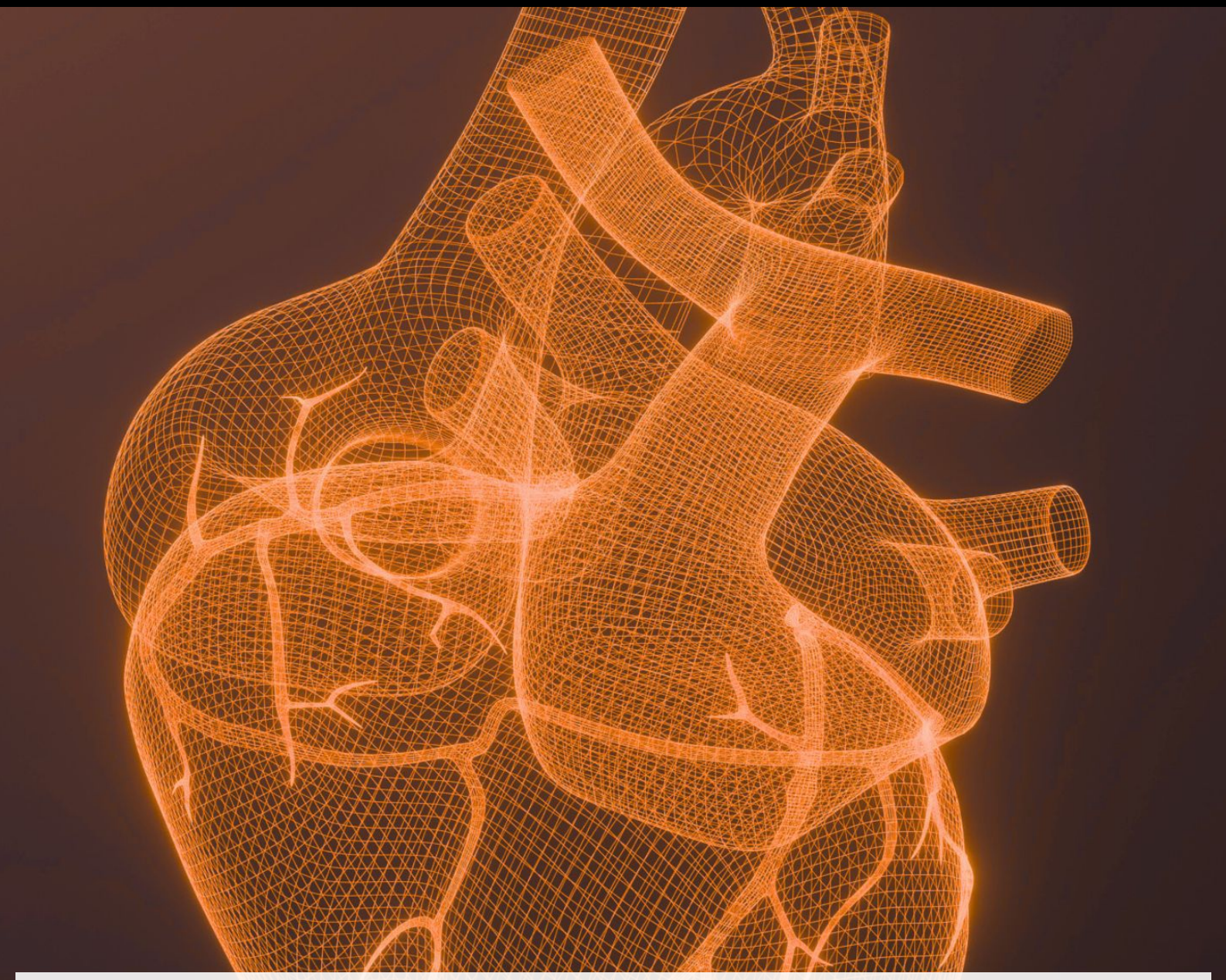
VOLUME 08 / EDITION 07 AUGUST 2026

NEWSLETTER

SOUTH AFRICAN IMMUNOLOGY SOCIETY



FEATURES

AWARENESS

Autoinflammatory Awareness Month
August 2026

Organ and Tissue Donor Awareness Month
August 2026

World Breastfeeding Week
1-7 August 2026

Rheumatic Fever And Rheumatic Heart Disease Awareness Week
1-7 August 2026

SAVE THE DATE

SAIS: An African-based Immunology Seminar Series
27 August 2026

Inborn Errors of Immunity
13 August 2026

The Heart of Integrated Immunity: Advancing African Solutions for Global Health
1-3 December 2026

MESSAGE FROM THE EDITORS

Dear SAIS members,

Welcome to the August 2026 edition of the SAIS Newsletter. As Women's Month unfolds in South Africa, this issue celebrates scientists advancing immunology while exploring how immune responses shape health across people, animals and our shared environments.

