

December 2022

### MESSAGE FROM THE CHAIR, DR. JUAN CARLOS ZUNIGA-PFLUCKER

It's beginning to look a lot like ... the end of the Fall term is here. This not only brings Final Exams for our Immunology Undergraduate students, and first year Applied Immunology Masters students, it also means that the Immunology Holiday Party is just around the corner. Yes, I am super excited about the return of this treasured Immunology tradition. Please be sure to send in your nominations for the Cinader Prize and Miller Award to recognize our outstanding senior PhD students, and also nominations for our new award recognizing the brilliance among our Applied IMM students.

I am happy to say that preparations for our Departmental Self-Study are going well, with my thanks to all that have helped put together this significant document, which I will be proud to share with all in early January. In the meantime, please keep replying to Leah's emails asking for information or additional documents.

I am delighted to share the wonderful news that the International Union of Immunological Societies Canadian Society (IUIS) selected the of Immunology's (CSI) bid to host the International Congress in Immunology in Toronto on Aug. 2028. I am very thankful to the folks from the city of Toronto (MTCC and Destination Toronto), who worked with Tania Watts (vice-chair of the local organizing committee, LOC) and me (chair of the LOC) to put together a very compelling bid on behalf of the CSI. Before you know it, it will be 2028, and this conference will be a fantastic way to highlight Canadian Immunology, grow the CSI, and showcase our UofT Immunology community to the world. In the meantime, we can all gather in Cape Town next year, and in Vienna, 2025, for those IUIS congresses.

# UPCOMING EVENTS IMMUNOLOGY WINTER RETREAT

Friday, December 16, 2022 5:30 pm at Hart House Great Hall Hope you're getting excited for our in-person Immunology Holiday Party!

## **CHARLES GOULD EASTON SEMINARS**

Monday, December 5, 2022 11:05 am at MSB 2170

### Dr. Mikael Karlsson

Professor, Department of Microbiology, Tumor and Cell Biology, Karolinska Institute

"Targeting macrophages for immunotherapy of cancer"

Host: Tracy McGaha, PhD

-----Monday, December 12, 2022

11:05 am at MSB 2170

### Dr. Ari Molofsky

Associate Professor, Department of Laboratory Medicine, University of California San Francisco "Stromal niches of tissue lymphocytes". Host: Matt Buechler, PhD

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**SPECIAL SEMINARS** 

Thursday, December 1, 2022 2:00-3:00 p.m. at MSB 7231

Dr. Hélène Decaluwe

Associate Clinical Professor, Department of Pediatrics; Accredited Professor, Department of Microbiology, Infectiology and Immunology Faculty of Medicine Université de Montréal

**"Targeting JAK-STAT signaling to increase effectiveness of adoptive cell therapy of cancer"** Host: Dr. Tania Watts



Tuesday, December 13, 2022 10:00-11:00 a.m. at MSB 7231 Dr. Dawn Bowdish

Professor, Department of Medicine; Executive Director, Firestone Institute for Respiratory Health McMaster University "Anti-infective immunity along the aging trajectory" Host: Dr. Tania Watts

## PHD RESEARCH SEMINAR

Thursday, December 1, 2022 9:00 – 10:00 a.m. at MSB 7231 "Characterization of T cell responses to SARS-CoV-2 following infection and vaccination" Jaclyn Law Supervisor: Dr. Tania Watts

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Tuesday, December 13, 2022 12:00-1:00 p.m. at MSB 7231 "Type I interferon responses in monocytes regulate GITRL expression and anti-tumor immunity" Melanie Girard Supervisor: Dr. Tania Watts

### **DECEMBER STUDENT SEMINARS**

December 5, 2022 Monday, 10:00-11:00 at MSB 2172

Investigating the Role of the Dura Mater During Th17 Cell Induced Grey Matter Injury **Alex Florescu** (Gommerman lab)

Defining factors that direct human regulatory innate lymphoid cell development and function **Sinthuja Jegatheeswaran** (Crome lab) December 12,2022 Monday, 10:00-11:00 at MSB 2172

Determining the influence of pancreatic ductal adenocarcinoma SMAD4 and CDKN2A mutations on tumour associated macrophages **Robbie Jin (**McGaha lab)

Altering T cell metabolism to improve cell therapy of cancer **Meghan Kates** (Ohashi/Saibil labs)

## **GRADUATE PROGRAM UPDATES**

### **Committee Meetings**

2nd year PhD students are reminded to complete their 2nd committee meeting by December 31, 2022. Committee Meeting forms should be submitted to Kate as soon as possible after the meeting.

