



SOUTH AFRICAN IMMUNOLOGY SOCIETY

NEWSLETTER

24 June 2022

Dear SAIS Members

Please find this month's newsletter. The SAIS Conference Organizing Committee is pleased to announce that the 9th SAIS Conference will take place from 2 - 4 October 2022. Abstract and scholarship submissions are now open (please see full details on page 2 or visit: <https://www.sais-bookings.co.za/> to register). Please follow us on all our social media platforms for more daily updates on the SAIS Conference 2022 and other SAIS events.

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>



PROF THERESA ROSSOUW

Professor and Head of the Immunopathology laboratory, Department of Immunology, University of Pretoria. She is a clinician scientist and has a double PhD, in Immunology and Philosophy. She is a member of the WHO's Research and Innovation Working Group, HIVResNet, and is the current President of the South African Immunology Society. She is also the co-chairperson of the Research Ethics Committee of the Faculty of Health Sciences at the University of Pretoria.

TITLE OF TALK: RESPONSIBLE CONDUCT OF RESEARCH: FROM THE PETRI DISH TO THE PATIENT.

27 JULY 2022



**Working together to get
TB control back on track**

13 - 16 September 2022

Durban ICC International Convention Centre

7th SA TB Conference - Reminder: Abstract submission closing on 30th June 2022

For more information on abstract submission and Conference registration, please visit <http://www.tbconference.co.za>





The South African
Immunology Society

9th CONFERENCE IMMUNOLOGY REDISCOVERED: Breakthroughs in Immunology

2 - 4 October 2022 • Misty Hills Hotel
Conference Centre and Spa

**SAVE
THE DATE**

The South African Immunology Society invites you to attend our 9th conference "Immunology Rediscovered: Breakthroughs in Immunology" from 2-4 October 2022. After two years of meeting virtually, this in - person event will showcase all the best immunology work going on locally and internationally, with a wide selection of world renowned speakers.

Topics will include vaccinology, infectious diseases, innate and adaptive immunity, tumour immunology, allergy, transplantation, and inborn errors of immunity, to name a few. The event will be held at the **Misty Hills Hotel, Conference Centre and Spa** nestled in the foothills of the Swartkop mountains in the beautiful Kromdraai Valley in Muldersdrift, Gauteng. Kromdraai falls within the Cradle of Humankind World Heritage Site; the birthplace of humankind. This is the perfect place to rediscover our human connections and passion for Immunology.

The conference will consist of both oral and poster presentations, and will include a cocktail networking function, as well as a gala dinner at the celebrated Carnivore restaurant. Abstract submission will open soon for consideration for short talks and posters. We cannot wait to gather again as a society and boost Immunology research in South Africa together. **Join us there!**

Abstract Submissions Now Open



+27 21 486 9111 • conference1@onscreenav.co.za • www.sais-bookings.co.za





AFRICAN ADVANCED VACCINOLOGY COURSE

**17 April 2023 -
26 April 2023**

Muldersdrift
Johannesburg
Gauteng, South Africa



The African Leadership in Vaccinology Expertise (ALIVE) Consortium under the guidance of Professor Shabir Madhi and Professor Helen Rees invite you to apply to attend the African Advanced Vaccinology Course, Afro-ADVAC 2023

Who should apply?

Decision makers in the field of vaccinology, vaccines, vaccine trials, implementation, strategies and policies, Applications can include medical and allied medical practitioners and scientists (minimum MSC) working in academia, government, non-government agencies and industry (e.g. paediatricians, virologists, microbiologists, physicians, research physicians, public health practitioners, epidemiologists, immunization managers)

Applicants should have at least **5 years experience** in the field of vaccines or immunization, with evidence of research and policy outputs.

Full Scholarships covering airfares, accommodation and registration are available for participants from academic institutions, non-government organisations and Ministries of Health in Countries with development economies.



