

# Department of Immunology

## Newsletter

VOL VII – ISSUE 1

September/October 2018

### *Message from the Chair, Dr. Juan Carlos Zúñiga-Pflücker*

Welcome to **Volume VII** of the Department of Immunology Newsletter. Fall is fully upon us and the Department of Immunology is already off to a great start. As per usual, we will use the monthly Newsletter to not only communicate upcoming events within our Department, such as our Easton, special and graduate seminars, and student sponsored events, but also to highlight special achievements from our trainees and faculty, while providing a platform for sharing departmental initiatives and showcasing recent publications from our Department.

Please join me in welcoming our new Immunology faculty members, and I am also delighted to welcome our new Immunology graduate students, joining us as part of the Fundamental or Applied Immunology programs - listed below. The Graduate Committee, as usual, did an excellent job in selecting an outstanding incoming class.

As you will see below, the Immunology Graduate Student Association (IGSA) has a new leadership, and I am delighted to welcome **Lisa Hung** and **Tao Chan** as the new co-presidents. I would like to thank the outgoing IGSA co-presidents **Yoojin Choi** and **Albert Nguyen** for their extraordinary work and leadership during the past academic year.

Speaking of graduate students, do not forget to attend the student seminars, held Mondays 10:00 am, hope to see you all there, with T-cards in hand. Upcoming seminars are conveniently listed on the right and just below the Easton Seminars listing.

A warm welcome to our new undergraduate project students, also listed below. It is wonderful to have such a thriving undergraduate research project cohort. I am also looking forward to working with the Undergraduate Immunology Student Association (IMMSA), led this year by **Kitty Liu** and **Francis Arias**, and you can read more about their plans below.

The Department of Immunology will be undertaking a new Strategic Planning consultation period this Fall, and then have a new plan ready by Spring 2019, and I look forward to working with all in the department as we look back at our 2014-2018 plan and develop a new one for 2019-2023.

Lastly, I want to make sure you mark your calendars for two important dates coming up for this term: 1) Our *Faculty Departmental Meeting* will be on **November 26, 2018, 11:00 am**; and, 2) our *Departmental Holiday Party* will be on **December 13, 2018**.

Best wishes to all for a productive and exciting 2018-2019 academic year.

### UPCOMING EASTON SEMINARS

October 2018

MSB 2172 at 11:10 a.m.

**Monday, October 8, 2018**

**No Seminar—Happy Thanksgiving**

**Monday, October 15, 2018**

**Dr. Bryan Coburn, MD, PhD**

"Protection and Therapeutic Manipulation of Immunomodulatory Microbiota"

**Host:** Dr. Juan Carlos Zúñiga-Pflücker

**Monday, October 22, 2018**

**Dr. Gideon Schreiber**

"Simple Rules Dictate the Complexity of Type 1 Interferon Signaling"

**Host:** Dr. David Spaner

**Monday, October 29, 2018**

**Dr. Ann Hill, PhD**

"Searching for the Cells that Drive T Cell Memory Inflation in CMV Infection"

**Host:** Dr. David Brooks



## WELCOME

### FACULTY

Dr. Sarah Crome, Assistant Professor, TGRI/UHN

### Fundamental MSc and PhD

Philip Barbulescu (Martin lab)  
Sofija Bekarovska (on rotation)  
Carolina De Amat Herbozo (on rotation)  
Audrey Kassardjian (on rotation)  
Tiffany Kong (on rotation)  
Julia Lin (on rotation)  
Alexander Luchak (Croitoru lab)  
Yu Xuan Luo (Spaner lab)  
Luke Neufeld (on rotation)  
Louis Ngai (on rotation)  
Kyle Reid (on rotation)  
Julia Szusz (on rotation)  
Miguel Torres Perez (on rotation)  
Derek Tsang (Philpott lab)  
Emma Vanlieshout (on rotation)  
Helen Wang (on rotation)  
Ryder Whittaker Hawkins (on rotation)  
Matthew Wong (on rotation)  
Stephanie Wong (Ohashi lab)

