

Department of Immunology

Newsletter

VOL V – ISSUE 1

September 2016

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

Welcome to **Volume V** of the Department of Immunology Newsletter. Since its start in the Fall of 2012, the monthly Newsletter has allowed us 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 the Fundamental or Applied Immunology programs - listed below. The Graduate Committee, as usual, did an excellent job in selecting an outstanding incoming class. An update from the Graduate Committee, I am happy to report that Profs. **Naoto Hirano** and **David Brooks** have agreed to join this important committee of the department. I am also thankful to Prof. **Michele Anderson**, who after many years of service has step down, and to Prof. **Michael Ratcliffe** for stepping in as acting Graduate Coordinator while Prof. **Jennifer Gommerman** was away on sabbatical, and additionally for him staying as a member of the Graduate Committee.

As you will see below, the Immunology Graduate Student Association (IGSA) has a new leadership, and I am delighted to welcome **Maria Edilova** and **Mark Gower** as the new co-presidents. I would like to thank the outgoing IGSA co-presidents **Helen Luck** and **Dennis Lee** 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 **Natalie Hoffmann** and **Conan Chua**, and you can read more about their plans below.

Best wishes to all for a productive and exciting 2016-2017 academic year.

UPCOMING SEMINARS

EASTON SEMINARS

October 2016

Room 2172 MSB at 11:10 a.m.

Monday October 3rd, 2016

Paul Kubes, Ph.D.

“Imaging Organ Specific Innate Immune Responses”

(Host: IGSA)

Monday October 10th, 2016

Thanksgiving—No Seminar

Monday October 17th, 2016

Myron Cybulsky, Ph.D.

“The Initiation of Atherosclerosis: Cellular and Molecular Mechanisms”

(Host: Dr. JC Zuniga-Pflucker)

Monday October 24th, 2016

Vincenzo Bronte, Ph.D.

“Altered Myelopoiesis and Immune Dysfunctions During Cancer Progression”

(Host: Dr. Tracy McGaha)

Monday October 31st, 2016

Sergio Grinstein, Ph.D.

“Molecular Mechanisms of Phagosome Formation and Maturation”

(Host: Dr. Dr. Jenny Jongstra-Bilen)

WELCOME

FACULTY

Dr. Arthur Mortha, Assistant Professor, MSB

Dr. Teraza Martinu, Assistant Professor, TGRI/UHN

Dr. Stefen Juvet, Assistant Professor, TGRI/UHN

Dr. Myron Cybulsky, Professor, TGRI/UHN

Dr. Hubert Tsui, Assistant Professor, TGH/UHN

Applied MSc Immunology Program: September Start Date

Megan Gusdal (Yeung lab)

Eun Lee (Yeung lab)

Karen Legg (Robbins lab)

April Lewtak (Zuniga-Pflucker lab)

Oksana Okorokov (Guidos lab)

Gregory Pavlatos (Serghides lab)

Anthony Pelaccia (Watts lab)

Renuka Ramlogan (Yeung lab)

Candice Tang (Epelman lab)

Matthew White (Juvet lab)

Fundamental Immunology MSc and PhD

Ashley Deonarain (On Rotation)

Ellie Doroshenko (On Rotation)

Dario Ferri (On Rotation)

Mengdi Guo (On Rotation)

Lisa Hung (On Rotation)

Alicia Kilfoy (On Rotation)

Jaclyn Law (On Rotation)

Scott Lien (Ohashi lab)

Sharon Ling (Yeung lab)

Mohammad Saleh (On Rotation)

Kenneth Ting (Watts lab)

Aaron Trotman-Grant (Philpott lab)

Ashton Trotman-Grant (Zuniga-Pflucker lab)

Laabiah Wasim (On Rotation)

Student Seminars

October 2016

Room 4171 MSB at 10:00 a.m.