Upper year PhD students are reminded to hold a committee meeting each year at minimum and submit the Committee Meeting forms to Kate.

### **Graduate Admissions**

Applications to our graduate programs are now being accepted. All application materials, including references, must be received by the deadline in order for an application to be considered.

PhD in Fundamental Immunology & MSc in Applied Immunology (Standard Entry) **Due: January 15, 2023** 

MSc in Applied Immunology (Advanced Standing) **Due: March 1, 2023** 

# WIDE Committee Updates

Hello from your Wellness, Inclusion, Diversity, and Equity Committee!

In our recent departmental survey, we heard that members of our community agree that EDI training for departmental faculty, staff, and trainees is essential. UofT's <u>Anti-Racism and Cultural Diversity Office</u> (ARCDO) offers many valuable training sessions – we strongly encourage all department members to browse their offerings and attend!

In particular, we wish to highlight these upcoming trainings and strongly encourage everyone to attend: Addressing Racial Microaggressions: Tools, Strategies and Discussions For Faculty and Staff (including Post Docs and Research Associates): January 26, 2023, 1:00-3:00pm, Virtual

For Students: February 15, 2023, 5:30pm – 7:30pm, Virtual

We'd also like to remind everyone about the full subscription to the <u>Headspace app</u>, which is now available to Immunology faculty, staff, and graduate students. Headspace is a mindfulness app that offers guided lessons on mindfulness, sleep, simply remembering to breathe – it's an excellent wellness tool. You get full access to the app, for free – all you need to do is sign up: <u>Faculty/Staff sign up / Grad Student sign up</u> If you experience any issues when signing up, please contact Kate at <u>graduate.immunology@utoronto.ca</u>

The **Temerty Faculty of Medicine's Office of Access and Outreach** would like to remind **faculty members** about two programs that aim to increase research opportunities for students that face systemic barriers:

The <u>Research Application Support Initiative (RASI)</u> is a Community of Support program that connects university students that face systemic barriers with research opportunities and mentorship. RASI is interested in working with PIs that provide students with opportunities to be actively involved in research projects, short or long-term, course-based, summer research, etc. If you are interested in supervising a RASI student during the summer, or for IMM<sub>3</sub>85 or IMM<sub>4</sub>50 please reach out to <u>korosh.kianizad@utoronto.ca</u>

The <u>Mentor 2 Mentor program (M2M)</u> is a capacity-building initiative for Principal Investigators. This 4-month training workshop series is designed for PIs working on supporting learners that face systemic barriers (i.e., RASI), and is an initiative led by the Community of Support RASI (Research Application Support Initiative) in collaboration with Dr. Andrea Boggild. <u>Applications</u> are due December 16, 2022.

WIDE would also like to acknowledge several important days that have recently passed or are coming up. November 20<sup>th</sup> was the <u>Transgender Day of Remembrance</u> – a day to honour the memory of trans people who have lost their lives as a result of transphobic and anti-trans violence. WIDE stands with all trans members of our Immunology community, and would like to highlight some of the <u>resources and supports</u> UofT offers for the LGBT+ UofT community.

November 25<sup>th</sup> was the International Day for the Elimination of Violence against Women, which began 16 Days of Activism Against Gender-Based Violence, leading up to International Human Rights Day on December 10th. The Temerty Faculty of Medicine recently released a statement of Solidarity with Iran and the Elimination of Violence against Women, which also includes a listing of related upcoming events and supports.



In Canada, the **National Day of Remembrance and Action on Violence Against Women** will take place on December 6<sup>th</sup>. This day honours the victims of the 1989 École Polytechnique Massacre, and victims of genderbased violence everywhere, and calls us to speak out against misogyny in all its forms. UofT will be hosting a tricampus <u>virtual memorial event</u> on December 4<sup>th</sup> from 10:00-11:30am, as well as a <u>panel discussion</u> December 6<sup>th</sup> from 12:00-2:30pm (in person and virtual options).

Last but certainly not least, WIDE would like to wish everyone a smooth end of term, and a very happy Hanukkah (Dec 18), Christmas (Dec 25), and Kwanzaa (Dec 26) to those celebrating! We hope everyone has a peaceful and restful winter break later this month.

