



SOUTH AFRICAN IMMUNOLOGY SOCIETY

# NEWSLETTER

29 April 2022

Dear SAIS Members

Welcome to our newly-designed SAIS Newsletter! We are pleased to announce that from this April, SAIS Newsletters will be published on the last Friday of each month. Each edition will feature an **African SuperScientist in Immunology**. We will dive into the life and Immunology Careers of our SuperScientist in a published interview. Additionally, we will bring you a featured column called the "Disease of the Month." Our SAIS Community corner will continue to highlight game-changing publications from SAIS members and networks. We encourage all SAIS members to send us their publications by copying the citation. We are more than happy to advertise all programs from our SAIS networks and corporate in the Newsletter. Please follow us on our social media platforms for more daily and weekly updates on the SAIS conferences and webinars. We welcome into the Newsletter editorial team **Sashkia Balla (aka Sash)**. Sash, we are excited to have you here!

## FUNDING CALLS, CONFERENCES, WEBINARS & ANNOUNCEMENTS

**South African Immunology Society** presents *An African Based Immunology Seminar Series*

For more information, please visit: <https://www.saimmunology.org.za/webinars.html>



Dr Obinna Ubah will talk about exploiting the uniqueness of soloMER™ technology for the development of next-generation, super-potent drug modalities for chronic autoimmune inflammation diseases, and beyond.



**Upcoming Keystone Conference: Cancer Neoantigens, Vaccines and Viruses**

For more information, please visit: <https://tks.keystonesymposia.org/index.cfm?e=Web.Meeting.Flyer&MeetingID=2006>

8 - 12 June 2022

### CANCER NEOANTIGENS, VACCINES AND VIRUSES



**7th SA TB Conference.** To register: <https://foundation.eventsair.com/7tb-conference-2022/delegate-registration/Site/Register>

For more information, please contact: [info@tbconference.co.za](mailto:info@tbconference.co.za)

7th SA  
**TB**  
Conference  
13 - 16 September 2022

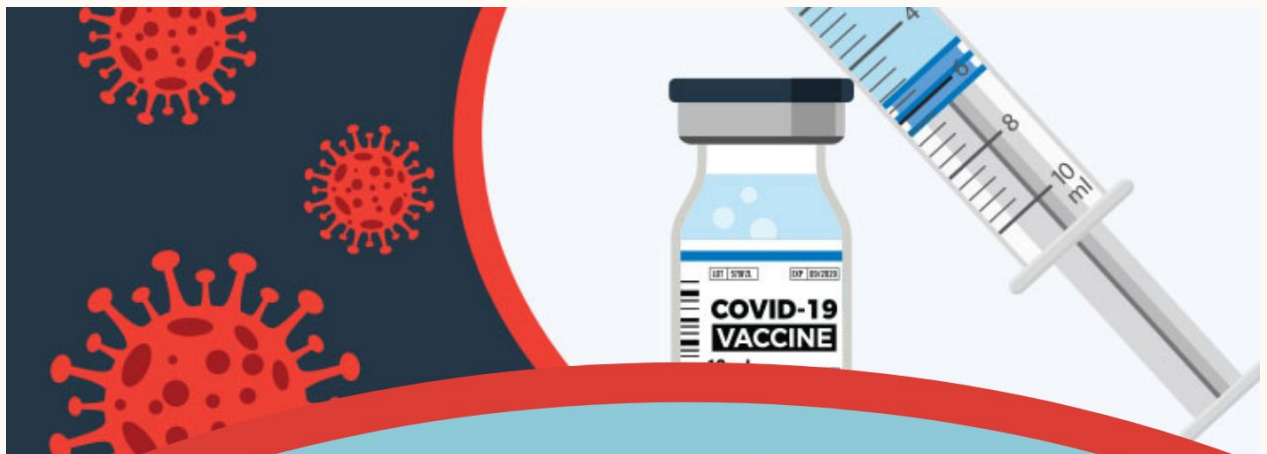


## Working together to get TB control back on track

13 - 16 September 2022

Durban ICC International Convention Centre





# 29 April 2022 International Day of Immunology

COVID-19 Vaccines:  
Answers to the  
questions you always  
wanted to ask

14:00-15:15

Special guest speaker:  
Dr Nyaradzo Chigorimbo-Tsikiwa



Live Q&A Session:  
Dr Jinal Bhiman



The program will include a welcome message from SAIS president, Prof Theresa Rossouw, followed by a very exciting talk on COVID-19 vaccines by Dr Nyaradzo Chigorimbo-Tsikiwa.

A live Q&A session with three top biology students, moderated by Dr Jinal Bhiman, will follow.