Monday October 3rd, 2016

Angela Li (Supervisor: C. Robbins)

Edward Chen (Supervisor: J.C. Zuniga-Pflucker)

Monday October 10th, 2016

Thanksgiving— No Seminar

Monday October 17th, 2016

Tingxi Guo (Supervisor: N. Hirano)

Mark Gower (Supervisor: C. Guidos)

Monday October 24th, 2016

Kuan Lun Chu (Supervisor: T. Watts)

Tiantian Zhao (Supervisor: B. Treanor)

Monday October 31st, 2016

Kogulan Yoganathan (Supervisor: J.C. Zuniga-Pflucker and M. Anderson)

YuChen Yao (Supervisor: R. Inman)



IMM450Y Research Project Students

Zhenzheng Zhao (Martin lab)
Xiaotian Ju (Ehrhardt lab)
Judy Yang (Siminovitch lab)
Yi Tao Chan (Mallewaey lab)
Edward Ming Yin Koo (Hirano lab)
Conan Chua (Robbins lab)
Hannah Fung (Anderson and Rast lab)
Nancy Qin (Serghides lab)
Chengming Zhang (Philpott lab)
Hokyun Park (Anderson lab)
Steven Zhang (Ostrowski lab)
Hening Sun (Ostrowski lab)
Anthony Zhao (Guidos lab)
Frank Pang (Jeschke lab)
Nasim Noroozbahari (Jeschke lab)
Xiaotang Gao (Jongstra and Cybulsky lab)
Allen Duong (Martinu and Juvet lab)
Saad Khan and Ghazal Najafi (Gommerman lab)
Jennifer Hoang (Zuniga-Pflucker lab)

CONGRATULATIONS

PhD

Eric Gracey (Inman lab) – July 18, 2016

MSc

Christopher Gunst (Guidos lab) – June 15, 2016	Lindsay Cho (Yeung lab) – July 21, 2016
Sintia Xhiku (Zúñiga-Pflücker lab) – June 23, 2016	Sofia Oke (Martin lab) – July 21, 2016
Magar Ghazarian (Winer lab) – June 23, 2016	Jennifer Yam (Gommerman lab) – July 27, 2016
Andrey Mikhaylov (Yeung lab) – July 20, 2016	YuHan Chang (Watts lab) – July 28, 2016

Reclassification Exam

Mark Anczurowski (Hirano lab) – June 1, 2016	YuChen Yao (Inman lab) – June 27, 2016
Maria Edilova (Watts lab) – June 16, 2016	Tiantian Zhao (Treanor lab) – June 28, 2016
Lysa Langevin (Yeung lab) – June 20, 2016	Alicia Fisch (Yeung lab) – June 29, 2016

Qualifying Exam

Christopher Yau (Danska lab) – June 16, 2016



Beyond Sciences Initiative (BSI): Website Update

The Beyond Sciences Initiative (BSI) is a not-for-profit consortium comprised predominantly of scholars from academic institutions around the globe. BSI provides a platform for dialogue and outreach to local and global communities, with a focus on mentorship. Cognizant of the value of the bidirectional partnership, a major objective is to promote cultural understanding and academic and personal growth. BSI website has been updated recently and has additional features - including a course repository (free!). Please see the following link for more information: <http://www.beyondsciences.org>

Connaught International Symposium 2016

The Connaught International Symposium 2016, presented by GEMINI Connaught Program and Department of Immunology, University of Toronto will take place on Nov 21-22 at the historic Hart House. We will be exploring the critical issue of gene x environment interactions in chronic inflammatory diseases. World leaders in this field will be giving talks and hosting panels (for a list of speakers please visit: <http://www.immunology.utoronto.ca/event/connaught-international-symposium-2016> PI's and trainees are strongly encouraged to attend. Free registration at <http://connaughtsymposium.eventbrite.com>

GEMINI Study – Healthy South Asian Participants Needed!