Marking Autoinflammatory Awareness Month, our Editorial unpacks systemic autoinflammatory diseases and explains how dysregulation of the innate immune system can drive persistent inflammation without infection.

Our Hotzone examines Oregon Health & Science University's decision to restructure its primate research centre, prompting reflection on the ethical use of animal models and the growing role of human-based new approach methodologies.

In our Disease of the Month feature, we recognise Acute Rheumatic Fever and Rheumatic Heart Disease Awareness Week by explaining how an untreated group A streptococcal throat infection can trigger immune-mediated heart damage, and why prevention and equitable access to care remain vital. Our Community Corner explores how urban and rural environmental exposures may influence atopic dermatitis, while our One Health Immunology article examines the zoonotic and antimicrobial-resistance risks of raw meat-based diets for companion animals.

We are also proud to celebrate outstanding scientists. In our SAIS Member Spotlight, Dr Christine Tshibuayi Mwenge Kahinda shares insights from her journey across academic research and veterinary vaccine development. Faces of FAIS honours Dr Pa Tamba Ngom's contributions to African immunology, while our Women in Science feature recognises Dr Nonhlanhla Nono Mkhize's influential work in HIV vaccine research.

Finally, explore the latest publications, funding calls, conferences, webinars and postgraduate opportunities featured in this issue.

A heartfelt thank you to all our contributors. We hope this edition informs, inspires and sparks meaningful conversations within our community. As always, let us know what you think at newsletter@saimmunology.org.za!

Happy reading!

With warm regards,
Shanerie Fischart
On behalf of the SAIS newsletter editorial team

CONTACT US!

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newsletter@saimmunology.org.za

South African Immunology Society (SAIS)

@SAImmunologySociety

@SAImmunology

UPCOMING FAIS CONFERENCE

Dear Fellow Immunologists,

It is with great pleasure and anticipation that I invite you to attend the FAIS 2026 Congress, to be held from 1–3 December 2026 in the vibrant and cosmopolitan city of Cape Town, South Africa. Renowned for its breathtaking natural beauty, rich cultural heritage, and world-class conference facilities, Cape Town provides an inspiring setting for meaningful scientific exchange and collaboration.

FAIS 2026 will bring together leading researchers, clinicians, policymakers, and emerging scientists from across Africa and around the world. Convened under the theme **"The Heart of Integrated Immunity: Advancing African Solutions for Global Health**", the Congress will serve as a dynamic platform to explore cutting-edge scientific advances, share innovative ideas, and strengthen collaborative networks within our diverse immunology community.

Delegates can look forward to a stimulating and contemporary scientific programme featuring keynote lectures by distinguished international and African experts, interactive symposia and panel discussions, and a vibrant industry exhibition. The Congress is intentionally designed to foster knowledge exchange, encourage interdisciplinary collaboration, and support the continued growth and visibility of immunology research, clinical practice, and policy across the African continent and beyond.

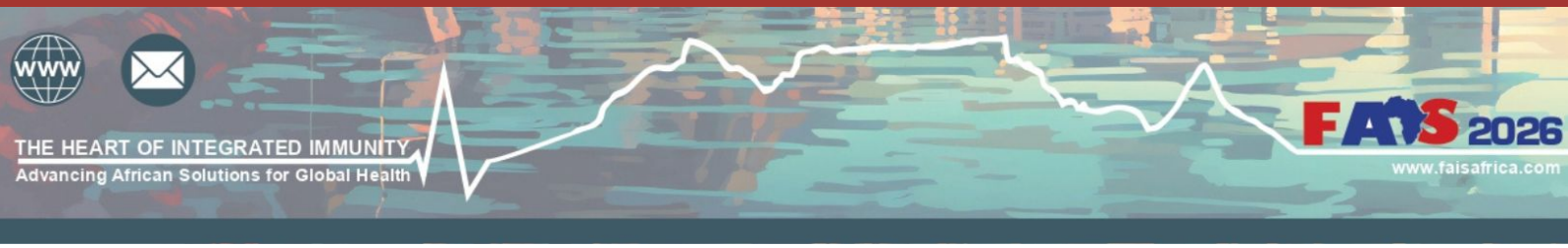
As we gather in Cape Town, we will also reflect on our shared responsibility to address pressing global and regional health challenges, including infectious diseases, emerging immunological conditions, health inequities, and the growing impact of environmental and ecological change on human health. FAIS 2026 aims to highlight African-led science and solutions that contribute meaningfully to integrated global health.

