

SAIS NEWSLETTER – MARCH 20TH, 2020

Dear SAIS members

Please find this week's newsletter below. The next newsletter will be sent out on Friday, 3 April 2020.

FUNDING CALLS, CONFERENCES, WEBINARS and ANNOUNCEMENTS

WEBINAR. TCR-seq & BCR-seq Solutions: Applications to Clinical Research Projects - 30 March 2020, 10:00 AM PDT

<https://www.labroots.com/webinar/tcr-seq-bcr-seq-solutions-applications-clinical-projects>

BE A LEADER! ASCB seeks co-chairs for the #cellbio2020 Minisymposia to review abstracts and chair the session. Open to all ASCB Regular and Educator Members, EMBO Members, and EMBO Young Investigators. Deadline: 1 April 2020. For more information, please visit:

<https://www.ascb.org/cellbio2020/program/minisymposia/>

6th Drug-Resistant TB Conference, 3-5 April 2020, Wolfson Pavilion Lecture Theatre, Institute of Infectious Disease & Molecular Medicine (IDM), Cape Town.

Abstracts submission deadline: 23 March 2020. Submit abstracts to Lynelle Mottay - lynelle.mottay@uct.ac.za. For more information, please visit: <http://www.immunology.uct.ac.za/news/mdr-tb-conference>

Coronavirus Virtual Webinar Series - 2 April 2020, Opens: 6:00 AM PT

A novel coronavirus emerged in China in late 2019; it has been officially named by the World Health Organization (WHO) as COVID-19. LabRoots will be working to educate the community about this pathogen in an ongoing series of virtual webinars that will start on April 2, 2020. For more information please visit: <https://www.labroots.com/virtual-event/coronavirus>

Keystone Symposia Important Information - UPDATE REGARDING CORONAVIRUS:

March 6, 2020 - Given the rapidly evolving COVID-19 coronavirus outbreak, we have CANCELLED the following 2020 meetings: All North American meetings scheduled to take place during March and April, 2020, all meetings scheduled outside of North America through June 2020. For more information, please visit:

https://kestonesymposia.org/ks/Online/Important_Information_About_the_Coronavirus.aspx?_ga=2.187023392.926530012.1584422135-220957198.1573809503

Gordon Research Conferences: For a list of conferences impacted by Coronavirus, please visit:

<https://www.grc.org/coronavirus-impacted-conferences/>

PUBLICATIONS and INTERESTING READS:

STOP floxing around: Specificity and leakiness of inducible Cre/loxP systems

<https://onlinelibrary.wiley.com/doi/10.1002/eji.202048546>

Next-Generation Neuroimmunology: New Technologies to Understand Central Nervous System Autoimmunity

[https://www.cell.com/trends/immunology/fulltext/S1471-4906\(20\)30025-9](https://www.cell.com/trends/immunology/fulltext/S1471-4906(20)30025-9)

IDO Targeting in Sarcoma: Biological and Clinical Implications

<https://www.frontiersin.org/articles/10.3389/fimmu.2020.00274/full>

Infant alveolar macrophages are unable to effectively contain Mycobacterium tuberculosis

<https://www.frontiersin.org/articles/10.3389/fimmu.2020.00486/abstract>

Applicability of common inflammatory markers in diagnosing infections in early period after liver transplantation in intensive care setting

<https://www.nature.com/articles/s41598-020-60936-0>

Targeting Immunometabolism as an anti-inflammatory strategy

<https://www.nature.com/articles/s41422-020-0291-z>

What It Will Take to Achieve a World without Measles

<https://academic.oup.com/jid/advance-article/doi/10.1093/infdis/jiaa045/5782423?searchresult=1>

Immunogenicity and Immune Silence in Human Cancer

<https://www.frontiersin.org/articles/10.3389/fimmu.2020.00069/full>

Evolution and function of interleukin-4 receptor signalling in adaptive immunity and neutrophils

<https://www.nature.com/articles/s41435-020-0095-7>

The outbreak of SARS-CoV-2 pneumonia calls for viral vaccines

<https://www.nature.com/articles/s41541-020-0170-0>

Malt triose-based probes for fluorescence and photoacoustic imaging of bacterial infections