Are you South Asian or do you have any South Asian friends? GEMINI Study is looking for healthy South Asians to participate in a paid research study to understand the impact of global migration on health and diseases. For more information visit our website and check out our study videos (www.geministudy.ca). For a couple hours of your time, you may be compensated up to \$75!



FEATURED CAMPUS RESOURCE

The School of Graduate Studies' Graduate Professional Skills Program (GPS) is designed to help all graduate students become fully prepared for their future. GPS focuses on skills beyond those conventionally learned within a disciplinary program—skills that may be critical to success in the wide range of careers that graduates enter, both within and outside academe.

The program can help you to communicate better, plan and manage your time, learn entrepreneurial skills, understand and apply ethical practices, and work effectively in teams and as leaders.

Check out the [GPS website](#) to find out more!



IMMSA

Hello everyone,

As the Co-Presidents for the Immunology Student's Association (IMMSA), we would like to welcome undergraduate students on behalf of the Department and congratulate you on your choice of selecting Immunology as your discipline of study here at the University of Toronto.

We encourage you to attend the various social and academic events held by IMMSA throughout the school year. In September, we began the school year with a Welcome Back Lunch, and are looking forward to future events, such as research seminars, social outings, and networking events where undergraduates, graduate students, and Immunology faculty get to interact. By doing so, we hope to nourish a strong learning environment that is not only knowledgeable but also enjoyable for everyone involved.

Please feel free email us (immsa.immunology@gmail.com) with any questions, and to follow us on social media to keep up with our latest events and updates!

Best,

Natalie Hoffmann & Conan Chua

Immunology Students Association (IMMSA) Co-Presidents 2016-17

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

IGSA

Dear Immunologists,

What a great start to the year it has been! We hope that everyone had a wonderful summer and is enjoying being back for a new school year.

Firstly, we would like to say a warm welcome to all the students of the incoming class. Thank you to everyone who came out to Orientation Pub at Green Room earlier this month. Not only did we have a fantastic faculty turnout, but we were also fortunate to have Kieran and Angela run an IMMpress booth. We hope that they fostered a lot of interest in the IMMpress magazine.

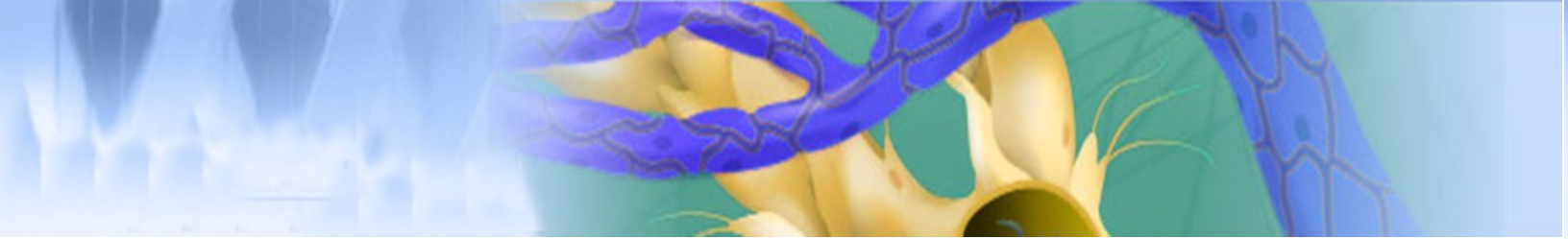
It has been a busy month with the start of classes, as well as the Wonderland trip and the First Year Social. Big shoutout to the Immunodominators softball team who capped off a terrific season with triumph at the Annual Imm vs. Biochem Fall Classic. Needless to say, we have reclaimed our natural position as Champions! Alberto Martin had the hit of the game— a 3-run home run that brought home his fellow faculty members Cynthia Guidos and JC. Stellar play in the infield solidified our commanding 21-20 win. Special mention goes to Nyrie Israelian on 2nd, and shortstop Dennis Lee, who played some serious defense. To those who showed up and cheered on the team, thank you for pushing the Immunodominators harder for the win!