Attendees will also have the chance to ask questions.

Don't miss this opportunity to have all your questions answered!

[https://us02web.zoom.us/webinar/register/WN\\_HYtebK0BSk2HuckvdorGBq](https://us02web.zoom.us/webinar/register/WN_HYtebK0BSk2HuckvdorGBq)

Alternatively, follow the registration link in the email or on our social media pages.



**11<sup>th</sup> IDA Symposium: 5-10 September 2022**  
**Flow Workshop: 12-16 September 2022**

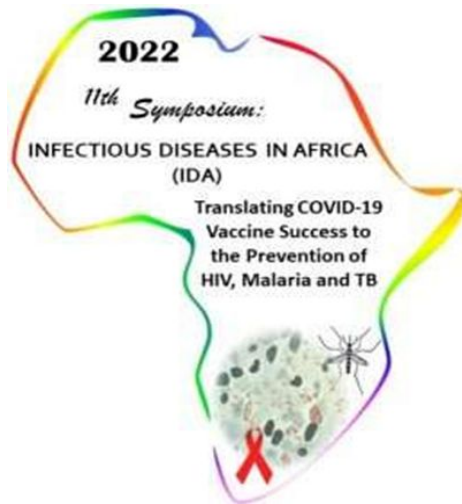
**Important Information:**

- Participants will be accepted based on the scientific merit of their submitted abstracts
- Participants will be accepted from African countries
- Participants will be required to complete an Immunology Pre-Course on [www.immunopaedia.org.za](http://www.immunopaedia.org.za)
- A full scholarship (travel and accommodation) will be awarded to selected African applicants to attend the 11<sup>th</sup> IDA symposium or the Flow Cytometry workshop or BOTH.

**Abstract submission deadline:** 17 June 2022

For more information and registration please visit

<https://www.immunopaedia.org.za/course-registrations/11th-ida-symposium/>



The Union

**WORLD CONFERENCE  
ON LUNG HEALTH 2022**

COMBATING PANDEMICS:  
TODAY & TOMORROW

Virtual Event November 8-11

The registration for the 53rd Union World Conference on Lung Health is NOW OPEN!

The conference will take place virtually on 8-11 November 2022. For more information and registration:

<https://mailchi.mp/theunion/remindersubmissions52unionworldconference-722980?e=0e6f65513b>

#LongLifeForAll



**In pursuit of  
a long life well lived**

World Immunization Week 2022

<https://www.who.int/campaigns/world-immunization-week/world-immunization-week-2022>

**Wave  
Apply Now!**

Application Deadline May 11th

Seeking innovative proposals in Integrated Service Delivery OR TB preventive treatment.

Visit [stoptb.org](http://stoptb.org) for details

Stop TB Partnership  
TB REACH

**STOP TB PARTNERSHIP ANNOUNCES A  
NEW FUNDING OPPORTUNITY!**

**TB REACH Wave 10 Call for Proposals is Now Open.** Deadline for Applications: 11 May 2022, 17:00 CEST (Geneva time)



## PUBLICATIONS & INTERESTING READS

### Association Between SARS-CoV-2 Vaccination During Pregnancy and Pregnancy Outcomes

<https://www.practiceupdate.com/content/association-between-sars-cov-2-vaccination-during-pregnancy-and-pregnancy-outcomes/133918/73/24/1>

### Association of COVID-19 Vaccination, SARS-CoV-2 Infection, and Risk of Immune-Mediated Neurological Events

<https://www.practiceupdate.com/content/association-of-covid-19-vaccination-sars-cov-2-infection-and-risk-of-immune-mediated-neurological-events/133653/73/24/1>

### Genital inflammatory status and the innate immune response to contraceptive initiation

<https://onlinelibrary.wiley.com/doi/full/10.1111/aji.13542?campaign=wolearlyview>

### Immunogenicity assessment of bispecific antibody-based immunotherapy in oncology

<https://jitc.bmj.com/content/10/4/e004225>

### Mucosal Mast Cells as Key Effector Cells in Food Allergies.

<https://doi.org/10.3390/cells11030329>

### Novel insights into contact dermatitis

[https://www.jacionline.org/article/S0091-6749\(22\)00187-7/fulltext](https://www.jacionline.org/article/S0091-6749(22)00187-7/fulltext)

### Profiling natural killers in COVID-19

[https://www.jacionline.org/article/S0091-6749\(22\)00042-2/fulltext](https://www.jacionline.org/article/S0091-6749(22)00042-2/fulltext)