On behalf of the Federation of African Immunological Societies, I warmly invite you to join us for what promises to be an engaging, impactful, and memorable Congress.

We look forward to welcoming you to Cape Town in December 2026.

Warm regards,
Professor Clive Gray
President, Federation of African Immunological Societies (FAIS)

Regular registration deadline | 30 September 2026



EDITORIAL

INFLAMMATION WITHOUT INFECTION

By D. Mhlanga

The ability to distinguish foreign microorganisms from host cells is crucial to avoid detrimental, localized damage to self during an inflammatory response. Systemic Autoinflammatory Diseases (SAIDs) are rare, lifelong conditions where the innate immune system mistakenly attacks healthy tissues, causing a variety of symptoms. Unlike autoimmune diseases, SAIDs do not involve antibodies that recognize and react to self-antigens. Instead, they are driven by autoimmune cells such as macrophages, monocytes, neutrophils and dendritic cells that remain locked in an active state, forcing them to continuously attack healthy tissue (Figure 1). While there are over fifty autoinflammatory conditions, they fall into two main categories: monogenic conditions are caused by a single, distinct gene mutation, while polygenic diseases are caused by a combination of genetic, environmental and immune system factors.

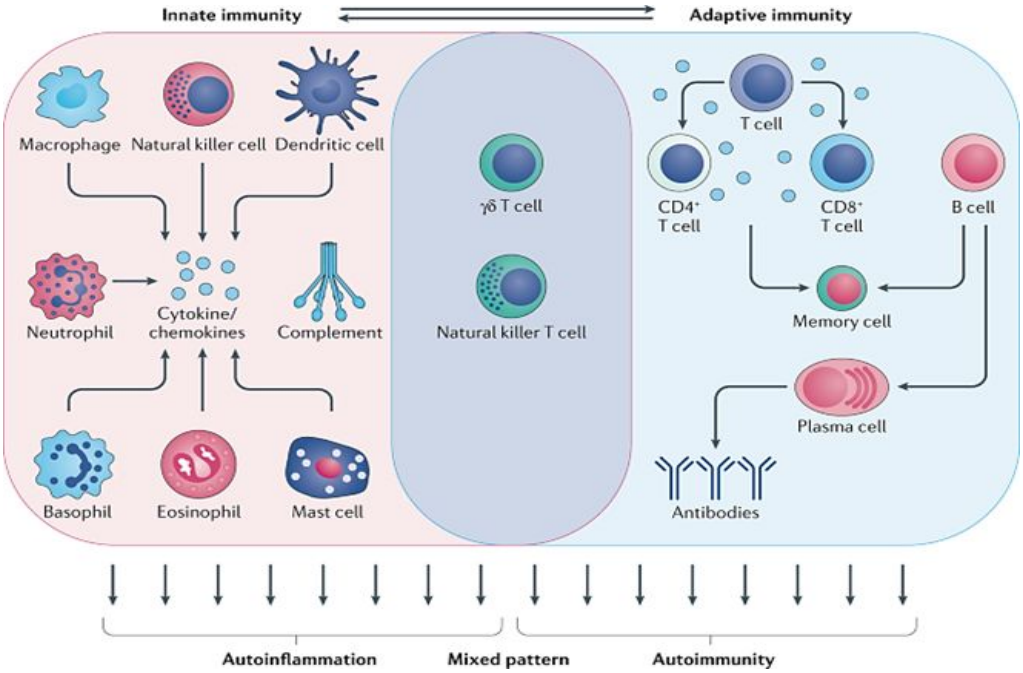


Figure 1: Cellular mediators of autoimmunity and autoinflammation

Since inflammation can spread throughout the body, symptoms typically appear in cycles or flare-ups and can include unexplained and recurrent fevers, joint and muscle swelling or pain, skin rashes, abdominal or chest pain, and persistent fatigue. Diagnosis typically includes a combination of clinical evaluation, urine tests and detailed blood work (to measure markers of inflammation and rule out bacterial and viral infections), autoantibody tests (to check for any autoimmune disorder) and genetic testing (to confirm specific mutations).