This course is funded by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

Applications close on 01 September 2022
Details and applications on www.wits-alive.ac.za





COPD 2022

SEPTEMBER 14-15

International COPD and Lung Disease Conference - Abstract now open
<https://magnusconferences.com/copd-lung-health/>

**GLOBAL CHALLENGES.
LOCAL SOLUTIONS.**

ISID | INTERNATIONAL CONGRESS ON INFECTIOUS DISEASES

NOV 17-20, 2022 | KUALA LUMPUR, MALAYSIA

International Congress on Infectious Diseases - Abstract now open
For more information on abstract submission, please visit <https://isidcongress.org/>



WHERE IMMUNOLOGISTS MEET
18th International Congress of Immunology
27 November - 2 December 2023 | Cape Town, South Africa

IUIS2023.org

Save the Date!
18th International Congress of Immunology: 27 - 02 December 2023

PUBLICATIONS & INTERESTING READS

20% of multidrug-resistant TB cases in children could be averted by household testing and treatment

<https://medicalxpress.com/news/2022-05-multi-drug-resistant-tuberculosis-cases-children-averted.html>

Are oral swabs the future of TB testing?

<https://www.spotlightnsp.co.za/2022/05/18/are-oral-swabs-the-future-of-tb-testing/>

Audio Interview: Dissecting the Host Response to SARS-CoV-2

https://www.nejm.org/doi/full/10.1056/NEJMe2207246?query=TOC&cid=NEJM%20eToc,%20June%2022,%202022%20M1106551_NEJM_Non_Subscriber&bid=1004713806

Hypoxia shapes the immune landscape in lung injury and promotes the persistence of inflammation

<https://www.nature.com/articles/s41590-022-01216-z>

Immunological signature of patients with Thymic Epithelial Tumors and Good Syndrome

<https://www.frontiersin.org/articles/10.3389/fimmu.2022.908453/abstract>

Is there a role for antibiotics in the treatment of chronic rhinosinusitis?

[https://www.jacionline.org/article/S0091-6749\(22\)00222-6/fulltext](https://www.jacionline.org/article/S0091-6749(22)00222-6/fulltext)

Longitudinal analysis shows durable and broad immune memory after SARS-CoV-2 infection with persisting antibody responses and memory B and T cells

[https://www.cell.com/cell-reports-medicine/fulltext/S2666-3791\(21\)00203-2#%20](https://www.cell.com/cell-reports-medicine/fulltext/S2666-3791(21)00203-2#%20)

New guidelines and medicines poised to boost TB prevention efforts in South Africa

<https://www.spotlightnsp.co.za/2022/05/23/in-depth-new-guidelines-and-medicines-poised-to-boost-tb-prevention-efforts-in-sa/>

Protection and Waning of Natural and Hybrid Immunity to SARS-CoV-2

https://www.nejm.org/doi/full/10.1056/NEJMoa2118946?query=recirc_mostViewed_railB_article

'Stem-like' precursors are the fount to sustain persistent CD8+ T cell responses

<https://www.nature.com/articles/s41590-022-01219-w>

The climate change hypothesis for the allergy epidemic

[https://www.jacionline.org/article/S0091-6749\(22\)00224-X/fulltext](https://www.jacionline.org/article/S0091-6749(22)00224-X/fulltext)

The immune cell atlas of human neuroblastoma

[https://www.cell.com/cell-reports-medicine/fulltext/S2666-3791\(22\)00189-6](https://www.cell.com/cell-reports-medicine/fulltext/S2666-3791(22)00189-6)

Tuberculosis: The disease that changed world history

https://www.medscape.com/viewarticle/974044#vp_1



Disease of the Month: Congenital Cytomegalovirus

In utero human cytomegalovirus infection is associated with increased levels of putatively protective maternal antibodies in nonprimary infection: evidence for boosting but not protection.

<https://academic.oup.com/cid/article-abstract/73/4/e981/6131727>

Recent progress in development of monoclonal antibodies against human cytomegalovirus

<https://www.sciencedirect.com/science/article/abs/pii/S1879625721001590?via%3Dihub>

RESOURCES FOR IMMUNOLOGY LOVERS

<https://www.faisafrica.com>

<https://iuis.org>

<https://immunopaedia.org>

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

Socials to follow



@ShabirMadh

@KatherineJWu

@deeptabhattacha

COMMUNITY CORNER

Showcasing the bright minds of SAIS



Immunogenicity and safety of a SARS-CoV-2 recombinant spike protein nanoparticle vaccine in people living with and without HIV-1 infection: a randomised, controlled, phase 2A/2B trial

