

## SAIS NEWSLETTER – MARCH 6<sup>TH</sup>, 2020

Dear SAIS members

Please find this week's newsletter below. The next newsletter will be sent out on Friday, 20 March 2020.

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### FUNDING CALLS, CONFERENCES, WEBINARS and ANNOUNCEMENTS

#### **WEBINAR: Investigation of NK cell-driven tumor immunity using novel image cytometry detection method, 31 March 2020, 7:00 AM PDT.**

For more information, please visit:

<https://www.labroots.com/webinar/investigation-nk-cell-driven-tumor-immunity-using-novel-image-cytometry-detection-method>

#### **NRF one call for proposals 2020**

The NRF One Call for Proposals 2020 is open. This call consists of many funding programmes including postgraduate bursaries and postdoctoral fellowships. Please see the list below:

All Framework and Funding and Application Guide documents are available on the NRF website at <https://www.nrf.ac.za/funding/framework-documents>.

Applications must be submitted to the NRF by the Institutional closing dates - please contact your institution representative for internal date.

Applications must be submitted electronically on the NRF Online Submission System at <https://nrfsubmission.nrf.ac.za>.

#### **INTRODUCTION TO BIOSTATISTICS: A SHORT COURSE - 31 March – 3 April 2020, SAMRC Durban**

The Biostatistics Unit (BU) of the South African Medical Research Council (SAMRC) will offer a four-day course in basic biostatistics. The course will cover principles and concepts of statistical methods that are generally used and applied in the wider field of biomedical research including public health, epidemiology and clinical science. RSVP: 13 March 2020. To register please visit: <https://samrc-redcap.mrc.ac.za/surveys/index.php?s=YHRRCFR8YH>

#### **REMINDER: FOCIS 2020 - 23-26 June 2020, San Francisco Marriott Marquis, California, USA.**

Through the FOCIS Annual Meeting, researchers and clinicians share knowledge across traditional disease borders, and identify commonalities between treatments and therapies that are life changing for those affected with immune-mediated diseases. Abstract submission, meeting registration and hotel reservations are now open! For more information, please visit: [http://www.focisnet.org/meetings/focis-2020/?utm\\_source=Email&utm\\_medium=link&utm\\_campaign=Promotion](http://www.focisnet.org/meetings/focis-2020/?utm_source=Email&utm_medium=link&utm_campaign=Promotion):

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### PUBLICATIONS and INTERESTING READS:

#### **New insight into mumps, flu and RSV**

Discovery could give insight into coronavirus, which has similar features and functions.

<https://news.northwestern.edu/stories/2020/02/key-atomic-structures-mapped-in-measles-mumps-flu-and-rsv/>

**Targeting turncoat immune cells to treat cancer**

<https://www.ludwigcancerresearch.org/news-releases/targeting-turncoat-immune-cells-to-treat-cancer/>

**Effect of bisphenol A on human neutrophils immunophenotype**

<https://www.nature.com/articles/s41598-020-59753-2>

**An analytically and diagnostically sensitive RNA extraction and RTqPCR protocol for peripheral blood mononuclear cells**

<https://www.frontiersin.org/articles/10.3389/fimmu.2020.00402/abstract>

**Multiplex screening assay for identifying cytotoxic CD8+ T cell epitopes**

<https://www.frontiersin.org/articles/10.3389/fimmu.2020.00400/abstract>

**Artificial intelligence yields new antibiotic**

<http://news.mit.edu/2020/artificial-intelligence-identifies-new-antibiotic-0220>

<https://www.labroots.com/trending/drug-discovery-and-development/16871/antibiotics-found-using-ai-technology>

**Both IDO1 and TDO contribute to the malignancy of gliomas via the Kyn–AhR–AQP4 signaling pathway**

<https://www.nature.com/articles/s41392-019-0103-4>

**Switching off DNA repair—how colorectal cancer evades targeted therapies through adaptive mutability**

<https://www.nature.com/articles/s41392-020-0120-3>

**Primary and secondary anti-viral response captured by the dynamics and phenotype of individual T cell clones**

<https://elifesciences.org/articles/53704>

**How COVID-19 Is Spread**

<https://www.the-scientist.com/news-opinion/how-covid-19-is-spread-67143>

**Scientists may have a way to let preemies breath easier - Insulin-like Growth Factor 1 Supports a Pulmonary Niche that Promotes Type 3 Innate Lymphoid Cell Development in Newborn Lungs**

<https://m.medicalxpress.com/news/2020-02-scientists-preemies-easier.html>

**The behavioral, cellular and immune mediators of HIV-1 acquisition: New insights from population genetics**

<https://www.nature.com/articles/s41598-020-59256-0>

**A universal reporter cell line for bioactivity evaluation of engineered cytokine products**

<https://www.nature.com/articles/s41598-020-60182-4>

**Matrix metalloproteinases and tissue inhibitor of metalloproteinases are potential biomarkers of pulmonary and extra-pulmonary tuberculosis**