Incorrect treatment can significantly worsen SAIDS, therefore it is important to rule out any malignancies during diagnosis. Some cancers share overlapping symptoms with SAIDS and can sometimes trigger systemic inflammation as a paraneoplastic syndrome, causing SAIDS to be misdiagnosed.

There is currently no cure for SAIDs, but certain medications are highly effective at controlling inflammation and preventing complications. Standard treatments usually include colchicine, which works by reducing white blood cell activity and blocking a number of inflammatory pathways. Targeted therapies that block specific inflammatory proteins, such as Interleukin-1 (IL-1), are often used for periodic fever syndromes. Nonsteroidal anti-inflammatory drugs (NSAIDs) such as ibuprofen, naproxen and celecoxib reduce pain, fever and inflammation. Unfortunately, these drugs also have unpleasant side effects when used in high doses for long periods.

FUNDING CALLS, CONFERENCES & WEBINARS

KEYSTONE SYMPOSIA

Hormonal Influences on Immunity and Cancer Across the Lifespan

Oct 05–08, 2026 | Beaver Run Conference Center, Breckenridge, CO, United States
Scientific Organizers: Suzanne D. Conzen, Amy Moran, and James DeGregori

Poster abstract submission deadline | 14 September 2026

ISESSAH 2026

International Society for Economics and Social Sciences of Animal Health

Shaping the Future of Animal Health:
Economic and Social Strategies to Tackle One Health, Biosecurity, Animal Welfare, and Climate Challenges

Bangkok, Thailand

Pre-conference workshop: 26 August 2026
Conference: 27 – 28 August 2026

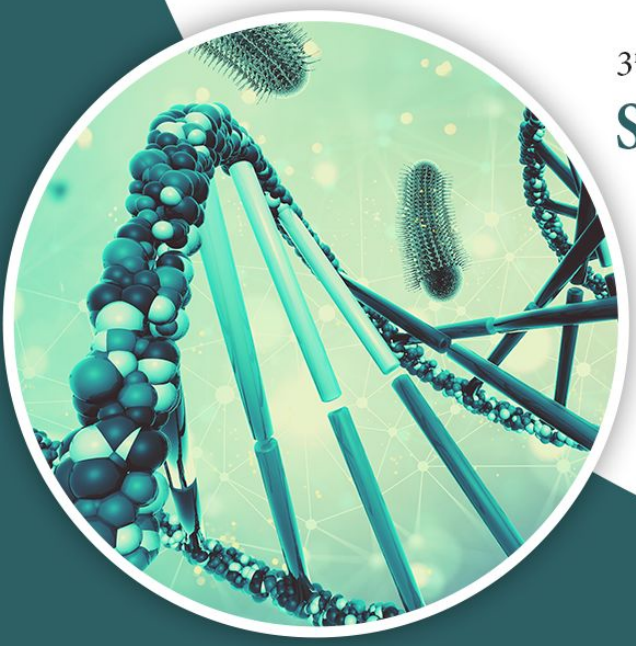
Pre-conference Animal Health Economics Course | 25-26 August 2026

VIROLOGY
Africa Congress 2026

Skukuza
Kruger National Park
Mpumalanga
15 - 18 September 2026

Virology Without Borders: Integrating Human, Animal and Plant Health in Africa

Register now!



Structural Biology Summit
OCT 26-27, 2026 | SWITZERLAND

3rd Global Summit on

Structural Biology and Protein Science

October 26-27, 2026
IntercityHotel Zürich Airport, Switzerland

Theme: *Emerging Directions in Biomolecular Structure Research*

Abstract Submission Open Now

https://structuralbiology.c2pforum.com/

Mid-term registration deadline | 31 August 2026

22ND BIENNIAL MEETING OF
THE EUROPEAN SOCIETY
FOR IMMUNODEFICIENCIES

MAASTRICHT, THE NETHERLANDS 14-17
OCTOBER 2026

ESID

IPOPI INTERNATIONAL PATIENT ORGANISATION FOR PRIMARY IMMUNODEFICIENCIES

International Nursing Group
INGID
for Immunodeficiencies

Late-breaking abstract submission deadline | 30 August 2026

WCI 2026
September, 8-12
Foz do Iguaçu, Brazil

17th World Congress of Inflammation – IAIS

11th Inflamma – Brazilian Society of Inflammation

50th Meeting of the Brazilian Society of Immunology – ImmunoFoz

Register now!