### Applied MSc

James An (Crome lab)  
Tina Daigneault (Martinu lab)  
Josephine Gomes (Dunn lab)  
Alexandra Johnson-Valiente (Gehring lab)  
Jean-Soo Lee (Eiwegger lab)  
Jessica Mathews (Crome lab)  
Claire Mazzia (Anderson lab)  
Marie-Christine Perry (Kaul lab)  
Apiraam Selvabaskaran (Girardin lab)  
Salma Sheikh-Mohamed (Gommerman lab)  
Siu Ling Tai (Mortha lab)  
Flora Wong (Mortha lab)  
Noelle Yee (Ostrowski lab)

## STUDENT SEMINARS

October 2018

**Thanksgiving - No Seminars**

**Oct 8, 2018**

**Lisa Hung & Jaclyn Law**

**Oct 15, 2018**

10:00am–11:00am

MSB 2173

**Scott Lien & Ashton Trotman-Grant**

**Oct 22, 2018**

10:00am–11:00am

MSB 2173

**Pailin Chiaranunt & Sintia Xhiku**

**Oct 29, 2018**

10:00am–11:00am

MSB 2173

## IMM450Y RESEARCH PROJECT STUDENTS

Joaquin Arias (Danska Lab)

Ke Fan Bei (Juvet Lab)

Kathleen Cheng (Winer Lab)

Joshua De Sousa Casal (Zuniga-Pflucker Lab)

Elizabeth Hore (Danska Lab)

Saraf Karim (Jongstra-Bilen Lab)

Meggie Kuypers (Mallevaey Lab)

Seungwoo Lee (Gehring Lab)

Sung Min Lim (Mortha Lab)

KyMBERly Litman (Watts Lab)

Zhe Qi Liu (Ohashi Lab)

Phillip Ly (Martinu Lab)

Xianjie Ma (Gommerman Lab)

Soomin Maeng (Ehrhardt Lab)

Madalina Maxim (Ohashi Lab)

Yota Ohashi (Hirano Lab)

Olivia Pezzutti (MacParland Lab)

Juan Diego Sanchez Vasquez (Martin Lab)

Ethan Smith (MacParland Lab)

Stephanie Stelea (Gommerman Lab)

Ayushi Thakur (Mortha Lab)

Nam Topp-Nguyen (Martinu Lab)

Clarissa Wirianto (Mallevaey Lab)

Lawrence Wood (De Carvalho Lab)

Brendan Wu (Martin Lab)

Karen Yeung (Gommerman Lab)

Christine Zhou (Ostrowski Lab)

## CONGRATULATIONS

### PhD

Simon Eng – August 1, 2018  
(Yeung lab)

Tey Irrazabal – August 14, 2018  
(Martin lab)

Sergey Yegorov – September 12, 2018  
(Kaul lab)

Catia Perciani – September 28, 2018  
(Macdonald lab)

### MSc

Juan Mauricio Umana – July 11, 2018  
(Mallevaey lab)

Jerry Shen – August 20, 2018  
(Danska lab)

### Reclassification Exam

Scott Lien (Ohashi lab) – August 13, 2018

## FEATURED CAMPUS RESOURCE

Division of **Student Life** at U of T

<https://www.studentlife.utoronto.ca/>

Our Vision: Through our work and partnerships, every student will have the opportunity to **actively participate** in university life; **find** connection, community, and friendship; **encounter** new ways of thinking and being in the world; and **experience** leadership, independence, and success.

Resources, news, clubs, events...check out Student Life!

### IMMSA

Hello Immunologists,

We hope you've been having a great start to your academic year! IMMSA has had some very exciting events this past month such as the Street Festival, Welcome Back Lunch and our Fall Elections. Its been a pleasure to get to know the students and faculty at the Department of Immunology; we thank you all for your attendance. For the month of October, we have planned two major events; a Lunch and Learn where students get to sit down with Faculty and get to know each other as well as a Seminar on finding meaningful undergraduate research. Details of these upcoming events will be posted on our Facebook page soon so please be sure to follow us at <https://www.facebook.com/immsa.uoft>.

On a final note we would like to congratulate the newly IMMSA executive members during this Fall election: ASSU Representative **Myriam Dilindi**, Second Year Representative **Anita Tia, Jr.** Treasurer **David Won** and Jr. Events coordinator **Phoebe Liu**. Congratulations to you all! Together, we hope to have an amazing year and continue building the wonderful community of immunologist at the University of Toronto.

