

## SAIS NEWSLETTER – APRIL 3<sup>TH</sup>, 2020

Dear SAIS members

Please find this week's newsletter below. The next newsletter will be sent out on Friday, 17 April 2020.

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### **FUNDING CALLS, CONFERENCES, WEBINARS and ANNOUNCEMENTS**

#### **Free lists of grants and fellowships around the world available online**

Three searchable databases provide information on global opportunities for graduate students, postdocs and junior faculty members.

<https://www.nature.com/articles/d41586-020-00599-z>

#### **Investigation of NK cell-driven tumor immunity using novel image cytometry detection method**

##### **- Labroots webinar - March 31, 2020 7:00 AM PDT**

To register, please visit: <https://www.labroots.com/ms/webinar/investigation-nk-cell-driven-tumor-immunity-using-novel-image-cytometry-detection-method>

#### **The Lancet Voice - Pregnancy and COVID-19**

<https://www.buzzsprout.com/861868/3118315>

#### **EXTENSION OF NRF closing dates from March to 17 April 2020**

For more information on extension of dates, please see attached document

#### **Crucial Applications of Single Cell Gene Expression and Immune Profiling for Infectious Disease Research**

##### **- webinar - April 7 2:30 - 4:00 PM, Eastern Standard Time**

For more information and to register, please visit: <https://www.the-scientist.com/sponsored-webinars/covid-19-10x-67252>

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### **PUBLICATIONS and INTERESTING READS:**

#### **Rare genetic variants in interleukin-37 link this anti-inflammatory cytokine to the pathogenesis and treatment of gout**

<https://ard.bmj.com/content/early/2020/02/28/annrheumdis-2019-216233>

#### **A phase 1b randomized study of the safety and immunological responses to vaccination with H4:IC31, H56:IC31, and BCG revaccination in Mycobacterium tuberculosis-uninfected adolescents in Cape Town, South Africa**

[https://www.thelancet.com/journals/eclinm/article/PIIS2589-5370\(20\)30057-2/fulltext](https://www.thelancet.com/journals/eclinm/article/PIIS2589-5370(20)30057-2/fulltext)

#### **Virus Outbreak Data Network (VODAN)**

<https://www.go-fair.org/implementation-networks/overview/vodan/>

#### **A human monoclonal antibody blocking SARS-CoV-2 infection**

<https://www.biorxiv.org/content/10.1101/2020.03.11.987958v1>

**Coronapod: “Test, test, test!”**

If testing and contact tracing are key to controlling the coronavirus outbreak, why aren't they being done around the world?

<https://www.nature.com/articles/d41586-020-00864-1>

**The naive T-cell receptor repertoire has an extremely broad distribution of clone sizes**

<https://elifesciences.org/articles/49900>

**Impaired proteolysis by SPPL2a causes CD74 fragment accumulation that can be recognized by anti-CD74 autoantibodies in human ankylosing spondylitis**

<https://onlinelibrary.wiley.com/doi/abs/10.1002/eji.201948502>

**Single-Cell Approaches to Profile the Response to Immune Checkpoint Inhibitors**

<https://www.frontiersin.org/articles/10.3389/fimmu.2020.00490/full>

**The Impact of Type 1 Interferons on Alveolar Macrophage Tolerance and Implications for Host Susceptibility to Secondary Bacterial Pneumonia**

<https://www.frontiersin.org/articles/10.3389/fimmu.2020.00495/full>

**Interleukin-2 druggability is modulated by global conformational transitions controlled by a helical capping switch**

<https://www.pnas.org/content/early/2020/03/16/2000419117>

**IL-4 induces M2 macrophages to produce sustained analgesia via opioids**

<https://insight.jci.org/articles/view/133093>

**Dr Jekyll and Mr Hyde - Enzyme targeted by TB antibiotic later stops the drug destroying it**

[https://www.crick.ac.uk/news/2020-03-16\\_dr-jekyll-and-mr-hyde-enzyme-targeted-by-tb-antibiotic-later-stops-the-drug-destroying-it](https://www.crick.ac.uk/news/2020-03-16_dr-jekyll-and-mr-hyde-enzyme-targeted-by-tb-antibiotic-later-stops-the-drug-destroying-it)