Authors: **Shabir A Madhi**, Dhayendre Moodley, Sherika Hanley, Moherndran Archary, Zaheer Hoosain, Umesh Lalloo, Cheryl Louw, Lee Fairlie, Leon Frederik Fouche, Mduduzi S L Masilela, Nishanta Singh, Coert Grobbelaar, Khatija Ahmed, Gabriella Benadé, Sutika Bhikha, As'ad Ebrahim Bhorat, Qasim Bhorat, Natasha Joseph, Keertan Dheda, Aliasgar Esmail, Sharne Foulkes, Aameena Goga, Aylin Oommen Jose, Gertruida Kruger, Dishiki J Kalonji, Natasha Lalloo, Johan J Lombaard, Anthonet Lombard Koen, Angélique Kany Luabeya, Rosie Mngqibisa, Friedrich G Petrick, Annah Pitsi, Michele Tameris, Asha Thombrayil, Pieter-Louis Vollgraaff, Shane Cloney-Clark, Mingzhu Zhu, Chijoke Bennett, Gary Albert, Emmanuel Faust, Joyce S Pleased, Lou Fries, Andreana Robertson, Susan Neal, Iksung Cho, Greg M Glenn, Vivek Shinde, for the 2019nCoV-501 Study Group

Evidence before this study: Sparse data exists on the safety, immunogenicity, and efficacy of non-replicating adenovirus vector, messenger RNA, or protein-based COVID-19 vaccines in people living with HIV-1. To date, about 15 studies have examined the safety, immunogenicity, or efficacy of COVID-19 vaccines in people living with HIV-1. None of these studies evaluated a protein-based COVID-19 vaccine. A saponin-adjuvanted protein-based COVID-19 vaccine, NVX-CoV2373 (Novavax), has been shown to be safe and highly efficacious in two large efficacy studies in the UK and the USA; however, specific data on the safety and effectiveness of NVX-CoV2373 in people living with HIV-1 have not yet been reported.

Added value of this study: This randomised, observer-blinded, placebo-controlled, phase 2A/B trial focused specifically on the immunogenicity and safety of a Matrix-M adjuvanted protein-based COVID-19 vaccine, NVX-CoV2373, in people with and without HIV-1 (aged 18–84 years) in South Africa; two doses of the vaccine were administered 21 days apart. People living with HIV-1 were fairly healthy, with a viral load of less than 1000 copies per mL, and on stable antiretroviral therapy for at least 8 weeks before screening. This study showed the safety and immunogenicity of NVX-CoV2373 when administered to participants living with and without HIV-1. Among participants who were baseline SARS-CoV-2-seronegative (naive), people living with HIV-1 had approximately half the anti-spike IgG and neutralising antibody responses of their HIV-negative counterparts. However, among participants who were baseline SARS-CoV-2-positive (previously exposed), similarly high anti-spike IgG and neutralising antibody responses were observed in people living with and without HIV-1.

Implications of all the available evidence: Our results showed the safety and immunogenicity of two doses of NVX-CoV2373 in people living with and without HIV-1. Nevertheless, due to the lower observed antibody responses in baseline SARS-CoV-2-seronegative people living with HIV-1 than in baseline SARS-CoV-2-seronegative HIV-negative participants, there is a need to investigate alternative dosing approaches, including potentially adding a third vaccine dose to the priming series or widening the interval between the two priming series doses. These approaches could enhance the antibody responses induced by NVX-CoV2373 in baseline SARS-CoV-2-seronegative people living with HIV-1.

SUPERSCIENTIST OF THE MONTH

Professor Shabir Madhi: Vaccinologist

SUPER SCIENTISTS AFRICA

PROVAX

SHABIR MADHI
WITS UNIVERSITY

FROM: GP, SOUTH AFRICA
HARD WORK: 79
CREATIVITY: 96
CURIOSITY: 99
COMMUNICATION: 78

MY HEROES
THE THOUSANDS OF SCIENTISTS INVOLVED IN VACCINE RESEARCH

TOP TIP
PUT IN THE HOURS, BUT DO IT WISELY. START YOUR CAREER WITH A FOCUS ON A SPECIFIC THEME OR PROJECT. STAY ON TOP OF WHAT IS HAPPENING IN YOUR FIELD. COLLABORATE!