All the best,

Joaquin Francis Arias & Kitty Liu

Immunology Students Association (IMMSA) Co-Presidents 2018-2019

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

### IGSA

Dear Immunologists,

We hope you had a great summer both in and outside the lab! Congratulations and welcome to all the incoming students in the department.

We had an amazing start to the school year with our Annual Departmental BBQ on Centre Island! The sun was shining, the food was great and we would like to thank everyone who came out, both new and returning students. The Orientation Pub was also a resounding success with one of the biggest turnouts so far. We hope the new students learned a lot at their orientation and are ready to get involved in their research and beyond with IMMpress, Let's Talk Science, The Beyond Science Initiative and SciChat! We are super excited to end the month with the Wonderland Trip and First Year Pub, hope to see all those fresh faces there!

For the spooky month of October, get ready to break out your favourite board games for Games Night! Then look forward to Pumpkin Carving and scary movies in the BiMMStro later in the month. IGSA is also happy to announce we are bringing back our outing to Friday Night Live at the ROM! Finally to round out October, you are all invited to attend the Interdepartmental Halloween Party (looking forward to seeing those creative costumes!).

This upcoming year will be jam-packed with activities for all the students and faculty to enjoy, and we have an amazing IGSA council ready to make it happen! Introducing IGSA 2018-2019: Lisa & Tao (Co-Presidents), Jennifer (Internal Affairs), Rysa & Lewis & Derek (Social Reps), Nate (Sports Rep), Saad (Community Outreach), Andrew (Career Development) and Anthony (GSU/CUPE Rep). Feel free to reach out to us if you have any questions or suggestions about IGSA, we would love to hear from you! You can contact us via the IGSA Facebook Group, IGSA Website (<http://www.igsauoft.com/>), or directly if you see us on the street.

Best,

Lisa & Tao (IGSA Co-Presidents 2018-2019)



## **PUBLICATIONS FROM THE DEPARTMENT OF IMMUNOLOGY (June-August 2018)**

1. Amini-Nik, S., Sadri, A.R., Diao, L., Belo, C., and Jeschke, M.G. (2018). Accumulation of myeloid lineage cells is mapping out liver fibrosis post injury: a targetable lesion using Ketanserin. *Experimental and Molecular Medicine* 50.
2. Bando, J.K., Gilfillan, S., Song, C., McDonald, K.G., Huang, S.C.C., Newberry, R.D., Kobayashi, Y., Allan, D.S.J., Carlyle, J.R., Cella, M., and Colonna, M. (2018). The Tumor Necrosis Factor Superfamily Member RANKL Suppresses Effector Cytokine Production in Group 3 Innate Lymphoid Cells. *Immunity* 48, 1208-+.
3. Bathgate, R.A.D., Kocan, M., Scott, D.J., Hossain, M.A., Good, S.V., Yegorov, S., Bogerd, J., and Gooley, P.R. (2018). The relaxin receptor as a therapeutic target - perspectives from evolution. *Check for updates and drug targeting. Pharmacology & Therapeutics* 187, 114-132.
4. Cao, A., Alluqmani, N., Buhari, F.H.M., Wasim, L., Smith, L.K., Quaile, A.T., Shannon, M., Hakim, Z., Furmli, H., Owen, D.M., *et al.* (2018). Galectin-9 binds IgM-BCR to regulate B cell signaling. *Nature Communications* 9.
5. Chen, Z.Q., Kapus, A., Khatri, I., Kos, O., Zhu, F., and Gorczynski, R.M. (2018). Cell membrane-bound CD200 signals both via an extracellular domain and following nuclear translocation of a cytoplasmic fragment. *Leukemia Research* 69, 72-80.
6. Dimitriou, I.D., Lee, K., Akpan, I., Lind, E.F., Barr, V.A., Ohashi, P.S., Samelson, L.E., and Rottapel, R. (2018). Timed Regulation of 3BP2 Induction Is Critical for Sustaining CD8(+) T Cell Expansion and Differentiation. *Cell Reports* 24, 1123-1135.
7. Ewaltl, E., Selb, R., Eckl-Dorna, J., Mueller, C.A., Cabauatan, C.R., Eiwegger, T., Resch-Marat, Y., Niespodziana, K., Vrtala, S., Valenta, R., and Niederberger, V. (2018). Betamethasone prevents human rhinovirus- and cigarette smoke-induced loss of respiratory epithelial barrier function. *Scientific Reports* 8.
8. Feld, J., Chandran, V., Haroon, N., Inman, R., and Gladman, D. (2018). Axial disease in psoriatic arthritis and ankylosing spondylitis: a critical comparison. *Nature Reviews Rheumatology* 14, 363-371.
9. Fischietti, M., Arslan, A.D., Sassano, A., Saleiro, D., Majchrzak-Kita, B., Ebine, K., Munshi, H.G., Fish, E.N., and Plataniias, L.C. (2018). Sifn2 Regulates Type I Interferon Responses by Modulating the NF-kappa B Pathway. *Molecular and Cellular Biology* 38.
10. Galicia, G., Lee, D.S.W., Ramaglia, V., Ward, L.A., Yam, J.Y., Leung, L.Y.T., Li, R., Handy, M., Zhang, J.X., Drohomirecky, P.C., *et al.* (2018). Isotype-Switched Autoantibodies Are Necessary To Facilitate Central Nervous System Autoimmune Disease in Aicda(-/-) and Ung(-/-) Mice. *Journal of Immunology* 201, 1119-1130.
11. Gorczynski, R.M., Farrokhi, K., Gorczynski, C., Sadozai, H., Zhu, F., and Khatri, I. (2018). Importance of B cells to development of regulatory T cells and prolongation of tissue allograft survival in recipients receiving autologous bone marrow transplantation. *Immunology* 154, 465-475.
12. Imkeller, K., Scally, S.W., Bosch, A., Marti, G.P., Costa, G., Triller, G., Murugan, R., Renna, V., Jumaa, H., Kreamsner, P.G., *et al.* (2018). Antihomotypic affinity maturation improves human B cell responses against a repetitive epitope. *Science* 360, 1358-1362.