-Your WIDE Committee-

## **IMMSA**

Hi immunologist,

We have finally come to the last stretch of the semester. Before we enter finals and then enjoy the holidays, we would like to thank everyone for supporting IMMSA throughout the semester. Your engagement has really motivated us to organize more events to strengthen our community and allow students to learn more about the field of STEM.

To recap, we celebrated the start of reading week by holding a movie night with CSBSU. I hope you all enjoyed the movie and some good pizzas. Next, we also held a highly requested graduate school seminar with the Immunology Graduate Students' Association (IGSA). We were very thankful to have three lovely graduate students come to our event. Not only did they share their research background and knowledge, but they also provided undergrads with tips and advice on how to apply to graduate school and manage physical and mental well-being during stressful times. It was definitely an eye-opener to see how graduate school allows students to mature academically and psychologically.

Lastly, our mentorship event this month revolves around another popular topic - cover letter and resume. This is important as many of you are searching for internships or jobs to gain some experience. We were happy that Steven Lappano from Career Exploration & Education at Student Life joined our event. His talk about how to cater your applications to research and job positions was very helpful to science students.

As this semester comes to an end, we would like to gather feedback from students regarding IMMSA's past events and suggestions for future events. This will help both us and students as we would like to support you guys as much as possible.

Please fill out the survey here: <u>https://forms.gle/xSHAkM2mimY5GWBi9</u>

We wish everyone the best of luck in your upcoming final exams and an early happy holidays! See you guys in the winter semester!

Cheers, Vicky Xie and Momo Lin IMMSA Co-presidents 2022-2023 Immunology Students' Association (IMMSA) Co-Presidents 2022/23 Website: <u>http://immsauoft.com</u> | Instagram: @immsta

# <u>IGSA</u>

Season's Greetings, fellow Immunologists!

As the end of the year quickly approaches, we would like to wish you all happy holidays! Before we dive into our updates, we first want to welcome and congratulate our new Outreach/Wellness Rep, Michelle Cheung, who was voted in at the start of last month and will complete our IGSA roster for 2022-2023.

We know December is a busy time, especially for those who are finishing up courses, scheduling committee meetings, or squeezing in last-minute experiments before the holidays. In order to support our hardworking community, we will have a return of our Dog Therapy Sessions to help everyone de-stress! There's nothing like a warm bundle of fluffy joy to make all your worries seem so far away. Even when there's a seemingly endless list of things to do, we want to ensure everyone takes some time out to relax.

For our fellow first-years especially, December is a pivotal month. Rotation decisions can definitely seem daunting, but remember that we're all here to help! You'll have an opportunity to discuss with both peers and upperclassmen at the End-of-Rotation Games Night before you make your final choice. Please keep an eye out for email updates and we wish every rotating student best of luck in getting into your first choice!

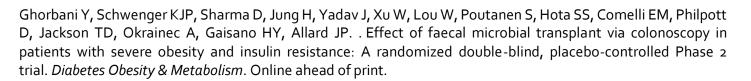
With the end of the semester, our fall intramural season is also drawing to a close. We are incredibly proud of our Immunodominators for their performance, dedication, and teamwork throughout the past few months. In order to celebrate the achievement of all our star athletes, we have an end-of-season Pub Night in the works! Have a night out with your fellow teammates as you look forward to the new sports season ahead!

Last but definitely not least, we are welcoming the long-awaited return of our in-person Holiday Party. Make sure you prepare your semi-formal attire for an unforgettable evening of great food & drinks with amazing company and lots of festivities! The event is scheduled for December 16th at 5:30pm in the Hart House Great Hall, and will include well-loved traditions such as the centerpiece competition, silent auction, and more. We will also be holding our third-annual gingerbread house competition, which is fast on its way to becoming its own tradition. The email for sign-up has already been sent out, so don't forget to reserve your spot before the deadline! Make sure you also keep an eye out for the individual sign-ups to each of the competitions, silent auction, and talent show that will also feature that night.

We'll see you all at the Holiday Party!

Bobby and Meggie IGSA Co-Presidents 2022-2023

# DEPARTMENT OF IMMUNOLOGY NEWSICATIONS



Killackey SA, Bi YT, Philpott DJ, Arnoult D, Girardin SE. . Mitochondria-ER cooperation: NLRX1 detects mitochondrial protein import stress and promotes mitophagy through the ER protein RRBP1. *Autophagy*. Online ahead of print.