VACCINOLOGIST
VACCINES SAVE 2-3 MILLION LIVES EACH YEAR. WE TEST VACCINES TO SEE IF THEY WORK AND EVALUATE HOW THEY POSITIVELY IMPACT OUR HEALTH.

This month, we had the pleasure of interviewing Prof Shabir Madhi, a respected physician-scientist. Prof Madhi is the Dean of the Faculty of Health Sciences and Professor of Vaccinology at the University of the Witwatersrand. He is also the Director of the SAMRC Vaccines and Infectious Diseases Analytics Research Unit (VIDA) and is co-Director of the African Leadership Initiative for Vaccinology Expertise (ALIVE). Take a peek at his super insights below:

Can you tell us a bit about your journey as a physician-scientist?

While completing my paediatric specialization in the early 1990s, my interest in medicine and research truly began, especially in infectious and vaccine preventable diseases. What was striking to me at the time was the number of children being hospitalised for diseases that had been vaccine preventable for decades. Under the apartheid regime, South Africa didn't have a public immunization programme - let alone equitable access to vaccines. Seeing these diseases that were preventable, but were not being prevented, really inspired me to pursue the field of vaccinology. It's really been a great journey.

What advice do you have for young scientists?

Many students don't see the importance of activism as part of their university experience. We can't just be academic driven or be scientists in silos. We've seen it in the HIV epidemic and in the COVID-19 pandemic - as much research as we do, scientists are only impactful in policy and can effect change if we are also activists. It is an even greater moral obligation when the public avails themselves for the research we undertake; we need to ensure the research we do drives change that contributes to the better health of our communities.

Be sure to watch the full interview, coming soon to 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. We hope the resources below will empower you and those around you to take your health into your own hands. Don't wait. Vaccinate.

3 FACTS ABOUT VAX

1. In the past 60 years, vaccines helped eradicate one disease (smallpox) and are close to eradicating another (polio).
2. Vaccines prevent more than 2.5 million deaths each year.
3. Scientific studies and reviews continue to show no relationship between vaccines and autism.

"Diseases You Almost Forgot About (Thanks to Vaccines)"

<https://www.cdc.gov/vaccines/parents/diseases/forgot-14-diseases.html>

"No vaccine for the scaremongers." WHO.

<http://www.who.int/bulletin/volumes/86/6/08-030608/en/>

"Vaccine Myths Debunked"

<https://www.publichealth.org/public-awareness/understanding-vaccines/vaccine-myths-debunked/>



Instructing durable humoral immunity for COVID-19 and other vaccinable diseases

[https://www.cell.com/immunity/fulltext/S1074-7613\(22\)00224-2](https://www.cell.com/immunity/fulltext/S1074-7613(22)00224-2)

National Institute for Communicable Diseases Vaccination Booklet

https://www.nicd.ac.za/wp-content/uploads/2017/08/NICD_Vaccine_Booklet_D132_FINAL.pdf

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

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



CONGENITAL CYTOMEGALOVIRUS

National Cytomegalovirus (CMV) Awareness Month is annually observed in the month of June, in the United States. CMV is a Herpesvirus that is not only the most common infectious cause of birth defects in the U.S. but infects approximately 60% of the world's population. Birth defects include neurodevelopmental delay, brain disease, growth restriction, non-genetic sensorineural hearing loss, and other intellectual disabilities. Congenital CMV (cCMV) places a substantial burden on society, thus, an effective CMV vaccine continues to be a major priority of public health research. There is currently no

approved CMV vaccine or therapy for cCMV infection. Healthy individuals sustain strong CMV specific antibody and T cell responses needed for restricting CMV replication, dissemination, and causing end-organ diseases. Small molecule antivirals are extensively used in treating post-transplantation CMV infections, however, drug resistance can occur.