13. Joag, V., Sivro, A., Yende-Zuma, N., Imam, H., Samsunder, N., Karim, Q.A., Karim, S.A., McKinnon, L., and Kaul, R. (2018). Ex vivo HIV entry into blood CD4+T cells does not predict heterosexual HIV acquisition in women. *Plos One* 13.
14. Krishnamoorthy, M., Buhari, F.H.M., Zhao, T.T., Brauer, P.M., Burrows, K., Cao, E.Y., Moxley-Paquette, V., Mortha, A., Zuniga-Pflucker, J.C., and Treanor, B. (2018). The ion channel TRPM7 is required for B cell lymphopoiesis. *Science Signaling* 11.
15. Krishnamoorthy, M., Wasim, L., Buhari, F.H.M., Zhao, T.T., Mahtani, T., Ho, J., Kang, S., Deason-Towne, F., Perraud, A.L., Schmitz, C., and Treanor, B. (2018). The channel-kinase TRPM7 regulates antigen gathering and internalization in B cells. *Science Signaling* 11.
16. Liu, Y.L., McDaniel, J.R., Khan, S., Campisi, P., Propst, E.J., Holler, T., Grunebaum, E., Georgiou, G., Ippolito, G.C., and Ehrhardt, G.R.A. (2018). Antibodies Encoded by FCRL4-Bearing Memory B Cells Preferentially Recognize Commensal Microbial Antigens. *Journal of Immunology* 200, 3962-3969.
17. Luft, O., Khattar, R., Farrokhi, K., Ferri, D., Yavorska, N., Zhang, J.H., Sadozai, H., Adeyi, O., Chruscinski, A., Levy, G.A., and Selzner, N. (2018). Inhibition of the Fibrinogen-Like Protein 2:FcRIIB/RIII immunosuppressive pathway enhances antiviral T-cell and B-cell responses leading to clearance of lymphocytic choriomeningitis virus clone 13. *Immunology* 154, 476-489.
18. Mazzanti, A., and Eiwegger, T. (2018). FOOD ALLERGY AND PRESCHOOL ASTHMA. *Current Allergy & Clinical Immunology* 31, 70-74.
19. Moyo, T., Ereno-Orbea, J., Jacob, R.A., Pavillet, C.E., Kariuki, S.M., Tangie, E.N., Julien, J.P., and Dorfman, J.R. (2018). Molecular Basis of Unusually High Neutralization Resistance in Tier 3 HIV-1 Strain 253-11. *Journal of Virology* 92.
20. Noordermeer, S.M., Adam, S., Setiaputra, D., Barazas, M., Pettitt, S.J., Ling, A.K., Olivieri, M., Alvarez-Quilon, A., Moatti, N., Zimmermann, M., *et al.* (2018). The shieldin complex mediates 53BP1-dependent DNA repair. *Nature* 560, 117-+.
21. Perez-Shibayama, C., Gil-Cruz, C., Cheng, H.W., Onder, L., Printz, A., Morbe, U., Novkovic, M., Li, C.L., Lopez-Macias, C., Buechler, M.B., *et al.* (2018). Fibroblastic reticular cells initiate immune responses in visceral adipose tissues and secure peritoneal immunity. *Science Immunology* 3.
22. Saidova, A., Hershkop, A.M., Ponce, M., and Eiwegger, T. (2018). Allergen-Specific T Cells in IgE-Mediated Food Allergy. *Archivum Immunologiae Et Therapiae Experimentalis* 66, 161-170.
23. Shinde, R., Hezaveh, K., Halaby, M.J., Kloetgen, A., Chakravarthy, A., Medina, T.D., Deol, R., Manion, K.P., Baglaenko, Y., Eldh, M., *et al.* (2018). Apoptotic cell-induced AhR activity is required for immunological tolerance and suppression of systemic lupus erythematosus in mice and humans. *Nature Immunology* 19, 571-+.
24. Stapleton, S., Dunne, M., Milosevic, M., Tran, C.W., Gold, M.J., Vedadi, A., McKee, T.D., Ohashi, P.S., Allen, C., and Jaffray, D.A. (2018). Radiation and Heat Improve the Delivery and Efficacy of Nanotherapeutics by Modulating Intratumoral Fluid Dynamics. *Acs Nano* 12, 7583-7600.
25. Steinbach, S.K., Wang, T., Carruthers, M.H., Li, A., Besla, R., Johnston, A.P., Robbins, C.S., and Husain, M. (2018). Aortic Sca-1(+) Progenitor Cells Arise from the Somitic Mesoderm Lineage in Mice. *Stem Cells and Development* 27, 888-897.