**Artificial sugar-binding protein may inhibit cell growth**

Blocking sugar structures on viruses and tumor cells

<https://www.tum.de/nc/en/about-tum/news/press-releases/details/35948/>

**A Trial of Lopinavir–Ritonavir in Adults Hospitalized with Severe Covid-19**

<https://www.nejm.org/doi/full/10.1056/NEJMoa2001282>

**Designing a Coronavirus Vaccine**

Researchers prepare for next year and beyond.

<https://hms.harvard.edu/news/designing-coronavirus-vaccine>

**Coronavirus origins: genome analysis suggests two viruses may have combined**

<https://www.weforum.org/agenda/2020/03/coronavirus-origins-genome-analysis-covid19-data-science-bats-pangolins>

**Portable AI Device Turns Coughing Sounds Into Health Data for Flu Forecasting**

<https://www.umass.edu/newsoffice/article/portable-ai-device-turns-coughing-sounds>

**Graphite nanoplatelets prevent infections**

<http://www.chalmers.se/en/departments/bio/news/Pages/Graphite-nanoplatelets-on-medical-devices-prevent-infections-.aspx>

**Active or latent tuberculosis increases susceptibility to COVID-19 and disease severity**

<https://www.medrxiv.org/content/10.1101/2020.03.10.20033795v1>

**How blood from coronavirus survivors might save lives**

<https://www.nature.com/articles/d41586-020-00895-8>

**COVID-19 infection: the perspectives on immune responses**

<https://www.nature.com/articles/s41418-020-0530-3>

**Mononuclear Phagocyte Activation Is Associated With the Immunopathology of Psoriasis**

<https://www.frontiersin.org/articles/10.3389/fimmu.2020.00478/full>

**Myeloid-Derived Suppressor Cells as Target of Phosphodiesterase-5 Inhibitors in Host-Directed Therapeutics for Tuberculosis**

<https://www.frontiersin.org/articles/10.3389/fimmu.2020.00451/full>

**Too much salt weakens the immune system**

<https://www.uni-bonn.de/news/076-2020>

**A Large Cavity is Discovered in a Tuberculosis Protein**

<https://www.labroots.com/trending/cell-and-molecular-biology/17167/cavity-discovered-tuberculosis-protein>

Link to research article: <https://www.nature.com/articles/s41586-020-2072-8>

**Should scientists infect healthy people with the coronavirus to test vaccines?**

<https://www.nature.com/articles/d41586-020-00927-3>

**Hepatitis B Core Antigen Impairs the Polarization While Promoting the Production of Inflammatory Cytokines of M2 Macrophages via the TLR2 Pathway**

<https://www.frontiersin.org/articles/10.3389/fimmu.2020.00535/full>

**Can a century-old TB vaccine steel the immune system against the new coronavirus?**

<https://www.sciencemag.org/news/2020/03/can-century-old-tb-vaccine-steel-immune-system-against-new-coronavirus>

**Rejuvenating conventional dendritic cells and T follicular helper cell formation after vaccination**

<https://elifesciences.org/articles/52473>

**Coronaviruses 101: Focus on Molecular Virology - informative video**

[https://www.youtube.com/watch?feature=emb\\_title&v=8\\_bOhZd6ieM&time\\_continue=11&app=desktop](https://www.youtube.com/watch?feature=emb_title&v=8_bOhZd6ieM&time_continue=11&app=desktop)

**The effect of human mobility and control measures on the COVID-19 epidemic in China**

<https://science.sciencemag.org/content/early/2020/03/25/science.abb4218>

**Arming Africa with science against COVID-19**

<https://sciamag.com/2020/03/30/arming-africa-with-science-against-covid-19/>

**Coronavirus: The Hammer and the Dance**

<https://medium.com/@tomaspuoyo/coronavirus-the-hammer-and-the-dance-be9337092b56>

