



A Word From The Editor...

It's beginning to look a lot like Christmas...

2021 has been interesting, to say the least. In some ways, it feels like we've been living in '2020, Part 2' (you know what they always say about sequels). At the same time, it's good to return to a semblance of normality. We're able to socialise again, and more importantly, now that travel has opened up, we can finally reunite with our families in a safe manner.

As we get ready to usher in the new year, there will be a small change to the ImmunoLogs, as we will be switching to a bi-monthly newsletter, rather than the currently monthly format. Our content will remain the same, though!

Finally, to round off, the ITRP would like to wish one and all a very Merry Christmas, and a wonderful New Year. See you all in 2022!

New Projects

Dr Chen Kaiwen has 2 new projects in the pipeline. The first studies the 'Characterisation of a novel neutrophil-mediated antimicrobial pathway involving Gasdermin D', while the second will be on 'Elucidating the mechanisms by which TNF and RIPK1 promote GSDMD activation and inflammatory disease'.

A/Prof Herbert Schwarz's new project on 'Depletion of the immune synapse for treatment of immune-mediated disease' will examine the inhibitory effect of a specific antibody on immune synapses in humanised mice.

A/Prof Veronique Angeli builds further on her expertise in LYVE1+ with her latest project on 'Intrauterine alterations of LYVE1+ macrophage in gestational diabetes mellitus'.

Dr Wilfried Moreira and Dr Benoit Malleret have been awarded funding for the 'Systematic isolation of bacteriophages from the gut microbiome: revealing and mining the global phageome' to isolate and characterise bacteriophage that target the top 100 species of the gut microbiome,

Congratulations everyone, and the Programme wishes you every success in your projects!



Upcoming Events



Tuesday | 18 January 2022 | 12-1PM
Dr Krzysztof Banas
NUSMED ITRP Seminar Series: Infrared spectroscopy and microscopy application in life science experimental approaches and reproducible data analysis



Wednesday | 26 January 2022 | 4PM-4.45PM
NUSMED ITRP Research in Progress: January 2022



Tuesday | 15 February 2022 | 12-1PM
Dr Christine Wong
NUSMED ITRP Seminar Series: February 2022



6-9 March 2022
Keystone Symposia on Molecular and Cellular Biology
OPEN FOR REGISTRATION: Innate Immune Memory: From Evolutionary Roots to Human Disease
&
Myeloid Cells: From Birth to Immunity and Disease

Programme Publications

L Poh, SM Abdul Razak, HM Lim, MKP Lai, CL-H Chen, LHK Lim, TV Arumugam, DY Fann (Aug 2021) AIM2 inflammasome mediates apoptotic and pyroptotic death in the cerebellum following chronic hypoperfusion. *Experimental Neurology*.

DOI: 10.1016/j.expneurol.2021.113856

D Banik, M Hamidinia, J Brzostek, L Wu, HM Stephens, PA MacAry, EL Reinherz, NRJ Gascoigne, and MJ Lang (Aug 2021) Single molecule force spectroscopy reveals distinctions in key biophysical parameters of $\alpha\beta$ T-cell receptors compared with chimeric antigen receptors directed at the same ligand. *Journal of Physical Chemistry Letters*

DOI: 10.1021/acs.jpcllett.1c02240

K Mulder, AA Patel, WT Kong, C Piot, E Halitzki, G Dunsmore, S Khalilnezhad, S Erdallrac, A Dubuisson, M Chevrier, XM Zhang, JKC Tam, TKH Lim, RMM Wong, R Pai, AIS Khalil, PKH Chow, SZ Wu, G Al-Eryani, D Roden, A Swarbrick, JKY Chan, S Albani, L Derosa, L Zitvogel, A Sharma, J Chen, A Silvin, A Bertolotti, C Blériot, C-A Dutertre, F Ginhoux (Aug 2021) Cross-tissue single-cell landscape of human monocytes and macrophages in health and disease. *Immunity*

DOI: 10.1016/j.immuni.2021.07.007

DH Haiyambo, L Aleksenko, D Mumbengegwi, R Bock, P Uusiku, B Malleret, L Rénia, and IK Quaye (Aug 2021) Children with Plasmodium vivax infection previously observed in Namibia, were Duffy negative and carried a c.136G > A mutation. *BMC Infectious Diseases*

