

THE IMMUNOLOGS

A Word From The Editor...

Here we are again. Whatever you've chosen to call it-P2HA, Circuit Breaker 2.0, Phase 1.5, a *really* bad case of déjà vu-the new measures seem just that little harder to bear this time round. Sure, they aren't as restrictive as the original Circuit Breaker. We can meet in groups of 2, buy takeaways, and go shopping (though not encouraged). Still, we'd gotten used to the relative freedom of Phase 3, and not having to resort to Zoom-based parties-but it is what it is.

In the meantime, why not pick up skills in bioinformatics as applied to immunology, to enhance your research. outcomes? Or tune in to our Tuesday seminar series, where we bring you fresh speakers every month from all around the world? We could even organise a 'social' night like a movie screening! With a little creativity, anything is possible, really. And before you know it, we'll be on the other side of this.

Hang in there, everyone!

Online Courses

Virtual Course: Bioinformatics for Immunologists
Date of Course: 27 September - 01 October 2021
Register by: 13 July 2021
Cost: £200
Organisers: The European Bioinformatics Institute (EMBL-EBI)

Run jointly with Wellcome Genome Campus Advanced Courses and Scientific Conferences, this course will provide participants with an introduction to a range of bioinformatics resources and approaches applicable to immunological research. The resources introduced during the course will cover a variety of data types, from genomic and proteomic data to computational models, biological pathways, and reaction information. Participants will gain experience of the analysis pipelines for NGS experiments relevant to immunology and will be led through an exploration of this data to identify information of interest. Additionally, participants will be introduced to how data from several sources can be integrated to provide a wider view of their research, thereby enabling them to be more confident users of their own data and that from public sources.

The course is aimed at individuals working in immunology research who have minimal experience in bioinformatics. Applicants are expected to be at an early stage of using bioinformatics in their research with the need to develop their skills and knowledge further. Participants will need a basic knowledge of the Unix command line, and the R statistical package.

After this course participants should be able to:

- Locate and search publicly available bioinformatics data of interest
- Use software and tools to manipulate and analyse immunological data
- Apply appropriate bioinformatics methodologies to their research
- To combine different types of data to gain further immunological insights

The course will explore several bioinformatics resources relevant to immunology including:

- Computation approaches for flow cytometry
- Bulk and Single-cell RNA sequencing and databases of regulatory information
- Tools to extract mechanism relevant for immunology from 'Omics' data
- Approaches to analysing adaptive immune receptor repertoire
- Immunology databases
- EMBL-EBI data resources: IntAct, Reactome, BioModels

Interested? More information and application form available at <https://www.ebi.ac.uk/training/events/bioinformatics-immunologists2021/>.

Events in June



Friday | 4 June 2021 | 9AM-12PM

Department of Microbiology and Immunology, Infectious Diseases Translational Research Programme and Immunology Translational Research Programme
Department Advanced Research Technologies (DART)
Online Roadshow



Tuesday | 8 June 2021 | 12-1PM

Dr Andrea Pavesi

ITRP Seminar Series: Shaping In-vitro Solid Tumor Microenvironments Models for T Cell Therapy and Drug Discovery



Tuesday | 8 June 2021 | 3-6PM (BST)

Abcam

Immunometabolism: Fundamentals to Prospective New Therapies



Every Wednesday | June-July 2021 | 12PM (EST)
University of California, San Diego (various speakers)
Global Immunotalks 2021 Seminar Series



Wednesday | 23 June 2021 | 3-5PM (BST)

Abcam

Spotlight on immunobiology: emerging trends and hot topics



Wednesday-Saturday | 1-4 September 2021 |
European Federation of Immunological Societies
OPEN FOR REGISTRATION: 6th European Congress of Immunology

Programme Publications and Projects

Publications

JL Low, PH-N Kao, PA Tambyah, GLE Koh, H Ling, KA Kline, WS Cheow, and SSJ Leong (Dec 2020) Development of a polymer-based antimicrobial coating for efficacious urinary catheter protection. *Biotechnology Notes*
DOI: [10.1016/j.biotno.2020.12.001](https://doi.org/10.1016/j.biotno.2020.12.001)

K Luu, MV Patwardhan, Q Zeng, SL Wickström, A Lundqvist, and H Schwarz (Feb 2021) Regulatory T Cells Inhibit T Cell Activity by Downregulating CD137 Ligand via CD137 Trogocytosis. *Cells*
DOI: [10.3390/cells10020353](https://doi.org/10.3390/cells10020353)

