics of cannabis-induced toxicoses in pets: Results from a survey of veterinarians in North America*. [PLOS One](#). Published: April 20, 2022. <https://doi.org/10.1371/journal.pone.0261909>

Rizk, A.A.* **Jenkins, B.***, **Al-Sabagh, Y.***, **Hamidullah, S.***, **Reitz, C.J.**, **Rasouli, M.**, **Martino, M.**, **Khokhar, J.Y.**, *The impact of Sex, Circadian Disruption, and the Clock Δ 19/ Δ 19 Genotype on Alcohol Drinking in Mice*. [Genes](#) (Accepted)

Mee WM, Faulkner S, Wood GA, Woods JP, Bienzle D, **Coomber BL**. *RNA-Seq analysis of gene expression in 25 cases of canine lymphoma undergoing CHOP chemotherapy*. [BMC Research Notes](#). 2022. in press

Andi Flory, **Brenda L. Coomber**, et al., *Clinical validation of a next-generation sequencing-based multi-cancer early detection “liquid biopsy” blood test in over 1,000 dogs using an independent testing set: The CANcer Detection in Dogs (CANDiD) study*. [PLOS One](#), 17(4): e0266623. <https://doi.org/10.1371/journal.pone.0266623>



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