EMBO | EMBL Symposium

Defining and defeating metastasis: from plasticity to immune evasion to therapy resistance

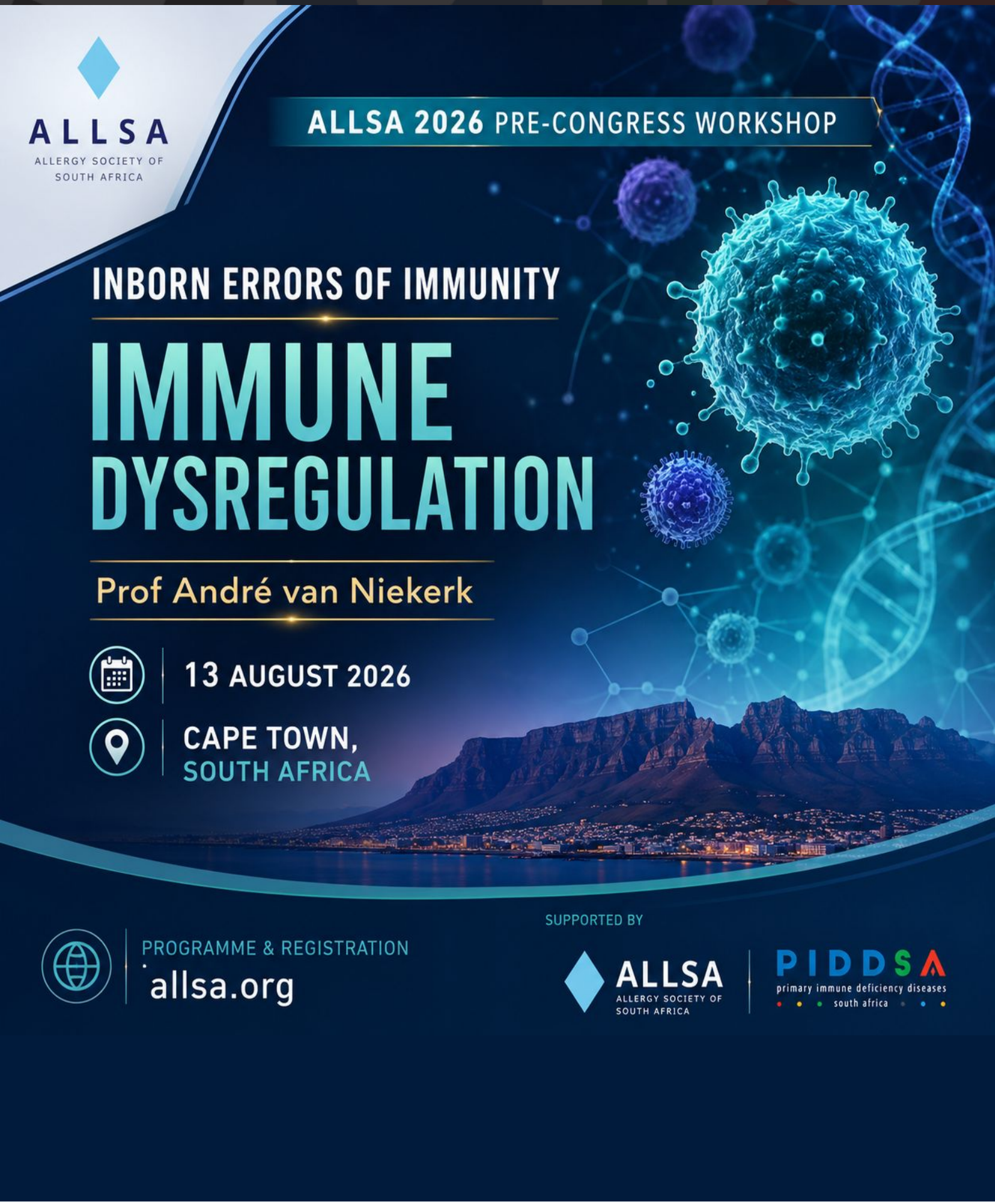
10 – 13 November 2026

EMBL Heidelberg and Virtual

Abstract submission deadline | 18 August 2026

Abstract submission deadline | 7 August 2026

Regular registration deadline | 28 September 2026


ALLSA
ALLERGY SOCIETY OF SOUTH AFRICA
ALLSA 2026 PRE-CONGRESS WORKSHOP
INBORN ERRORS OF IMMUNITY
IMMUNE DYSREGULATION
Prof André van Niekerk
13 AUGUST 2026
CAPE TOWN, SOUTH AFRICA
PROGRAMME & REGISTRATION
allsa.org
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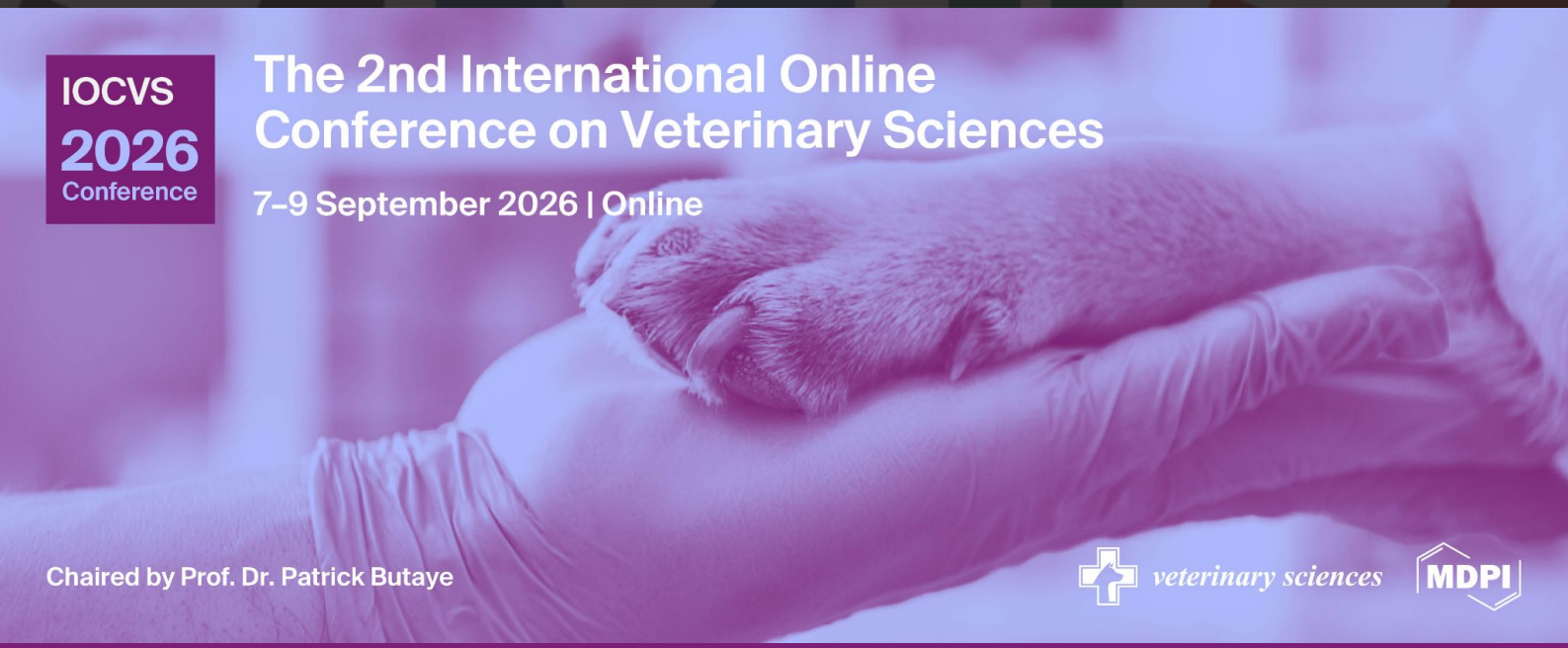
ALLERGY SOCIETY OF SOUTH AFRICA
PIDDSA
primary immune deficiency diseases
south africa



Registration deadline | 1 September 2026

ISID

21ST INTERNATIONAL CONGRESS ON INFECTIOUS DISEASES (ICID) 2026

10–13 NOV, MADRID, SPAIN

Late-breaking abstract submission deadline | 18 August 2026

WORLD CONGRESS ON RHEUMATIC HEART DISEASE

11–14 November 2026
Perth, Australia

WORLD HEART FEDERATION

Heart Foundation Australia

Late-breaking abstract submission announcement | August 2026

GIOH 2026
London, UK | 21-23 September

Global Infectious Diseases & One Health Conference

Standard registration deadline | 10 September 2026

Cell Symposia

Hallmarks of cancer

November 1–3, 2026

Sitges, Spain

Early registration deadline | 4 September 2026

9th world one health CONGRESS

LISBON
PORTUGAL
4-7 SEPTEMBER 2026

Registration now!