### SARS-CoV-2 epitope-specific CD4+ memory T cell responses across COVID-19 disease severity and antibody durability

<https://www.science.org/doi/10.1126/sciimmunol.abl9464>

### T cells in the skin: Lymphoma and inflammatory skin disease

[https://www.jacionline.org/article/S0091-6749\(22\)00234-2/fulltext](https://www.jacionline.org/article/S0091-6749(22)00234-2/fulltext)

### The use of oncolytic virotherapy in the neoadjuvant setting

<https://jitc.bmj.com/content/10/4/e004462>

### Zooming in on dendritic cells for CD40 agonists

<https://www.nature.com/articles/s43018-022-00340-x>



## Disease of the Month: Tuberculosis

### Stealth Strategies of Mycobacterium tuberculosis for Immune Evasion

<https://doi.org/10.21775/cimb.041.597>

### Covid-19's Devastating Effect on Tuberculosis Care — A Path to Recovery

<https://www.nejm.org/doi/full/10.1056/NEJMp2118145>

### The scientific response to TB - the other deadly global health emergency

<https://doi.org/10.5588/ijtld.21.0734>

### Tuberculosis vaccines in the era of Covid-19 – what is taking us so long?

[https://www.thelancet.com/journals/ebiom/article/PIIS2352-3964\(22\)00177-3/fulltext?hss\\_channel=tw-27013292](https://www.thelancet.com/journals/ebiom/article/PIIS2352-3964(22)00177-3/fulltext?hss_channel=tw-27013292)

## COMMUNITY CORNER

Showcasing the bright minds of SAIS



### Clinical predictors of pulmonary tuberculosis among South African adults with HIV

eClinicalMedicine - <https://doi.org/10.1016/j.eclinm.2022.101328>

Authors: Simon C. Mendelsohn, Andrew Fiore-Gartland, Denis Awany, Humphrey Mulenga, Stanley Kimbung Mbandi, Michele Tameris, Gerhard Walzl, Kogieleum Naidoo, Gavin Churchyard, **Thomas J. Scriba**, and Mark Hatherill, the CORTIS-HR Study Team

#### Take-Home Message

The authors of this community-based study in South Africa aimed to explore the utility of clinical factors in predicting TB among people with HIV who are not seeking care. The researchers recruited healthy adult volunteers without clinical suspicion of TB, residing in five TB endemic communities, including Durban, Klerksdorp, Ravensmead, Rustenburg, and Worcester, through word-of-mouth, house-to-house visits, and liaison with non-governmental organisations.

Participants were tested for Mycobacterium tuberculosis (Mtb) sensitisation (interferon-g release assay, IGRA) and microbiologically-confirmed prevalent pulmonary TB disease at baseline, and actively surveilled for incident TB for 15 months. Among 851 participants screened, 94.5% were asymptomatic and 45.9% sensitised to Mtb. TB prevalence was 2.0% at baseline and incidence 2.3/100 person-years through 15 months' follow-up. Interestingly, higher CD4 counts were associated with increased IGRA positivity, and participants without TB disease had reduced IGRA positivity; no variables were independently associated with prevalent TB. CD4 count and antiretroviral initiation, proxies for immune status and HIV stage, were associated with Mtb sensitisation and TB disease. Inadequate performance of clinical prediction models may reflect predominantly subclinical disease diagnosed in this setting and unmeasured local site factors affecting transmission and progression.

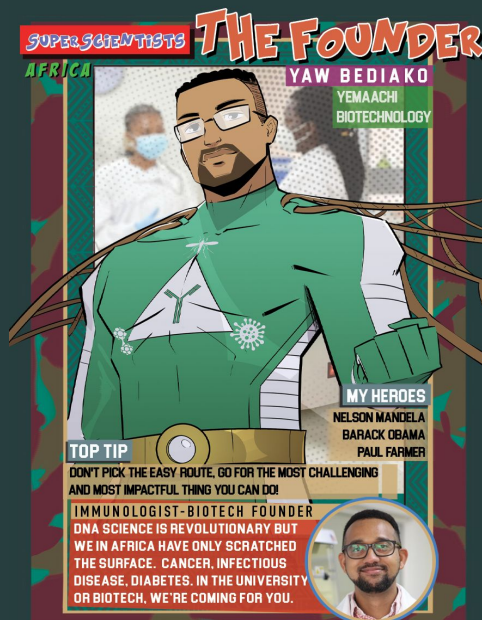
- Dr SC Mendelsohn

#### Other Publications from the SAIS Community

1. **Worsley CM**, Veale RB, Mayne ES. The acidic tumour microenvironment: manipulating the immune response to elicit escape. Accepted by Human Immunology, epub Feb 2022
2. Mezoh G, Lutchman N, **Worsley C**, Gededzha M, Mayne E, Martinson N, Moore P, Crowther NJ. Biomarkers of endothelial dysfunction in Black South African HIV-positive subjects are associated with both high viral load and low CD4 counts. AIDS Research and Human Retroviruses 2022, 38(2): 152-161

