



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

It is beginning to feel like the worst of the pandemic is behind us, with rates of vaccinations up and cases down, a renewed sense of hope is palpable. Great strides have been made in COVID-19 related work, and I am thankful to all the members of our department that have led the way forward.

I am pleased to welcome our new IMMSA co-presidents and thank last year's IMMSA executive for their leadership. Please read the IMMSA section for more about their plans.

June typically marks a time when we celebrate many achievements at UofT Immunology. Starting with our amazing undergraduate students, I am pleased to announce that this year's winner of the *The Immunology Undergraduate Prize*, which is given to a student with the best academic standing in both IMM340/1 and IMM350/1 third year immunology courses, is **Aaron Dou**, who had a near perfect set of marks for both courses.

I am also delighted to announce that the winner of the 9<sup>th</sup> annual *BD-Biosciences / Immunology Post-Doctoral Lecture Award* is Dr. **Conglei Li** (Gommerman/Martin labs), and as noted on the right, the BDB/IPDLA will take place on Monday June 14<sup>th</sup>. Congratulations to Conglei, we look forward to an exciting talk, just ahead of the upcoming *Immunology Summer Retreat* (June 15-16), featuring our very own Dr. Akiko Iwasaki, as Keynote lecturer. Please see the IGSA section for more details on how postdocs can sign up for talks.

I am looking forward to the upcoming BD-Biosciences /Immunology Postdoc Lecture, and then enjoying a virtual time by the shores of Lake Couchiching for our Summer Retreat.

## UPCOMING EVENTS

### EASTON SEMINARS

2021-22 Easton Seminar will commence in September 2021.

-----

### BD BIOSCIENCES / IMMUNOLOGY POST-DOCTORAL LECTURE AWARD – via Zoom

**June 14, 2021 – 11:00-12:00**

“Regulation of Intestinal IgA Responses”

**Dr. Conglei Li** (Gommerman/Martin labs)

-----

### PHD RESEARCH SEMINAR – via Zoom

**June 29, 2021 – 1:00-2:00**

**Dennis Lee - PhD Research Seminar**

“B Cell Responses in an Animal Model of Neuroinflammation -- Implications for Multiple Sclerosis”

Supervisor: Dr. Jennifer Gommerman

**June 30, 2021 – 10:00-11:00**

**Yoojin Choi - PhD Research Seminar**

“Human Papillomavirus and Anorectal Immunology in HIV-positive Men who have Sex with Men”

Supervisor: Dr. Rupert Kaul





**STUDENT SEMINARS – via Quercus**  
**Mondays, 10:00-11:00**

**June 7, 2021**

Anti SARS-CoV-2 antibodies in saliva following intramuscular COVID-19 vaccination  
**Salma Sheikh-Mohamed**  
(Gommerman lab)

Using a data-driven approach to characterize and compare Multisystem Inflammatory Syndrome in Children (MIS-C)  
**Sophie Sun**  
(Yeung lab)

**June 14, 2021**

A personalized approach towards the improvement of Crohn's disease  
**Ling Ling Tai**  
(Mortha lab)

title TBD

**Nasana Vaidya**  
(Dunn lab)

Two-photon microscopy in rodent lung transplantation.  
**Nancy Zhao**  
(Juvet Lab)

**GRADUATE PROGRAM UPDATES**

**Congratulations!**  
**PhD**

Paulina Drohomyrecky (Dunn lab) – May 5, 2021  
Qiaochu (Irene) Lin (Mallevaey lab) – May 12, 2021