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UNIVERSITY OF CAPE TOWN
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NO MORE MONKEY BUSINESS? OHSU CHARTS A NEW COURSE FOR PRIMATE RESEARCH

By J. Polley

Non-human primates (NHPs), such as rhesus macaques, have long been used across multiple fields of biomedical research, due to their high degree of homology to humans. This encompasses their genetic makeup, physiology, anatomy, as well as behaviour, making them a highly valued animal model to study human diseases.

While NHPs have played a critical role in the development of treatments and vaccines against a variety of diseases, such as HIV, Polio and Parkinson's, the ethics surrounding the use of these animals for such research has been widely debated. This recently came to a head last month, on the 27th of July, when the board of Oregon Health and Science University (OHSU) voted unanimously to restructure the Oregon National Primate Research Centre (ONPRC) housed on its campus.

ONPRC is one of seven federally funded National Primate Centres in the United States, and one of the largest facilities dedicated to breeding primates for researchers working with the National Institutes of Health (NIH). The decision to restructure follows a six-month-long discussion with the ONPRC's primary funder, the NIH. ONPRC has faced intense scrutiny from animal rights and wellness groups such as People for the Ethical Treatment of Animals (PETA), Centre for a Humane Economy, and Animal Wellness Action.

Figure 2: Japanese macaques at ONPRC

This pressure, combined with the broader push by federal agencies to redirect funding to human-based research methods, such as organoid development, led to discussion about converting the centre into a sanctuary, effectively ending animal research. However, due to a lack of viable funding to support such a conversion, a sanctuary was not deemed feasible.

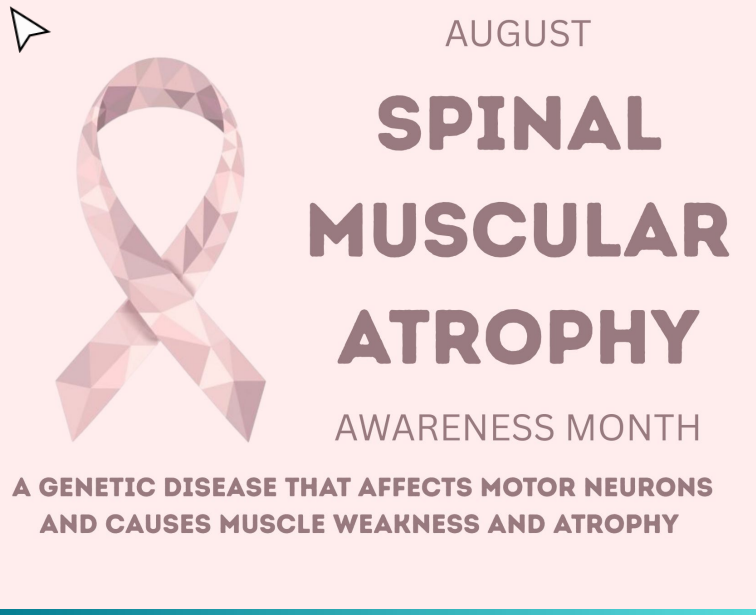
Instead, the OHSU board proposed a compromise, replacing the plan for a sanctuary with one of change. OHSU, which currently houses approximately 4500 monkeys, plans to restructure the ONPRC by gradually reducing the number of monkeys and ending the breeding of monkeys for other institutions. While the centre will still conduct animal research on a smaller scale, there are also plans to pivot to human-based research methods, known as new approach methodologies (NAMs), which may include artificial intelligence, human tissue models and computational biology. OHSU board members voiced that establishing and validating these models will be challenging, the pace at which these models can replace animal models is uncertain and that some scientific questions may not be answerable any other way.