<https://www.nature.com/articles/s41467-020-14985-8>

New drugs aim to disarm the immune system's 'atomic bomb' cells

<https://www.sciencemag.org/news/2020/03/new-drugs-aim-disarm-immune-system-s-atomic-bomb-cells>

Why does the coronavirus spread so easily between people?

https://www.nature.com/articles/d41586-020-00660-x?utm_source=Nature+Briefing&utm_campaign=9dd44b4364-briefing-dy-20200309&utm_medium=email&utm_term=0_c9dfd39373-9dd44b4364-44620873

TIGIT limits immune pathology during viral infections

<https://www.nature.com/articles/s41467-020-15025-1>

Genome-based Salmonella serotyping as the new gold standard

<https://www.nature.com/articles/s41598-020-61254-1>

Second patient cured of HIV, say doctors

<https://www.bbc.com/news/health-51804454>

Link to research article: [https://www.thelancet.com/journals/lanhiv/article/PIIS2352-3018\(20\)30069-2/fulltext](https://www.thelancet.com/journals/lanhiv/article/PIIS2352-3018(20)30069-2/fulltext)

CD29 identifies IFN- γ -producing human CD8+ T cells with an increased cytotoxic potential

<https://www.pnas.org/content/early/2020/03/10/1913940117>

Identification of scavenger receptor B1 as the airway microfold cell receptor for Mycobacterium tuberculosis

<https://elifesciences.org/articles/52551>

SARS Coronavirus Redux

[https://www.cell.com/trends/immunology/fulltext/S1471-4906\(20\)30038-7](https://www.cell.com/trends/immunology/fulltext/S1471-4906(20)30038-7)

Whither Covid-19? An interview with SA's chief virus hunter

<https://www.dailymaverick.co.za/article/2020-03-12-whither-covid-19-will-south-africa-emerge-bruised-or-with-a-raging-epidemic/>

Malaria drug treats lupus and prevents diabetes

<https://www.labroots.com/trending/immunology/17002/malaria-drug-treats-lupus-prevents-diabetes>

Link to research article: <https://onlinelibrary.wiley.com/doi/abs/10.1002/acr.24147>

How artificial kidneys and miniaturized dialysis could save millions of lives

<https://www.nature.com/articles/d41586-020-00671-8>

Treating sickle cell anemia

<https://science.sciencemag.org/content/367/6483/1198>

Absence of MHC class II on cDC1 dendritic cells triggers fatal autoimmunity to a cross-presented self-antigen

<https://immunology.sciencemag.org/content/5/45/eaba1896>

Visualizing the History of Pandemics

<https://www.visualcapitalist.com/history-of-pandemics-deadliest/>

Coronavirus (COVID-19) infection and pregnancy

<https://www.rcog.org.uk/coronavirus-pregnancy>

Why do dozens of diseases wax and wane with the seasons—and will COVID-19?

<https://www.sciencemag.org/news/2020/03/why-do-dozens-diseases-wax-and-wane-seasons-and-will-covid-19>

Monkeys Develop Protective Antibodies to SARS-CoV-2

<https://www.the-scientist.com/news-opinion/monkeys-develop-protective-antibodies-to-sars-cov-2-67281>

RGS4 promotes allergen- and aspirin-associated airway hyper-responsiveness by inhibiting PGE2 biosynthesis

[https://www.jacionline.org/article/S0091-6749\(20\)30372-9/abstract](https://www.jacionline.org/article/S0091-6749(20)30372-9/abstract)

'A ticking time bomb': Scientists worry about coronavirus spread in Africa

<https://www.sciencemag.org/news/2020/03/ticking-time-bomb-scientists-worry-about-coronavirus-spread-africa>



JOBS and POSITIONS

POSTDOCTORAL RESEARCH FELLOWSHIP - The Hatter Institute for Cardiovascular Research in Africa (HICRA), Faculty of Health Sciences (FHS), UCT.