**Qualifying Exams**

Jawairia Atif (MacParland lab) – May 11, 2021  
Giuliano Bayer (Philpott/Girardin labs) – May 13, 2021  
James Pollock (Kaul lab) – May 17, 2021  
Baweleta Isho (Gommerman lab) – May 18, 2021  
Meggie Kuypers (Mallevaey lab) – May 19, 2021  
Nayanan Nathan (Philpott/Girardin labs) – May 19, 2021  
Michelle Zuo (Gommerman lab) – May 20, 2021  
Karen Yeung (Watts lab) – May 20, 2021  
Annie Pu (Gommerman lab) – May 25, 2021  
Sarah Colpitts (Crome lab) – May 26, 2021  
Yota Ohashi (Hirano lab) – May 27, 2021  
Diego Sanchez Vasquez (Gehring lab) – May 28, 2021  
Seungwoo Lee (Watts lab) – May 28, 2021

**Immunology Summer Student Research Program 2021:**

Our Summer Students will be presenting their work on **July 30th, 2021 via Zoom.**

Please keep an eye on your inboxes for the meeting details shortly.

Drop by (virtually) and see the great work being done by our summer students!



## IGSA

Dear Immunologists,

Congratulations to finishing your April exams! We hope you have all been enjoying the warm May weather and have found renewed hope and excitement as small pieces of normalcy return back to our lives. The herculean effort exerted by healthcare providers, pharmacies and essential workers in the past few months should not go unnoticed, so thank you to those reading this letter who have participated in any capacity to help vaccinate our communities.

We would also like to take a moment to say we understand that the political unrest in several parts of the world may be affecting a number of our students. Please know that IGSA stands in solidarity with the needs of our student body. We are always here to provide support, to listen, and to connect you with resources to help you through this difficult time.

Many of our IGSA members have been working incredibly hard to support all the graduate students completing their PhD qualifying exams during this season. Thank you Baweleta Isho and Annie Pu for hosting several practice sessions every week while balancing your own commitments! Our warmest congratulations to those who have successfully qualified to be PhD candidates and best of luck to those taking the exam soon!

### Some exciting events to keep in mind:

- **Stay tuned for more virtual fitness classes!** Itching to incorporate some exercise back into your weekly routine? GPSN hosts high-intensity interval training classes every Thursday at 7pm.
- **Save the date! The Department of Immunology Annual Summer Retreat will take place virtually once again this year on June 15th-16th.**
  - o If you are a post-doc that would like to give a live talk during the event and enter our annual post-doc speaker competition, please email [utgsu.immunology@gmail.com](mailto:utgsu.immunology@gmail.com) with your name, 1-page abstract, and availability on June 16 by **June 4th**
  - o This year, we will also have a virtual poster fair for graduate students to showcase their work! Participating students will be able to record a 10-min video of their presentation and upload their talk to a Google Drive folder for members of the department to view. This is a great opportunity for graduate students to share your work with the department. You will also have the option to participate in our annual poster competition, with prizes for first, second, and third place. We will share the folder link very soon with our event invite, so keep an eye on your in-boxes!

Please feel welcome to reach out to [utgsu.immunology@gmail.com](mailto:utgsu.immunology@gmail.com) if you ever have any questions or comments.

With love,  
**Rashi Gupta and Anthony Wong**  
IGSA Co-Presidents 2020-21



## IMMSA

Hello Immunologists!

It's been quite the year at-home and we hope everyone is staying positive and productive!

We are Shaivy Tiwari and Kunal Kolhatkar, your IMMSA co-presidents for the 2021-2022 school year and we're really looking forward to it! Having been on IMMSA for the previous year and involved with the Immunology department throughout acquiring our undergraduate degree, we are incredibly excited about being able to create, continue and commemorate various events through IMMSA.

Having attended and hosted many IMMSA events, we are excited to offer new opportunities to the new and existing members of the Immunology student body. With 2 years of experience on IMMSA, we have seen the best of both worlds from having hosted both virtual and in-person seminars, OQUIC and socials. We are equipped to handle whatever circumstances are thrown at us and are passionate about making the most of it for everybody!