Lastly, make sure to look out for next month's events, including Games Night, Pumpkin Carving, the spooky October edition of bIMMstro Movie Night, and the Interdepartmental Halloween Party. We hope our fellow students are as excited as us because Team IGSA has been busy planning plenty more distractions for the upcoming year!

Yours truly,

Mark & Maria

IGSA Co-Presidents 2016-2017



PUBLICATIONS FROM THE DEPARTMENT OF IMMUNOLOGY (June-August 2016)

1. Abdullahi, A., and M. G. Jeschke. 2016. White Adipose Tissue Browning: A Double-edged Sword. *Trends in Endocrinology and Metabolism* 27: 542-552.
2. Ding, Y., J. Liu, S. Lu, J. Igweze, W. Xu, D. Kuang, C. Zealey, D. H. Liu, A. Gregor, A. Bozorgzad, L. Zhang, E. Yue, S. Mujib, M. Ostrowski, and P. Chen. 2016. Self-assembling peptide for co-delivery of HIV-1 CD8+T cells epitope and Toll-like receptor 7/8 agonists R848 to induce maturation of monocyte derived dendritic cell and augment polyfunctional cytotoxic T lymphocyte (CTL) response. *Journal of Controlled Release* 236: 22-30.
3. Harris, V. M., R. Sharma, J. Cavett, B. T. Kurien, K. Liu, K. A. Koelsch, A. Rasmussen, L. Radfar, D. Lewis, D. U. Stone, C. E. Kaufman, S. B. Li, B. Segal, D. J. Wallace, M. H. Weisman, S. Venuturupalli, J. A. Kelly, M. E. Alarcon-Riquelme, B. Pons-Estel, R. Jonsson, X. Lu, J. E. Gottenberg, J. M. Anaya, D. S. Cunninghame-Graham, A. J. W. Huang, M. T. Brennan, P. Hughes, I. Alevizos, C. Miceli-Richard, E. C. Keystone, V. P. Bykerk, G. Hirschfield, G. Xie, W. F. Ng, G. Nordmark, S. M. Bucher, P. Eriksson, R. Omdal, N. L. Rhodus, M. Rischmueller, M. Rohrer, M. Wahren-Herlenius, T. Witte, X. Mariette, C. J. Lessard, J. B. Harley, K. L. Sivils, and R. H. Scofield. 2016. Klinefelter's syndrome (47,XXY) is in excess among men with Sjogren's syndrome. *Clinical Immunology* 168: 25-29.
4. Lavallee, V. P., J. Krosi, S. Lemieux, G. Boucher, P. Gendron, C. Pabst, I. Boivin, A. Marinier, C. J. Guidos, S. Meloche, J. Hebert, and G. Sauvageau. 2016. Chemo-genomic interrogation of CEBPA mutated AML reveals recurrent CSF3R mutations and subgroup sensitivity to JAK inhibitors. *Blood* 127: 3054-3061.
5. Lavallee, V. P., J. Krosi, S. Lemieux, G. Boucher, P. Gendron, C. Pabst, I. Boivin, A. Marinier, S. Meloche, C. J. Guidos, J. Hebert, and G. Sauvageau. 2016. CHEMO-GENOMIC INTERROGATION OF PRIMARY ACUTE MYELOID LEUKEMIA WITH BIALLELIC CEBPA MUTATIONS REVEALS RECURRENT CSF3R MUTATIONS AND SUBGROUP SENSITIVITY TO JAK INHIBITORS. *Haematologica* 101: 323-324.
6. Lun, C. M., C. S. Schrankel, H. Y. Chou, S. Sacchi, and L. C. Smith. 2016. A recombinant Sp185/333 protein from the purple sea urchin has multitasking binding activities towards certain microbes and PAMPs. *Immunobiology* 221: 889-903.
7. Paun, A., C. Yau, and J. S. Danska. 2016. Immune recognition and response to the intestinal microbiome in type 1 diabetes. *Journal of Autoimmunity* 71: 10-18.
8. Philpott, D. J., and M. Piquette-Miller. 2016. The Bugs Within Our Body: The Human Microbiota. *Clinical Pharmacology & Therapeutics* 99: 570-574.
9. Rehou, S., S. Mason, M. Burnett, and M. G. Jeschke. 2016. Burned Adults Develop Profound Glucose Intolerance. *Critical Care Medicine* 44: 1059-1066.