DOI: 10.1186/s12879-021-06573-y

AM Banas, K Banas, TTT Chu, R Naidu, PE Hutchinson, R Agrawal, MKF Lo, M Kansiz, A Roy, R Chandramohanadas, and MBH Breese (Sep 2021) Comparing infrared spectroscopic methods for the characterization of Plasmodium falciparum-infected human erythrocytes. *Communications Chemistry*

DOI: 10.1038/s42004-021-00567-2

Y Huang, YY Soon, F Aminkeng, SH Tay, Y Ang, ACL Kee, BC Goh, ASC Wong, RA Soo (Sep 2021) Risk factors for immune-related adverse events from anti-PD-1 or anti PD-L1 treatment in an Asian cohort of non-small cell lung cancer patients. *International Journal of Cancer*

DOI: 10.1002/ijc.33822

C Blériot, E Barreby, G Dunsmore, R Ballaire, S Chakarov, X Ficht, G De Simone, F Andreatta, V Fumagalli, W Guo, G Wan, G Gessain, A Khalilnezhad, XM Zhang, N Ang, P Chen, C Morgantini, V Azzimato, WT Kong, Z Liu, R Pai, J Lum, S Foo, I Low, C Xu, B Malleret, MF Mohd Kairi, A Balachander, O Cexus, A Larbi, B Lee, EW Newell, LG Ng, WW Phoo, RM Sobota, A Sharma, SW Howland, J Chen, M Bajenoff, L Yvan-Charvet, N Venteclef, M Iannacone, M Aouadi, and F Ginhoux (Sep 2021) A subset of Kupffer cells regulates metabolism through the expression of CD36. *Immunity*

DOI: 10.1016/j.immuni.2021.08.006

A Hansakon, CW Png, Y Zhang, and P Angkasekwina (Sep 2021) Macrophage-derived osteopontin influences the amplification of Cryptococcus neoformans promoting type 2 immune response. *Journal of Immunology*

DOI: 10.4049/jimmunol.2100202

SY Chong, O Zharkova, Siti Maryam JM Yatim, X Wang, XC Lim, C Huang, CY Tan, J Jiang, L Ye, MS Tan, V Angeli, HH Versteeg, M Dewerchin, P Carmeliet, CSP Lam, MY Chan, DPV de Kleijn, and J-W Wang (Sep 2021) Tissue factor cytoplasmic domain exacerbates post-infarct left ventricular remodeling via orchestrating cardiac inflammation and angiogenesis. *Theranostics*

DOI: 10.7150/thno.63354

S Shorey, EH Kua, W Tam, V Chan, YS Goh, HM Lim, LHK Lim, CS Tian, and R Mahendran (Sep 2021) "Where-There-Is-No-Psychiatrist integrated personal therapy" among community-dwelling older adults: a randomized pilot study. *International Journal of Environmental Research and Public Health*

DOI: 10.3390/ijerph18189514

J Cui, Y Yuan, MK Shanmugam, D Anbalagan, TZ Tan, G Sethi, AP Kumar, and LHK Lim (Oct 2021) MicroRNA-196a promotes renal cancer cell migration and invasion by targeting BRAM1 to regulate SMAD and MAPK signaling pathways. *International Journal of Biological Sciences*

DOI: 10.7150/ijbs.60805

E Nickles, B Dharmadhikari, Y Li, RJ Walsh, LP Koh, M Poon, LK Tan, L-Z Wang, Y Ang, Y Asokumaran, WQ Chong, Y Huang, KS Loh, J Tay, R Soo, M Koh, LP Ho, M Chan, M Niam, M Soh, YH Luah, CM Lim, N Kaliaperumal, VB Au, N Said Nasir Talib, R Sng, JE Connolly, BC Goh, and H Schwarz (Oct 2021) Dendritic cell therapy with CD137L-DC-EBV-VAX in locally recurrent or metastatic nasopharyngeal carcinoma is safe and confers clinical benefit. *Cancer Immunology, Immunotherapy*