As we go into the summer months, we'd like to prompt students about course enrollment and applications for the upcoming year. The summer goes by pretty fast, and is an ideal time to make headway on research and graduate school applications. A little bit each day can go a long way! That being said, it is summer after all, and as restaurants and stores open up, make sure to take some time for your health and well-being. As always, your IMMSA community is here to support you academically and there is a plethora of resources at UofT and in Toronto to reach out to for support for mental health!

This ongoing pandemic has been a trying and tough time for everyone, but remembering that we aren't alone will get us through this! We're almost at the finish line and none of us could have made it this far without the support of our various communities! We wanted to thank Anita Tia and Phoebe Liu for leading an incredible team on IMMSA this year, keeping our spirits high and keeping all of us motivated. Having worked with them, we have the tools and resources we need to create an exceptional year! Not only were they incredible at their positions; having planned OQUIC and every event entirely virtually, while keeping participation high, but they set amazing standards and were role models for everyone on IMMSA to aspire to.

We hope your summer is relaxing, mindful and productive and we hope to see many new and old faces at our events in the upcoming fall semester!

Cheers,

**Shaivy Tiwari & Kunal Kolhatkar**

Immunology Students Association (IMMSA) Co-Presidents 2020-2021

<http://immsauoft.com> | [@IMMSA\\_UofT](https://twitter.com/IMMSA_UofT) | <http://facebook.com/IMMSA.UofT>



## PUBLICATIONS

Chen ELY, Brauer PM, Martinez EC, Huang XT, Yu N, Anderson MK, Li Y, Zuniga-Pflucker JC. 2021. Cutting Edge: TCR-beta Selection Is Required at the CD4(+)CD8(+) Stage of Human T Cell Development. *Journal Of Immunology*. **206(10)**:2271-2276.

Lee JB, Vasic D, Kang H, Fang KKL, Zhang L. 2021. State-of-Art of Cellular Therapy for Acute Leukemia. *International Journal of Molecular Sciences*. **22(9)**.

El Khatib A, Jeschke MG. 2021. Contemporary Aspects of Burn Care. *Medicina-lithuania*. **57(4)**.

Foerster EG, Mukherjee T, Cabral-Fernandes L, Rocha JDB, Girardin SE, Philpott DJ. . How autophagy controls the intestinal epithelial barrier. *Autophagy*. **Online Ahead of Print**.

Hancock EJ, Krycer JR, Ang J. 2021. Metabolic buffer analysis reveals the simultaneous, independent control of ATP and adenylate energy ratios. *Journal Of the Royal Society Interface*. **18(177)**.

Prodger JL, Abraham AG, Tobian AAR, Park DE, Aziz M, Roach K, Gray RH, Buchanan L, Kigozi G, Galiwango RM, Ssekasanvu J, Nnamutete J, Kagaayi J, Kaul R, Liu CM. 2021. Penile bacteria associated with HIV seroconversion, inflammation, and immune cells. *JCI Insight*. **6(8)**.

Mohan H, Lenis MG, Laurette EY, Tejada O, Sanghvi T, Leung KY, Cahill LS, Sled JG, Delgado-Olguin P, Greene NDE, Copp AJ, Serghides L. 2021. In response to the Letter to the Editor by Romach et al. re our publication "Dolutegravir in pregnant mice is associated with increased rates of fetal defects at therapeutic but not at supratherapeutic levels". *Ebiomedicine*. **66**.

Han JX, Zuniga-Pflucker JC. 2021. High-Oxygen Submersion Fetal Thymus Organ Cultures Enable FOXP1-Dependent and -Independent Support of T Lymphopoiesis. *Frontiers In Immunology*. **12**.

Bayer G, Philpott DJ. 2021. Defined mouse microbiota: An "evolving" tool. *Cell Host & Microbe*. **29(4)**:545-547.

Murakami J, Wu LC, Kohno M, Chan ML, Zhao YD, Yun ZH, Cho BCJ, de Perrot M. 2021. Triple-modality therapy maximizes antitumor immune responses in a mouse model of mesothelioma. *Science Translational Medicine*. **13(589)**.

