

SAIS NEWSLETTER - NOVEMBER 8th, 2019

Dear SAIS members,

Below, please find this week's newsletter. Please note that the next newsletter will be sent on Friday, the 1st of November.

FUNDING CALLS, CONFERENCES, WEBINARS and ANNOUNCEMENTS

The 23rd International AIDS Conference (AIDS 2020) - 6-10 July 2020 - SF, CA, USA - submission now open
Programme submissions are now open, including abstracts, the Global Village and Youth Programme, pre-conferences and more. Early bird registration closes on January 15, 2020. <https://www.aids2020.org/abstract-submission-guidelines/>.

Challenges and Innovative Approaches to Discover and Develop New Antibacterial Agents - Gordon Research Conference - February 29 - March 1, 2020 - Lucca (Barga), Italy
Applications for this meeting must be submitted by February 1, 2020; any applicants who wish to be considered for an oral presentation should submit their application by **November 29, 2019**. For more information: <https://www.grc.org/new-antibacterial-discovery-and-development-grs-conference/2020/>.

Host-Pathogen Interactions and Novel Therapies for Acute Respiratory Infections – Gordon Research Conference - February 16 - 21, 2020 - Galveston, TX, US
Applications for this meeting must be submitted by January 19, 2020. For more information and registration, please visit <https://www.grc.org/biology-of-acute-respiratory-infection-conference/2020/>.

PUBLICATIONS and INTERESTING READS:

Plasmodium secretion induces hepatocyte lysosome exocytosis and promotes parasite entry
[https://www.cell.com/iscience/fulltext/S2589-0042\(19\)30435-3](https://www.cell.com/iscience/fulltext/S2589-0042(19)30435-3).

Increased mosquito midgut infection by dengue virus recruitment of plasmin is blocked by an endogenous Kazal-type inhibitor
[https://www.cell.com/iscience/fulltext/S2589-0042\(19\)30437-7](https://www.cell.com/iscience/fulltext/S2589-0042(19)30437-7).

Transplanting organs from pigs to humans
<https://immunology.sciencemag.org/content/4/41/eaau6298>.

Transcriptomics and proteomics reveal two waves of translational repression during the maturation of malaria parasite sporozoites
<https://www.nature.com/articles/s41467-019-12936-6>.

Repurposing rotavirus vaccines for intratumoral immunotherapy can overcome resistance to immune checkpoint blockade
<https://stm.sciencemag.org/content/11/515/eaat5025>.

Transient protein accumulation at the center of the T cell antigen-presenting cell interface drives efficient IL-2 secretion

<https://elifesciences.org/articles/45789>.

How the after-effects of measles could be even more serious than previously thought

Simply a childhood illness? New research suggests that childhood measles could weaken our body's existing immune response to other diseases, leaving us vulnerable to infections. <https://www.health24.com/Medical/Childhood-diseases/Measles/how-the-after-effects-of-measles-could-be-even-more-serious-than-previously-thought-20191104>.

Mouse gut bacteria cure rotavirus infection, pointing to treatment for humans

<http://blog.pnas.org/2019/10/mouse-gut-bacteria-cure-rotavirus-infection-pointing-to-treatment-for-humans/>.

A transient wave of hematopoietic stem cell production discovered in late fetuses and young adults

<https://www.hubrecht.eu/a-transient-wave-of-hematopoietic-stem-cell-production-discovered-in-late-fetuses-and-young-adults/>.

Quantification of HIV-2 DNA in Whole Blood

<https://bio-protocol.org/e3404>.

Transcriptional Basis of Mouse and Human Dendritic Cell Heterogeneity

[https://www.cell.com/cell/fulltext/S0092-8674\(19\)31116-X](https://www.cell.com/cell/fulltext/S0092-8674(19)31116-X).

Risk assessment of Ebola virus disease spreading in Uganda using a two-layer temporal network

<https://www.nature.com/articles/s41598-019-52501-1>.

Scientists discover first new HIV strain in nearly two decades

<https://edition.cnn.com/2019/11/06/health/hiv-new-strain-discovered/index.html?no-st=1573193072>.



JOBS and POSITIONS



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 Tuberculosis¹. 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.

Please email CV to Dr Heena Ranchod by **15 November 2019**
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.

Kind regards

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