## SUPERSCIENTIST OF THE MONTH

### Dr Yaw Bediako: Immunologist, CEO & Founder of Yemaachi Biotech



This April, we celebrate the life and achievements of Dr Yaw Bediako, an immunologist and entrepreneur from Ghana. Dr Bediako was one of the faculty members of the IDA2019 symposium, and we were fortunate to interview him. His interview focuses on his journey from graduate school to Postdoctoral positions in Kenya and England, now the Founder of Yemaachi Biotech. Dr Bediako has volumes of advice for the African scientist. Check out a snippet of the interview below:

*You established your company in Africa where we have many infectious diseases giving you plenty of access to patients and clinical data - but you chose to focus on cancer. What informed that decision?*

Dr Bediako: Africa is indeed a hotbed of infectious disease, but a closer look shows that there is a rising burden of non-communicable diseases like cancer - which we won't be able to ignore forever. Most research done globally is cancer research, so when Africa catches up to the rest of the world, we will be doing globally significant research. My goal is to build a global brand headquartered in Africa.

*What skills do you think are unique to African scientists?*

Dr Bediako: African scientists are equipped to solve Africa's problems - we have the home-field advantage. The majority of scientists studying the continent's problems are not from the continent. Science is best when it is contextually relevant, and in order to do that, it needs to be indigenous.

<https://www.immunopaedia.org.za/webinars/sais-immunopaedia-webinars-2022/>

The full interview will be available soon on the SAIS website!

# VACCINATION

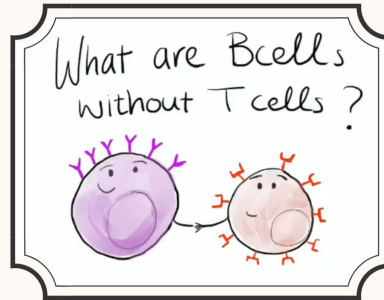
*Our best shot*

Pioneered by Edward Jenner in the early 1800s, vaccination has since grown to be one of the most life-saving public health interventions. Vaccines protect the adult in every child and allow adults to protect themselves, their loved ones, and their communities from disease.

World Immunization Week (24 – 30 April) and the Day of Immunology (29 April) highlight a time to recognise the power of vaccination and our incredible immune systems. We hope the resources below will empower you and those around you to take your health into your own hands. Don't wait. Vaccinate.

## International day of Immunology

April 29, 2021



Take a moment to appreciate your wonderful immune system this International Day of Immunology by watching this lovely video created by Dr Simone Richardson (@cueEVILlaugh) at the NICD: <https://vm.tiktok.com/ZMLsuL4md/>

<https://www.who.int/health-topics/vaccines-and-immunization>

<https://www.humanvaccinesproject.org/>

<https://teamhalo.org/>

### National Institute for Communicable Diseases Vaccination Booklet

[https://www.nicd.ac.za/wp-content/uploads/2017/08/NICD\\_Vaccine\\_Booklet\\_D132\\_FINAL.pdf](https://www.nicd.ac.za/wp-content/uploads/2017/08/NICD_Vaccine_Booklet_D132_FINAL.pdf)

### Rodrigues & Plotkin (2020). Impact of Vaccines; Health, Economic and Social Perspectives

<https://www.frontiersin.org/articles/10.3389/fmicb.2020.01526/full>

### Pollard & Bijker (2020). A guide to vaccinology: from basic principles to new developments

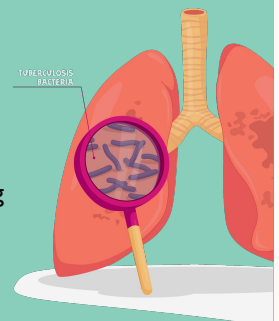
<https://www.nature.com/articles/s41577-020-00479-7.pdf>