Fischietti M, Eckerdt F, Blyth GT, Arslan AD, Mati WM, Oku CV, Perez RE, Lee-Chang C, Kosciuczuk EM, Saleiro D, Beauchamp EM, Lesniak MS, Verzella D, Sun LY, Fish EN, Yang GY, Qiang WA, Plataniias LC. 2021. Schlafen 5 as a novel therapeutic target in pancreatic ductal adenocarcinoma. *Oncogene*. **40(18)**:3273-3286.

Stranzl T, Ipsen H, Christensen LH, Eiwegger T, Johansen N, Lund K, Andersen PS. 2021. Reply to "Inferring clinical relevance of der p 23 from the restricted effect on treatment outcomes after tablet allergy immunotherapy". *Allergy*. **76(4)**:1300-1301.



Copeland JK, Chao G, Vanderhout S, Acton E, Wang PW, Benchimol EI, El Sohami A, Croitoru K, Gommerman JL, Guttman DS. 2021. The Impact of Migration on the Gut Metagenome of South Asian Canadians. *Gut Microbes*. **13(1)**:1-29.

Parmar N, Burrows K, Vornewald PM, Lindholm HT, Zwiggelaar RT, Diez-Sanchez A, Martin-Alonso M, Fossli M, Vallance BA, Dahl JA, Zaph C, Oudhoff MJ. 2021. Intestinal-epithelial LSD1 controls goblet cell maturation and effector responses required for gut immunity to bacterial and helminth infection. *PLOS Pathogens*. **17(3)**.

Pathan EMI, Inman RD. 2021. Pain in Axial Spondyloarthritis Insights from Immunology and Brain Imaging. *Rheumatic Disease Clinics of North America*. **47(2)**:197-213.

Feld J, Ye JY, Chandran V, Inman RD, Haroon N, Cook R, Gladman DD. 2021. Axial Disease in Psoriatic arthritis: The presence and progression of unilateral grade 2 sacroiliitis in a psoriatic arthritis cohort. *Seminars In Arthritis and Rheumatism*. **51(2)**:464-468.

Liu M, Zhang JY, Pinder BD, Liu QQ, Wang DY, Yao H, Gao YB, Toker A, Gao JM, Peterson A, Qu J, Siminovitch KA. 2021. WAVE2 suppresses mTOR activation to maintain T cell homeostasis and prevent autoimmunity. *Science*. **371(6536)**:1333.

Yau HL, Bell E, Ettayebi I, de Almeida FC, Boukhaled GM, Shen SY, Allard D, Morancho B, Marhon SA, Ishak CA, Gonzaga IM, Medina TD, Singhanian R, Chakravarthy A, Chen R, Mehdipour P, Pommey S, Klein C, Amarante-Mendes GP, Roulois D, Arribas J, Stagg J, Brooks DG, De Carvalho DD. 2021. DNA hypomethylating agents increase activation and cytolytic activity of CD8(+)T cells. *Molecular Cell*. **81(7)**:1469.

Burston HE, Kent OA, Communal L, Udaskin ML, Sun RX, Brown KR, Jung E, Francis KE, La Rose J, Lowitz J, Drapkin R, Mes-Masson AM, Rottapel R. 2021. Inhibition of relaxin autocrine signaling confers therapeutic vulnerability in ovarian cancer. *Journal Of Clinical Investigation*. **131(7)**.

Lamorte S, Shinde R, McGaha TL. 2021. Nuclear receptors, the aryl hydrocarbon receptor, and macrophage function. *Molecular Aspects of Medicine*. **78**.

Irrazabal T, Thakur BK, Croitoru K, Martin A. 2021. Preventing Colitis-Associated Colon Cancer With Antioxidants: A Systematic Review. *Cellular And Molecular Gastroenterology and Hepatology*. **11(4)**.