N Yawata, M Shirane, K Woon, X Lim, H Tanaka, Y-I Kawano, M Yawata, S-P Chee, J Siak, and K-H Sonoda (Mar 2021) Molecular Signatures of Natural Killer Cells in CMV-Associated Anterior Uveitis, A New Type of CMV-Induced Disease in Immunocompetent Individuals. *Frontiers in Immunology*
DOI: [10.3390/fjms22073623](https://doi.org/10.3390/fjms22073623)

MA Suter, NY Tan, CH Thiam, M Khatoor, PA MacAry, V Angeli, S Gasser, and YL Zhang (Mar 2021) cGAS-STING cytosolic DNA sensing pathway is suppressed by JAK2-STAT3 in tumor cells. *Scientific Reports*
DOI: [10.1038/s41598-021-86644-x](https://doi.org/10.1038/s41598-021-86644-x)

C Petchakup, PE Hutchinson, HM Tay, SY Leong, KHH Li, and HW Hou (Mar 2021) Label-free quantitative lymphocyte activation profiling using microfluidic impedance cytometry. *Sensors and Actuators B: Chemical*
DOI: [10.1016/j.snb.2021.129864](https://doi.org/10.1016/j.snb.2021.129864)

D Biswas, P Ambalavanan, M Ravins, A Anand, A Sharma, KXZ Lim, RYM Tan, HY Lim, A Sol, G Bachrach, V Angeli, and E Hanski (Mar 2021) LL-37-mediated activation of host receptors is critical for defense against group A streptococcal infection. *Cell Reports*
DOI: [10.1016/j.celrep.2021.108766](https://doi.org/10.1016/j.celrep.2021.108766)

HB Low, ZL Wong, B Wu, LR Kong, CW Png, Y-L Cho, C-W Li, F Xiao, X Xin, H Yang, JM Loo, FYX Lee, IBH Tan, R DasGupta, H-M Shen, H Schwarz, NRJ Gascoigne, BC Goh, X Xu, and Y Zhang (Apr 2021) DUSP16 promotes cancer chemoresistance through regulation of mitochondria-mediated cell death. *Nature Communications*
DOI: [10.1038/s41467-021-22638-7](https://doi.org/10.1038/s41467-021-22638-7)

M Prasad, L Wojciech, J Brzostek, J Hu, YL Chua, DWH Tung, J Yap, V Rybakina, and NRJ Gascoigne (Apr 2021) Expansion of an Unusual Virtual Memory CD8+ Subpopulation Bearing V α 3.2 TCR in Themis-Deficient Mice. *Frontiers in Immunology*
DOI: [10.3389/fimmu.2021.644483](https://doi.org/10.3389/fimmu.2021.644483)

M Chandrakanthan, TQ Nguyen, Z Hasan, S Muralidharan, TM Vu, AWL Li, UTN Le, HTT Ha, S-H Baik, SH Tan, JC Foo, MR Wenk, A Cazenave-Gassiot, F Torta, WY Ong, MYY Chan, and LN Nguyen (Apr 2021) Deletion of Mfsd2b impairs thrombotic functions of platelets. *Nature Communications*
DOI: [10.1038/s41467-021-22642-x](https://doi.org/10.1038/s41467-021-22642-x)

S Wu, BHD Teo, SYK Wee, J Chen, and J Lu (May 2021) The GAR/RGG motif defines a family of nuclear alarmins. *Cell Death And Disease*
DOI: [10.1038/s41419-021-03766-w](https://doi.org/10.1038/s41419-021-03766-w)

A Rouers, R Appanna, M Chevrier, J Lum, MC Lau, L Tan, T Loy, A Tay, R Sethi, D Sathiakumar, K Kaur, J Böhme, Y-S Leo, L Renia, SW Howland, A Singhal, J Chen, and K Fink (May 2021) CD27hiCD38hi plasmablasts are activated B cells of mixed origin with distinct function. *iScience*
DOI: [10.1016/j.isci.2021.102482](https://doi.org/10.1016/j.isci.2021.102482)

New Projects

PI: A/P Herbert Schwarz

Project Title: Converting the immunoinhibitory ectopic CD137 expression in the tumor microenvironment to an immunostimulatory signal

Grant Agency: N2CR

Best wishes,

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