10. Revelo, X. S., M. Ghazarian, M. H. Y. Chng, H. Luck, J. H. Kim, K. J. Zeng, S. Y. Shi, S. Tsai, H. Lei, J. Kenkel, C. L. Liu, S. Tangsombatvisit, H. Tsui, C. Sima, C. T. Xiao, L. Shen, X. Y. Li, T. R. Jin, G. F. Lewis, M. Woo, P. J. Utz, M. Glogauer, E. Engleman, S. Winer, and D. A. Winer. 2016. Nucleic Acid-Targeting Pathways Promote Inflammation in Obesity-Related Insulin Resistance. *Cell Reports* 16: 717-730.
11. Robertson, S. J., K. Geddes, C. Maisonneuve, C. J. Streutker, and D. J. Philpott. 2016. Resilience of the intestinal microbiota following pathogenic bacterial infection is independent of innate immunity mediated by NOD1 or NOD2. *Microbes and Infection* 18.
12. Schrankel, C. S., C. M. Solek, K. M. Buckley, M. K. Anderson, and J. P. Rast. 2016. A conserved alternative form of the purple sea urchin HEB/E2-2/E2A transcription factor mediates a switch in E-protein regulatory state in differentiating immune cells. *Developmental Biology* 416: 149-161.
13. Shikatani, E. A., M. Chandy, R. Besla, C. C. Li, A. Momen, O. El-Mounayri, C. S. Robbins, and M. Husain. 2016. c-Myb Regulates Proliferation and Differentiation of Adventitial Sca1(+) Vascular Smooth Muscle Cell Progenitors by Transactivation of Myocardin. *Arteriosclerosis Thrombosis and Vascular Biology* 36: 1367-+.
14. Shukalek, C. B., D. P. Swanlund, R. K. Rousseau, K. E. Weigl, V. Marensi, S. P. C. Cole, and E. M. Leslie. 2016. Arsenic Trigluthione As(GS)(3) Transport by Multidrug Resistance Protein 1 (MRP1/ABCC1) Is Selectively Modified by Phosphorylation of Tyr920/Ser921 and Glycosylation of Asn19/Asn23. *Molecular Pharmacology* 90: 127-139.
15. Sieberts, S. K., F. Zhu, J. Garcia-Garcia, E. Stahl, A. Pratap, G. Pandey, D. Pappas, D. Aguilar, B. Anton, J. Bonet, R. Eksi, O. Fornes, E. Guney, H. D. Li, M. A. Marin, B. Panwar, J. Planas-Iglesias, D. Poglayen, J. Cui, A. O. Falcao, C. Suver, B. Hoff, V. S. K. Balagurusamy, D. Dillenberger, E. C. Neto, T. Norman, T. Aittokallio, M. Ammad-ud-din, C. A. Azencott, V. Bellon, V. Boeva, K. Bunte, H. Chheda, L. Cheng, J. Corander, M. Dumontier, A. Goldenberg, P. Gopalacharyulu, M. Hajiloo, D. Hidru, A. Jaiswal, S. Kaski, B. Khalfaoui, S. A. Khan, E. R. Kramer, P. Marttinen, A. M. Mezlini, B. Molparia, M. Pirinen, J. Saarela, M. Samwald, V. Stoven, H. Tang, J. Tang, A. Torkamani, J. P. Vert, B. Wang, T. Wang, K. Wennerberg, N. E. Wineinger, G. H. Xiao, Y. Xie, R. Yeung, X. W. Zhan, C. Zhao, J. Greenberg, J. Kremer, K. Michaud, A. Barton, M. Coenen, X. Mariette, C. Miceli, N. Shadick, M. Weinblatt, N. de Vries, P. P. Tak, D. Gerlag, T. W. J. Huizinga, F. Kurreeman, C. F. Allaart, S. L. Bridges, L. Criswell, L. Moreland, L. Klareskog, S. Saevarsdottir, L. Padyukov, P. K. Gregersen, S. Friend, R. Plenge, G. Stolovitzky, B. Oliva, Y. F. Guan, L. M. Mangravite, and C. Rheumatoid Arth. 2016. Crowdsourced assessment of common genetic contribution to predicting anti-TNF treatment response in rheumatoid arthritis. *Nature Communications* 7.
16. Sivaprakasam, S., A. Gurav, A. V. Paschall, G. L. Coe, K. Chaudhary, Y. Cai, R. Kolhe, P. Martin, D. Browning, L. Huang, H. Shi, H. Sifuentes, M. Vijay-Kumar, S. A. Thompson, D. H. Munn, A. Mellor, T. L. McGaha, P. Shiao, C. W. Cutler, K. Liu, V. Ganapathy, H. Li, and N. Singh. 2016. An essential role of Ffar2 (Gpr43) in dietary fibre-mediated promotion of healthy composition of gut microbiota and suppression of intestinal carcinogenesis. *Oncogenesis* 5.