Atif J, Udhesister STP, Abdelnabi MN, D'Souza S, Hung JH, Edgar RD, Gobran ST, Gomez-Escobar E, Greenwald ZR, Gallardo-Flores CE, Fontaine G, Jeong D, Laniece-Delaunay C, Lawton D, Makuza JD, Masterman C, Marathe G, Mortazhejri S, Li JF, Palmer M, Passos-Castilho AM, Sag M, Shengir M, Wallace HL, Mendlowitz AB. . Impacts of the COVID-19 pandemic on hepatitis C elimination in Canada: Where do we go from here? *Canadian Liver Journal*. Online ahead of print.

Tang YF, Teng YQ, Xu LY, Xu GT, Chen DQ, Jin X, Li WL, Jin XH, Zhu W, Hu B, Shen RL, Zhu YZ. 2022. Lower Platelet-to-Lymphocyte Ratio Was Associated with Poor Prognosis for Newborn Patients in NICU. *Medicina-lithuania*. **58(10)**.

Gehring AJ, MacParland SA. 2022. Intrahepatic T cells with NK-like properties: Expanding the repertoire of lymphocytes sensitive to bystander activation. *Journal Of Hepatology*. **77(4)**:915-917.

Scipione CA, Cybulsky MI. 2022. Early atherogenesis: new insights from new approaches. *Current Opinion In Lipidology*. **33(5)**:271-276.

Rehou S, Jeschke MG. 2022. Admission creatinine is associated with poor outcomes in burn patients. *Burns*. **48(6):**1355-1363.

Warner K, Ghaedi M, Chung DC, Jacquelot N, Ohashi PS. 2022. Innate lymphoid cells in early tumor development. *Frontiers in Immunology*. **13**.

Marwaha AK, Laxer R, Liang MG, Muise AM, Eiwegger T. 2022. A Chromosomal Duplication Encompassing Interleukin-33 Causes a Novel Hyper IgE Phenotype Characterized by Eosinophilic Esophagitis and Generalized Autoimmunity. *Gastroenterology*. **163(2):**510.

Knuth CM, Rehou S, Barayan D, Jeschke MG. 2022. Evaluating Sepsis Criteria in Detecting Alterations In Clinical, Metabolic, And Inflammatory Parameters In Burn Patients. *Shock*. **58(2):**103-110.

Shvartsman E, Richmond MEI, Schellenberg JJ, Lamont A, Perciani C, Russell JNH, Poliquin V, Burgener A, Jaoko W, Sandstrom P, MacDonald KS. 2022. Comparative analysis of DNA extraction and PCR product purification methods for cervicovaginal microbiome analysis using cpn6o microbial profiling. *Plos One*. **17(1)**.

# DEPARTMENT OF IMMUNOLOGY



Kucharska I, Hossain L, Ivanochko D, Yang QR, Rubinstein JL, Pomes R, Julien JP. 2022. Structural basis of Plasmodium vivax inhibition by antibodies binding to the circumsporozoite protein repeats. *Elife*. **11**.

Smith LC, Boettger SA, Byrne M, Heyland A, Lipscomb DL, Majeske AJ, Rast JP, Schuh NW, Song L, Tafesh-Edwards G, Wang LL, Xue Z, Yu ZC. 2022. Echinoderm diseases and pathologies. *Invertebrate Pathology*. 505-562.

Cefalu WT, Andersen DK, Arreaza-Rubin G, Pin CL, Sato S, Verchere CB, Woo M, Rosenblum ND. 2022. Heterogeneity of Diabetes: beta-Cells, Phenotypes, and Precision Medicine: Proceedings of an International Symposium of the Canadian Institutes of Health Research's Institute of Nutrition, Metabolism and Diabetes and the US National Institutes of Health's National Institute of Diabetes and Digestive and Kidney Diseases. *Diabetes Care*. **45(1)**:3-22.

Cefalu WT, Andersen DK, Arreaza-Rubin G, Pin CL, Sato S, Verchere CB, Woo M, Rosenblum ND. 2022. Heterogeneity of Diabetes: beta-Cells, Phenotypes, and Precision Medicine: Proceedings of an International Symposium of the Canadian Institutes of Health Research's Institute of Nutrition, Metabolism and Diabetes and the US National Institutes of Health's National Institute of Diabetes and Digestive and Kidney Diseases. *Diabetes*. **71(1):**1-22.

Gilmore JC, Hoque MT, Dai WY, Mohan H, Dunk C, Serghides L, Bendayan R. 2022. Interaction between dolutegravir and folate transporters and receptor in human and rodent placenta. *Ebiomedicine*. **75**.