**eLife and COVID-19: Keeping communications open with online research talks**

<https://elifesciences.org/inside-elifesciences/1a9d9c08/elifesciences-and-covid-19-keeping-communications-open-with-online-research-talks>

**Seek, Test, Treat**

**In nations with limited lab capacity, physicians turn to new point-of-care rapid COVID-19 tests.**

<https://hms.harvard.edu/news/seek-test-treat>

**Loss of testosterone impairs anti-tumor neutrophil function**

<https://www.nature.com/articles/s41467-020-15397-4>

**HIV hides in platelets**

<https://www.nature.com/articles/s41579-020-0363-6>

**Structural basis for the recognition of SARS-CoV-2 by full-length human ACE2**

<https://science.sciencemag.org/content/367/6485/1444>

**More on Chloroquine/Azithromycin. And On Dr Raoult.**

<https://blogs.sciencemag.org/pipeline/archives/2020/03/29/more-on-chloroquine-azithromycin-and-on-dr-raoult>

**'We need to be alert': Scientists fear second coronavirus wave as China's lockdowns ease**

**Other countries on lockdown will be watching for a resurgence of infections in Hubei province now that travel restrictions are lifting.**

<https://www.nature.com/articles/d41586-020-00938-0>

**Suppressing early information on COVID-19 and other health scares can aid misinformation**

<https://www.nature.com/articles/d41586-020-00920-w>

**Can a Paper-Based Device Trace COVID-19 Sources with Wastewater-Based Epidemiology?**

<https://pubs.acs.org/doi/abs/10.1021/acs.est.0c01174>

**A new mechanism triggering cell death and inflammation: a left turn that kills**

<https://portal.uni-koeln.de/en/universitaet/aktuell/press-releases/single-news/a-new-mechanism-triggering-cell-death-and-inflammation-a-left-turn-that-kills>

**New clinical trials underway to evaluate antiviral drug as treatment for COVID-19**

<https://hms.harvard.edu/news/quick-study>

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

[https://www.cell.com/trends/immunology/fulltext/S1471-4906\(20\)30025-9?dgcid=raven\\_jbs\\_etoc\\_email](https://www.cell.com/trends/immunology/fulltext/S1471-4906(20)30025-9?dgcid=raven_jbs_etoc_email)

**How Does the Coronavirus Behave Inside a Patient?**

We've counted the viral spread across peoples; now we need to count it within people.

<https://www.newyorker.com/magazine/2020/04/06/how-does-the-coronavirus-behave-inside-a-patient>



### **HIV Researcher Gita Ramjee Dies of Complications Tied to COVID-19**

The South African scientist fought for women's access to healthcare in disadvantaged communities.  
<https://www.the-scientist.com/news-opinion/hiv-researcher-gita-ramjee-dies-67365>

### **US Selects Two COVID-19 Vaccine Candidates for Huge Investments**

<https://www.the-scientist.com/news-opinion/us-selects-two-covid-19-vaccine-candidates-for-huge-investments--67367>

### **Blocking the Iron Transport Could Stop Tuberculosis**

The bacteria that cause tuberculosis need iron to survive. Researchers at the University of Zurich have now solved the first detailed structure of the transport protein responsible for the iron supply. When the iron transport into the bacteria is inhibited, the pathogen can no longer grow. This opens novel ways to develop targeted tuberculosis drugs.

<https://www.media.uzh.ch/en/Press-Releases/2020/Tuberculosis.html>

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## **JOBS and POSITIONS**

### **WELLCOME CENTRE FOR INFECTIOUS DISEASES RESEARCH IN AFRICA - 2 x 2-year Postdoctoral fellowships**

The University of Cape Town's Wellcome Centre for Infectious Diseases Research in Africa (CIDRI-Africa) invites applications for Postdoctoral Fellowships in the area of Infectious Diseases. Applicants should submit a research proposal developed with a Principal or Contributing Investigator of CIDRI-Africa as their supervisor. Applications close **31 March 2020**

For more information, please visit: <http://www.immunology.uct.ac.za/news/cidri-africa-2-postdoctoral-fellowships>

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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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