We particularly seek applications from demographic groups under-represented in South Africa. Applicants should submit their CV and 1-2 page motivation to Proof Karen Slaw (karen.sliwahahnle@uct.ac.za) with cc to Maggie Grootboom (maggie.grootboom@uct.ac.za), Tel: 021 406 6358. Application deadline 11 March 2020

<https://www.linkedin.com/feed/update/urn:li:activity:6642701808835928064/>



UNIVERSITY OF THE
WITWATERSRAND
JOHANNESBURG



NATIONAL INSTITUTE FOR
COMMUNICABLE DISEASES
Division of the National Health Laboratory Service

Centre for HIV and Sexually Transmitted Infections
1 Modderfontein Road, Sandringham, 2031
Tel: +27 11 386 6408

Date: 24 February 2020

PhD Student Position

The Centre for HIV and STIs (CHIVSTI) at the National Institute for Communicable Diseases (NICD) has a strong research track record in various HIV disciplines and provides a suitable academic environment for successful supervision of postgraduate students. The Cell Biology Section has an opportunity for a student interested in pursuing a PhD degree by research to join the department. The candidate will be registered with the University of the Witwatersrand. The candidate's research focus will explore innate immunological mechanisms of control, factors behind inflammatory phenotype and metabolic signatures in individuals with spontaneous HIV control. The studies will provide a basis to harness anti-innate immune responses for cure interventions.

The candidate's research will be funded through the European & Developing Countries Clinical Trials Partnership (EDCTP) and locally through the National Research Foundation. Interested applicants must be South African citizens, hold a Master's degree in Biomedical/Biological Sciences, have excellent academic record and organizational skills and be available to work full-time in the laboratory on the project for a duration of 3 years. Prior experience on tissue culture and Flow cytometry will be an advantage. To apply, please forward a complete CV with contact details (telephone number and email address) of at least two referees who can comment on your academic potential, one page cover letter outlining research interests and academic record to: Ms Faaiza Laher (Faaizal@nicd.ac.za) with a copy to Dr Christina Thobakgale (christina.thobakgale@wits.ac.za). **The closing date is 27 March 2020.**

**MSc Student**

Based at Centre for Vaccines and Immunology, NICD
1 Modderfontein Rd, Sandringham

Background

The Centre for Vaccines and Immunology comprises the National and World Health Organisation Regional Reference Laboratories for acute flaccid paralysis as well as measles and rubella surveillance. Additionally, the centre conducts projects on viral hepatitis, Tuberculosis and other vaccine preventable diseases. Our research focus is immune tolerance and its application to infectious diseases such as Tuberculosis and HIV. A key project is the role of Indoleamine 2,3 dioxygenase as a TB biomarker.

Using enzymatic activity on peripheral blood, we have shown that IDO activity is elevated during active Tuberculosis ¹. The use of sputum as a sample type due to infection control issues when patients are required to cough into specimen bottles. While peripheral blood is preferable, this sample type still requires trained health professionals for phlebotomy and is problematic in children. Dried blood spots are already in use for other diagnostic assays such as HIV and would be preferred, but have not been evaluated for IDO measurement.

In this project, we aim to correlate IDO mRNA expression levels by real-time PCR with IDO activity levels measured by ELISA. We will further investigate whether IDO PCR can differentiate patients with active TB to patients without active TB.

A further aim is to investigate the use of dried blood spot cards for determination of IDO activity in healthy individuals. Here, we will evaluate dried blood spots as a sample type for determination of IDO enzyme activity.

Qualifications and experience

BSc (honours) in immunology or related discipline. Preferred skills: real-time PCR, ELISA, cell culture. Interested applicants should be situated in South Africa and able to register with the university in May 2020.

Please email CV to Dr Heena Ranchod by 31 March 2020

heenar@nicd.ac.za

Please don't forget to send me any info you may have on funding opportunities, meetings, workshops and/or conferences, so I can post it on the SAIS LinkedIn page. Additionally, if you are recruiting/hiring, I am more than happy to advertise it on LinkedIn and in the newsletter.

Thank you.

Kind regards

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