Multiple viral glycoproteins are used to facilitate entry and infect different cell types. The gM/gN complex is involved in virus attachment, the trimer complex is required to enter into all cell types, the pentamer complex is used for epithelial/endothelial cell entry, and gB interacts with gH/gL to facilitate viral membrane fusion. These viral glycoproteins are important targets of potent CMV neutralizing antibodies. Despite the importance of antibody-based therapies, the developments of these therapies for CMV are slow and challenging. Since antibodies inhibit CMV using different mechanisms to those of the small molecule antivirals, using antibodies in combination with antivirals could overcome drug resistance and reduce side effects by lowering the antiviral drug dosage. Additionally, a combination of antibodies targeting various CMV glycoproteins could offer better protection than single antibodies. One way to optimize the current antibody combinations is to include novel neutralizing antibodies correlating well with *in vivo* CMV protection. Thus, mAb-based therapy is still a worthwhile option for treating CMV infections. However, more knowledge on CMV neutralizing epitopes, neutralizing antibodies, and their correlates with *in vivo* protection is needed.

Full article (<https://www.sciencedirect.com/science/article/abs/pii/S1879625721001590?via%3Dihub>) found under "Publications & Interesting Reads" section.



JOBS & OPPORTUNITIES

Postdoctoral fellowship in Human Immunology - Oregon Health and Science University (OHSU), United States

Project title: Characterization of T cell mediated mechanisms of pathogenesis and viral control in the CNS

A funded postdoctoral position is available to develop a research program studying the immune mechanisms contributing to viral control and pathogenesis in the brain in HIV infection and other viral infections. The successful applicants will develop their research at the Vaccine and Gene Therapy Institute, OHSU, under the supervision of Dr Lydie Trautmann.

Requirements: The applicant must have a PhD with research skills in the fields of immunology/immunopathology/infectious diseases, be strongly motivated by the study of virus/host interactions, be a team player and have good skills in communicating in English (oral and writing). Experience in neuroimmunology would be an important asset for this program. **Applications including a curriculum vitae and a cover letter detailing your skills and motivations should be directed to:** OHSU Jobs: <https://careersat-ohsu.icims.com/jobs/>.

Postdoctoral fellowship in Cancer Research - Cedars-Sinai Samuel Oschin Comprehensive Cancer Institute, United States.

The Li Lab at Cedars-Sinai Cancer at Cedars-Sinai Medical Center in Los Angeles is seeking a highly motivated Post-Doctoral Scientist who can work independently while maintaining close collaboration with the Principal Investigator and other Research Scientists. The successful candidate must be able to: (1) make significant contributions to project development, experimental design, data collection and interpretation, (2) present findings within and outside the lab including departmental and national meetings, (3) first author and co-author original research manuscripts. Candidates with strong background in cancer biology, epigenetics, immunology, and/or bioinformatics are preferred and strongly encouraged to apply. Please send a cover letter, personal statement, CV, and contact information of three references to Ms. Danielle Hickethier (Danielle.Hickethier@cshs.org) and Dr. Sean Li (sean.li@cshs.org).

Molecular Mechanisms and Translational Cancer Research, The University of Texas Southwestern Medical Center, Dallas, TX, United States.

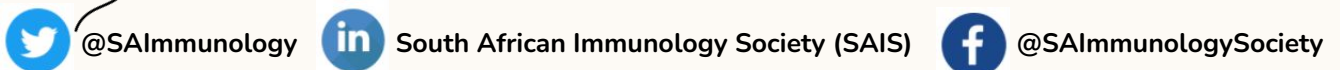
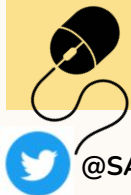
A postdoctoral fellow position is available in the Brugarolas lab. Research in the lab spans the full spectrum from basic to translational to clinical. Particular areas include genomics, mechanistic and biomarker studies, animal models, drug discovery and clinical trials. Candidates should be in the last year of their doctoral studies or within 6 months of a Ph.D. degree. A track record of productivity and publications in well-established journals is essential. Successful applicants will have the opportunity to work in a translational research program with access to a unique infrastructure linking patient records to experimental genomics, a comprehensive tumor bank, and state-of-the-art genetically engineered as well as tumorigraft models. Information about the postdoctoral training program and benefits can be found at <http://www.utsouthwestern.edu/postdocs>. Interested individuals should send a CV and a statement of interest explaining their interest in the position and how it may help advance their career to: KCPadmin@utsouthwestern.edu.

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 editors at newsletter@saimmunology.org.za by the 20th of each month to be featured in our next newsletter.

IMPORTANT LINKS

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



@SAImmunology



South African Immunology Society (SAIS)



@SAImmunologySociety

With regards,
The SAIS Newsletter Editorial Team

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