DOI: 10.1007/s00262-021-03075-3

P Kongsuphol, H Jia, HL Cheng, Y Gu, B Shunmuganathan, MW Chen, SM Lim, SY Ng, PA Tambyah, Haziq N, X Gao, D Tay, S Kim, R Gupta, X Qian, MM Kozma, K Purushotorman, ME McBee, PA MacAry, HD Sikes, and PR Preiser (Nov 2021) A rapid simple point-of-care assay for the detection of SARS-CoV-2 neutralizing antibodies. *Communications Medicine*
DOI: 10.1038/s43856-021-00045-9

ACY Chan, HY Wong, YF Chong, PS Lai, HL Teoh, AYY Ng, JHM Hung, YC Chan, KWP Ng, J Vijayan, JJY Ong, B Chandra, CH Tan, NH Rutt, TM Tan, NH Ismail, E Wilder-Smith, H Schwarz, H Choi, VK Sharma, A Mak (Nov 2021) Novel autoantibodies in idiopathic small fiber neuropathy. *Annals of Neurology*
DOI: 10.1002/ana.26268

M Prasad, J Brzostek, N Gautam, R Balyan, V Rybakina, NRJ Gascoigne (Nov 2021) Themis regulates metabolic signaling and effector functions in CD4+ T cells by controlling NFAT nuclear translocation. *Cellular & Molecular Immunology*
DOI: 10.1038/s41423-020-00578-4

Looking For A Job?

1) The Alonso Lab has 1 Research Fellow position available for a research project. This research endeavour aims to develop novel therapeutic options to fight EV-A71 infection. The approach consists of identifying druggable host factors that are involved in EV-A71 infection cycle. As a Research Fellow, you will validate some of the shortlisted candidates that have been identified from a siRNA screen. You will perform downstream mechanistic and efficacy studies using relevant cell lines and in vivo (mouse) model.

You should have:

a PhD in cell biology and/or virology

Strong expertise in molecular (protein; DNA/RNA) techniques (Western blots; co-IP; immunofluorescence imaging; siRNA; quantitative real-time PCR),

Expertise in mouse work would be a plus,

Hardworking, very dedicated, capable of working independently and lead a research project,

Team player; open-minded.

Interested parties can send their CV to Prof Alonso at micas@nus.edu.sg.

2) An Immunology Postdoctoral Fellowship position is available in the lab of David Wiest at Fox Chase Cancer Center, Philadelphia, USA.

The Wiest lab has a longstanding history of investigation into the molecular mechanisms controlling lymphoid development and transformation. You will be studying the molecular control of gd T cell lineage commitment and effector fate, and its implications for gd T cells in the immunotherapy of cancer. In pursuing this research, the focus will be on the role of lncRNA, using genome wide approaches.

The successful applicant will learn not only how to perform wet "omic" analysis, but also how to perform the bioinformatic analysis necessary to maximally benefit from these approaches. Experience with mouse models of cancer is advantageous.

More information about Dr Wiest's research can be found at: <https://www.foxchase.org/david-wiest>.

Please send CV and 3 references to David Wiest at: David.Wiest@FCCC.edu



**And Now
For
Something
Completely
Different...**



Do you know that every Christmas Eve, the North American Aerospace Defense Command (NORAD) adjusts its satellites to track Santa and help keep him safe on his journey?

According to Stacey Knott, NORAD's Strategic Communication Manager, it all started in the 1950s, when a newspaper accidentally printed NORAD Command Centre's phone number in an advertisement.. Later that night, a little child phoned in and asked the colonel who took the call if he was Jolly Ol' St. Nick. He then directed the staff to tell any children who called that they were tracking Santa to ensure his safety as he made his way to their homes!

Thus a tradition was born. Since then, on Christmas Eve, NORAD re-calibrates the same radars and satellites that help to defend North American airspace to follow Santa across the globe, and even has special 'Santa Cams' on landmarks such as Big Ben and the Eiffel Tower..

To get in on the fun, you can visit noradsanta.org on 24 December. Happy Santa-watching!!

#funlifactoids #holidaymagic #santayoustillowemeafewthingsfrom1988