<https://www.frontiersin.org/articles/10.3389/fimmu.2020.00419/abstract>

**Anti-PD-1 immunotherapy leads to tuberculosis reactivation via dysregulation of TNF- $\alpha$**

<https://elifesciences.org/articles/52668>

**Women in immunology: 2020 and beyond**

<https://www.nature.com/articles/s41590-020-0618-4>

**Leucine-rich alpha 2 glycoprotein is a new marker for active disease of tuberculosis**

<https://www.nature.com/articles/s41598-020-60450-3>

**Novel pathways of HIV latency reactivation revealed by integrated analysis of transcriptome and target profile of bryostatin**

<https://www.nature.com/articles/s41598-020-60614-1>

**Better Epitope Discovery, Precision Immune Engineering and Accelerated Vaccine Design Using Immunoinformatics Tools**

<https://www.frontiersin.org/articles/10.3389/fimmu.2020.00442/abstract>

**Extracellular Vesicles as Mediators of Cellular Crosstalk Between Immune System and Kidney Graft**

<https://www.frontiersin.org/articles/10.3389/fimmu.2020.00074/full>

**Vaccination Against Tuberculosis: Revamping BCG by Molecular Genetics Guided by Immunology**

<https://www.frontiersin.org/articles/10.3389/fimmu.2020.00316/full>

**Mass cytometry reveals cellular fingerprint associated with IgE+ peanut tolerance and allergy in early life**

<https://www.nature.com/articles/s41467-020-14919-4>

**CRISPR-engineered T cells in patients with refractory cancer**

<https://science.sciencemag.org/content/367/6481/eaba7365>

**Singapore claims first use of antibody test to track coronavirus infections**

[https://www.sciencemag.org/news/2020/02/singapore-claims-first-use-antibody-test-track-coronavirus-infections?utm\\_campaign=news\\_daily\\_2020-02-27&et rid=643223756&et\\_cid=3224015](https://www.sciencemag.org/news/2020/02/singapore-claims-first-use-antibody-test-track-coronavirus-infections?utm_campaign=news_daily_2020-02-27&et rid=643223756&et_cid=3224015)

**Multiplexed Proteomic Analysis for Diagnosis and Screening of Five Primary Immunodeficiency Disorders from Dried Blood Spots**

<https://www.frontiersin.org/articles/10.3389/fimmu.2020.00464/abstract>

**Myeloid Cell-Mediated Trained Innate Immunity in Mucosal AIDS Vaccine Development**

<https://www.frontiersin.org/articles/10.3389/fimmu.2020.00315/full>

**Gradient acoustic focusing of sub-micron particles for separation of bacteria from blood lysate**

<https://www.nature.com/articles/s41598-020-60338-2>

**Genetic and pharmacological inhibition of inflammasomes reduces the survival of Mycobacterium tuberculosis strains in macrophages**

<https://www.nature.com/articles/s41598-020-60560-y>

**PAX1 is essential for development and function of the human thymus**

<https://immunology.sciencemag.org/content/5/44/eaax1036>

**B cells control lupus autoimmunity by inhibiting Th17 and promoting Th22 cells**

<https://www.nature.com/articles/s41419-020-2362-y>

**Evaluation of the efficiency of dried blood spot-based measurement of hepatitis B and hepatitis C virus seromarkers**

<https://www.nature.com/articles/s41598-020-60703-1>

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## JOBS and POSITIONS

### **CSIRO Postdoctoral Fellowship in Allergen detection using on-the-spot diagnostics**

This project will couple advanced proteomics, novel protein-bioconjugation and biosensing to develop significantly improved antibody-based diagnostics for the detection of food allergens. Applications close 19 March 2020, 11:00 pm AEST/AEDT. For more information, please visit:

<https://jobs.csiro.au/job/Brisbane,-QLD-ResearchPlus-CSIRO-Postdoctoral-Fellowship-in-Allergen-detection-using-on-the-spot->

[diagnostics/631722300/?from=email&refid=5625323000&utm\\_source=J2WEmail&source=2&eid=17800-202037211237-11748019300&locale=en\\_GB](https://jobs.csiro.au/job/Brisbane,-QLD-ResearchPlus-CSIRO-Postdoctoral-Fellowship-in-Allergen-detection-using-on-the-spot-diagnostics/631722300/?from=email&refid=5625323000&utm_source=J2WEmail&source=2&eid=17800-202037211237-11748019300&locale=en_GB)

[http://www.csiro.au/~media/Positions/2020/Agriculture-and-Food/64549\\_Post\\_Doc\\_Allergen\\_Detection\\_using\\_diagnostics.docx](http://www.csiro.au/~media/Positions/2020/Agriculture-and-Food/64549_Post_Doc_Allergen_Detection_using_diagnostics.docx)

		<b>Centre for HIV and Sexually Transmitted Infections</b> 1 Modderfontein Road, Sandringham, 2031 Tel: +27 11 386 6408
<p>Date: 24 February 2020</p>		
<p><b>PhD Student Position</b></p>		
<p>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.</p>		
<p>The candidate's research will be funded through the European &amp; 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 (<a href="mailto:Faaizal@nicd.ac.za">Faaizal@nicd.ac.za</a>) with a copy to Dr Christina Thobakgale (<a href="mailto:christina.thobakgale@wits.ac.za">christina.thobakgale@wits.ac.za</a>). <b>The closing date is 27 March 2020.</b></p>		

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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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