17. Stanojic, M., P. Chen, F. M. Xiu, and M. G. Jeschke. 2016. Impaired Immune Response in Elderly Burn Patients: New Insights Into the Immune-senescence Phenotype. *Annals of Surgery* 264: 195-202.
18. Stanojic, M., C. C. Finnerty, and M. G. Jeschke. 2016. Anabolic and anticatabolic agents in critical care. *Current Opinion in Critical Care* 22: 325-331.
19. Sun, T., O. L. Rojas, C. L. Li, D. J. Philpott, and J. L. Gommerman. 2016. Hematopoietic LT beta R deficiency results in skewed T cell cytokine profiles during a mucosal viral infection. *Journal of Leukocyte Biology* 100: 103-110.
20. Wang, X., G. Wang, Y. Shi, L. Sun, R. Gorczynski, Y. J. Li, Z. Xu, and D. E. Spaner. 2016. PPAR-delta promotes survival of breast cancer cells in harsh metabolic conditions. *Oncogenesis* 5.
21. Xiu, F. M., M. Stanojic, V. Wang, P. Qi, and M. G. Jeschke. 2016. C-C Chemokine Receptor Type 2 Expression on Monocytes Before Sepsis Onset Is Higher Than That of Postsepsis in Septic Burned Patients: A New Predictor for Sepsis in Burned Injury. *Annals of Surgery* 264: 392-398.
22. Yamada, T., H. Horimoto, T. Kameyama, S. Hayakawa, H. Yamato, M. Dazai, A. Takada, H. Kida, D. Bott, A. C. Zhou, D. Hutin, T. H. Watts, M. Asaka, J. Matthews, and A. Takaoka. 2016. Constitutive aryl hydrocarbon receptor signaling constrains type I interferon-mediated antiviral innate defense. *Nature Immunology* 17: 687-+.
23. Zanello, G., A. Goethel, S. Rouquier, D. Prescott, S. J. Robertson, C. Maisonneuve, C. Streutker, D. J. Philpott, and K. Croitoru. 2016. The Cytosolic Microbial Receptor Nod2 Regulates Small Intestinal Crypt Damage and Epithelial Regeneration following T Cell-Induced Enteropathy. *Journal of Immunology* 197: 345-355.

We'd like to hear from you!
Comments or Questions – Please contact:
Immunology.communications@utoronto.ca