Waller DA, Opitz I, Bueno R, Van Schil P, Cardillo G, Harpole D, Adusumilli PS, De Perrot M. 2021. Divided by an ocean of water but united in an ocean of uncertainty: a transatlantic review of mesothelioma surgery guidelines. *European Journal of Cardio-thoracic Surgery*. **59(1)**:8-11.

Perciani CT, Liu LY, Wood L, MacParland SA. 2021. Enhancing Immunity with Nanomedicine: Employing Nanoparticles to Harness the Immune System. *Acs Nano*. **15(1)**:7-20.



Yampolsky M, Shlakhter O, Deng DN, Kala S, Walmsley SL, Murphy KE, Yudin MH, MacGillivray J, Loutfy M, Dunk C, Serghides L. 2021. Exploring the impact of HIV infection and antiretroviral therapy on placenta morphology. *Placenta*. **104**:102-109.

Soares F, Chen B, Lee JB, Ahmed M, Ly D, Tin E, Kang H, Zeng Y, Akhtar N, Minden MD, He HSHS, Zhang L. 2021. CRISPR screen identifies genes that sensitize AML cells to double-negative T-cell therapy. *Blood*. **137(16)**:2171-2181.

Boukhaled GM, Harding S, Brooks DG. 2021. Opposing Roles of Type I Interferons in Cancer Immunity. *Annual Review of Pathology: Mechanisms Of Disease, Vol 16, 2021*. **16**:167-198.

Gu Y, Yang RS, Yang Y, Zhao YL, Wakeham A, Li WY, Tseng A, Leca J, Berger T, Saunders M, Fortin J, Gao X, Yuan Y, Xiao LM, Zhang F, Zhang LJ, Gao GX, Zhou WJ, Wang Z, Mak TW, Ye J. 2021. IDH1 mutation contributes to myeloid dysplasia in mice by disturbing heme biosynthesis and erythropoiesis. *Blood*. **137(7)**:945-958.

Waller DA, Opitz I, Bueno R, Van Schil P, Cardillo G, Harpole D, Adusumilli PS, De Perrot M. 2021. Divided by an Ocean of Water but United in an Ocean of Uncertainty: A Transatlantic Review of Mesothelioma Surgery Guidelines. *Annals Of Thoracic Surgery*. **111(2)**:386-389.

Probstel AK, Zhou XY, Baumann R, Wischnewski S, Kutza M, Rojas OL, Sellrie K, Bischof A, Kim K, Ramesh A, Dandekar R, Greenfield AL, Schubert RD, Bisanz JE, Vistnes S, Khaleghi K, Landefeld J, Kirkish G, Liesche-Starnecker F, Ramaglia V, Singh S, Tran EB, Barba P, Zorn K, Oechtering J, Forsberg K, Shioh LR, Henry RG, Graves J, Cree BAC, Hauser SL, Kuhle J, Gelfand JM, Andersen PM, Schlegel J, Turnbaugh PJ, Seeberger PH, Gommerman JL, Wilson MR, Schirmer L, Baranzini SE. 2020. Gut microbiota-specific IgA(+) B cells traffic to the CNS in active multiple sclerosis. *Science Immunology*. **5(53)**.

Liu F, Feng XX, Zhu SL, Lin L, Huang HY, Zhang BY, Huang JL. 2021. Long non-coding RNA SNHG1 regulates rheumatoid synovial invasion and proliferation by interaction with PTBP1. *International Immunopharmacology*. **90**.

Zaman R, Hamidzada H, Epelman S. 2021. Exploring cardiac macrophage heterogeneity in the healthy and diseased myocardium. *Current Opinion in Immunology*. **68**:54-63.

Duong BTV, Wu LC, Green BJ, Bavaghar-Zaeimi F, Wang ZJ, Labib M, Zhou YX, Cantu FJP, Jeganathan T, Popescu S, Pantea J, de Perrot M, Kelley SO. 2020. A liquid biopsy for detecting circulating mesothelial precursor cells: A new biomarker for diagnosis and prognosis in mesothelioma. *Ebiomedicine*. **61**.