## MYCOBACTERIUM TUBERCULOSIS (TB)

Tuberculosis (TB) is a devastating disease that causes high mortality, especially in developing countries. South Africa is among the countries with the highest rates of TB, drug-resistant TB, and HIV-co-infected TB in the world. Though, over the years it has made significant progress in reducing the burden of the disease through adopting WHO recommended therapies for preventing and managing TB. As a result of these initiatives, the incidence of TB in South Africa has decreased. Despite these great steps, the TB burden remains high; further efforts to reduce this burden must continue to achieve the goal of ending TB by 2035. *Mycobacterium tuberculosis* (*M. tb*) is the agent responsible for TB. While the host immune system is capable of eliminating *M. tb*, co-evolution has resulted in the ability of *M. tb* to hijack the host's innate and adaptive immune systems by various means. *M. tb* uses various strategies to withstand host cell defences, such as modulating micro RNA-mediated immune response, dampening oxidative damage, divalent metal homeostasis, as well as dormancy adaptation. Another survival mechanism of *M. tb* is modulating innate immunity. The innate immune cells eliminate phagocytosed bacteria through the fusion of the phagosome with lysosomes. Several *M. tb* proteins inhibit phagosome maturation, while exotoxins/proteasomes and a cell wall component have been reported to inhibit phago-lysosomal fusion.

*M. tb* also indirectly manipulates innate immunity by recruiting a specific host protein to its phagosome, preventing phago-lysosomal fusion. *M. tb* survives within the acidic phago-lysosomal environment through certain receptors and an acid endurance and virulence providing factor. Another host factor induces apoptosis, suppresses cytotoxicity, and modulates cytokine secretion, which allows *M. tb* to evade host responses. Another strategy for intracellular *M. tb* survival is through the interaction of tyrosine phosphatase with the host ubiquitin system to inhibit innate immunity by promoting macrophage apoptosis. Therefore, this interaction could serve as a possible target for new therapeutic approaches against TB.

Full article (<https://doi.org/10.21775/cimb.041.597>) found under "Publications & Interesting Reads" section.



## JOBS & OPPORTUNITIES

### Joint Academic Head - University of the Witwatersrand - Johannesburg, Gauteng

Qualifications: A medical qualification appropriate for a professorial appointment. A doctoral degree in the relevant field and/or peer-reviewed full publications on original research will be strongly advantageous. The preferred candidate must be appointed/appointable at the level of Associate Professor or Full Professor in the University. HPCSA registration would be an advantage. A minimum of seven years of postgraduate experience, of which at least five years are at senior level with demonstrable experience in managing research or diagnostic laboratory. To apply for this position, submit an application letter, a detailed CV with the names, addresses and contact numbers of three referees, and certified copies of degrees/diplomas to Human Resources, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, 7 York Road, Parktown, 2193. Apply via <https://irec.wits.ac.za>. Send all enquiries to Prof Johnny Mahlangu at [Johnny.Mahlangu@wits.ac.za](mailto:Johnny.Mahlangu@wits.ac.za).

### Manager, Regulatory Affairs - IAVI - Cape Town, Western Cape

IAVI is seeking a qualified Manager of Regulatory Affairs who will provide support for a portfolio of vaccines and other biological products being developed for the prevention and treatment of HIV/AIDS, several emerging infectious diseases, TB, and other targets that are the focus of IAVI efforts. The successful candidate will work in Kenya or South Africa. Education and Work Experience: Bachelor's Degree or equivalent in a life science or related subject is required; An advanced degree is desirable. A minimum of five years of experience in Regulatory Affairs with expertise and working knowledge of SAHPRA policies and procedures is required. Apply on the IAVI website here <https://bit.ly/3OAgNRg>.

### Laboratory Technician (Full time) - Hutchinson Centre Research Institute of South Africa - Gardens, Western Cape

This position is responsible for monitoring all specimen activities for the laboratory, including specimen requests, tracking, receipt, inventory, and shipping. This position will also assist with laboratory procurement, inventory management, equipment management, and other laboratory work needed. For more information, please visit <https://southafrica-fhrc.icims.com/jobs/search>. Interested candidates should send their full CV to Bongji Vilakazi: [svilakaz@hcrisa.org.za](mailto:svilakaz@hcrisa.org.za).

## CONTACT US!

If you have any suggestions or feedback to improve this newsletter, feel free to contact us! Please send us your recent publications so we can showcase them in our Community Corner. If you are hiring/recruiting, we would be more than happy to advertise for you in the Newsletter and on our social media platforms. You can email the editor at [clementa@nicd.ac.za](mailto:clementa@nicd.ac.za).

## IMPORTANT LINKS

To renew your SAIS Membership please visit: <https://saimmunology.org.za/membership.htm>



@SAImmunology



South African Immunology Society (SAIS)



@SAImmunologySociety

## RESOURCES FOR IMMUNOLOGY LOVERS

<https://www.faisafrica.com>  
<https://immunopaedia.org>

<https://iuis.org>  
<https://www.stemcell.com/>

### Socials to follow



@AllergyKidsDoc  
 @DrTomFrieden  
 @ShabirMadh

With regards,  
 The SAIS Newsletter Editorial Team

Dr. Clement Adu-Gyamfi  
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