26. Steinert, E.M., Thompson, E.A., Beura, L.K., Adam, O.A., Mitchell, J.S., Guo, M.D., Breed, E.R., Sjaastad, F.V., Vezys, V., and Masopust, D. (2018). Cutting Edge: Evidence for Nonvascular Route of Visceral Organ Immunosurveillance by T Cells. *Journal of Immunology* 201, 337-342.
27. Tanaka, M., Fine, J.H., Kirkham, C.L., Aguilar, O.A., Belcheva, A., Martin, A., Ketela, T., Moffat, J., Allan, D.S.J., and Carlyle, J.R. (2018). The Inhibitory NKR-P1B:Clr-b Recognition Axis Facilitates Detection of Oncogenic Transformation and Cancer Immunosurveillance. *Cancer Research* 78, 3589-3603.
28. Verdu, E.F., and Danska, J.S. (2018). Common ground: shared risk factors for type 1 diabetes and celiac disease. *Nature Immunology* 19, 685-695.
29. Woo, J.S., Srikanth, S., Kim, K.D., Elsaesser, H., Lu, J., Pellegrini, M., Brooks, D.G., Sun, Z.M., and Gwack, Y. (2018). CRACR2A-Mediated TCR Signaling Promotes Local Effector Th1 and Th17 Responses. *Journal of Immunology* 201, 1174-1185.
30. Wu, C.A.M., Roth, T.L., Baglaenko, Y., Ferri, D.M., Brauer, P., Zuniga-Pflucker, J.C., Rosbe, K.W., Wither, J.E., Marson, A., and Allen, C.D.C. (2018). Genetic engineering in primary human B cells with CRISPR-Cas9 ribonucleoproteins. *Journal of Immunological Methods* 457, 33-40.

*We'd like to hear from you!*  
*Comments or questions – please contact:*  
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