Saibil SD, Ohashi PS. 2020. Targeting T cell activation in immuno-oncology. *Current Oncology*. **27**:S98-S105.





Galkin O, McLeod J, Kennedy JA, Jin LQ, Mbong N, Wong M, Uger RA, Minden MD, Danska JS, Wang JCY. 2021. SIRP alpha Fc treatment targets human acute myeloid leukemia stem cells. *Haematologica*. **106(1)**:279-283.

Chiaranunt P, Burrows K, Ngai L, Mortha A. 2020. Isolation of mononuclear phagocytes from the mouse gut. *Tumor Immunology and Immunotherapy - Cellular Methods, Pt B*. **632**:67-90.

Burrows K, Chiaranunt P, Ngai L, Mortha A. 2020. Rapid isolation of mouse ILCs from murine intestinal tissues. *Tumor Immunology and Immunotherapy - Cellular Methods, Pt A*. **631**:305-327.

Bratman SV, Yang SYC, Iafolla MAJ, Liu ZH, Hansen AR, Bedard PL, Lheureux S, Spreafico A, Razak AA, Shchegrova S, Louie M, Billings P, Zimmermann B, Sethi H, Aleshin A, Torti D, Marsh K, Eagles J, Cirilan I, Hanna Y, Clouthier DL, Lien SC, Ohashi PS, Xu W, Siu LL, Pugh TJ. 2020. Personalized circulating tumor DNA analysis as a predictive biomarker in solid tumor patients treated with pembrolizumab. *Nature Cancer*. **1(9)**:873.

Li J, Gordon J, Chen ELY, Xiao SY, Wu LY, Zuniga-Pflucker JC, Manley NR. 2020. NOTCH1 signaling establishes the medullary thymic epithelial cell progenitor pool during mouse fetal development. *Development*. **147(12)**.

Klimek L, Pfaar O, Worm M, Eiwegger T, Hagemann J, Ollert M, Untersmayr E, Hoffmann-Sommergruber K, Vultaggio A, Agache I, Bavbek S, Bossios A, Casper I, Chan SS, Chatzipetrou A, Vogelberg C, Firinu D, Kauppi P, Kolios A, Kothari A, Matucci A, Palomares O, Szepfalusi Z, Pohl W, Hotzenecker W, Rosenkranz AR, Bergmann KC, Bieber T, Buhl R, Buters J, Darsow U, Keil T, Kleine-Tebbe J, Lau S, Maurer M, Merk H, Mosges R, Saloga J, Staubach P, Jappe U, Rabe KF, Rabe U, Vogelmeier C, Biedermann T, Jung K, Schlenter W, Ringa J, Chaker A, Wehrmann W, Becker S, Freudelsperger L, Mulleneisen N, Nemat K, Czech W, Wrede H, Brehler R, Fuchs T, Tomazic PV, Aberer W, Fink-Wagner AH, Horak F, Wohrl S, Niederberger-Leppin V, Pali-Scholl I, Pohlg W, Roller-Wirnsberger R, Spranger O, Valenta R, Akdis M, Matricardi PM, Spertini F, Khaltaev N, Michel JP, Nicod L, Schmid-Grendelmeier P, Idzko M, Hamelmann E, Jakob T, Werfel T, Wagenmann M, Taube C, Jensen-Jarolim E, Korn S, Hentges F, Schwarze J, O'Mahony L, Knol EF, del Giacco S, Perez TC, Bousquet J, Zuberbier T, Akdis C, Jutel M. 2020. Use of biologics in allergic and type 2 inflammatory diseases in the current Covid 19 pandemic(a, b, c). *Allergo Journal*. **29(4)**:14-27.

Klionsky DJ, et al. 2021. Guidelines for the use and interpretation of assays for monitoring autophagy (4th edition). *Autophagy*. **17(1)**:1-382.