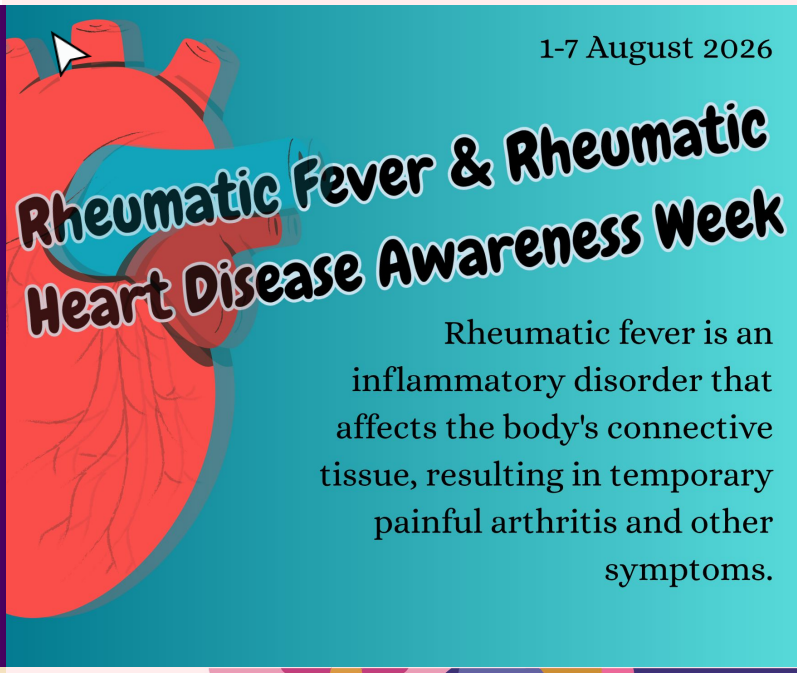
This decision marks a significant shift for one of the United States' oldest and largest primate research facilities, and it reflects a growing tension across the biomedical field between the scientific value of animal models and mounting ethical and public pressure to move away from them. Whether NAMs can mature quickly enough to answer the questions NHPs currently help address remains to be seen, but OHSU has signalled its intent to find out. As OHSU President Dr. Shereef Elnahal put it:

"If Oregonians want to see science eventually evolve from non-human primates as a necessary model, then we intend to undertake that line of work by engaging the best science... that will allow us to get there."

Science OCC OPB OPB NIH

AWARENESS DAYS





DISEASE OF THE MONTH

ACUTE RHEUMATIC FEVER AND RHEUMATIC HEART DISEASE: HOW A SIMPLE SORE THROAT CAN DAMAGE YOUR HEART FOREVER

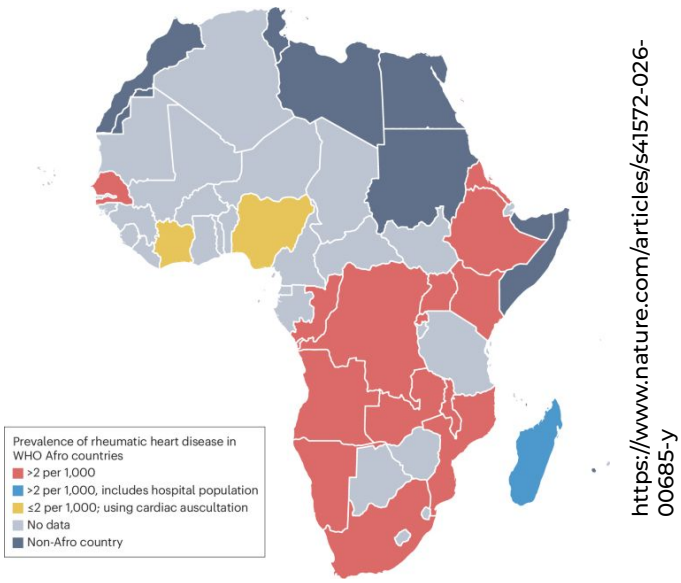
By S.Z. Gqeba

From the 1st to the 7th August, South Africa observes Acute Rheumatic Fever and Rheumatic Heart Disease Awareness Week. Acute rheumatic fever (ARF) is an autoimmune disease caused by group A Streptococcal (GAS) infection with recurrent or untreated infections leading to rheumatic heart disease (RHD). The inflammatory cascade in ARF causes permanent swelling, scarring and stiffening of the heart valves. Rheumatic fever mostly affects children and adolescents in low- and middle-income countries (LMICs) especially where poverty is pervasive and where there is limited access to healthcare services. People who are at the greatest risk of developing the disease are those that live in overcrowded and poor conditions. **RHD affects approximately 55 million people worldwide and causes around 360 000 deaths yearly,** with LMICs accounting for majority of these deaths. Sub-Saharan Africa accounts for 23% of global RHD cases.

During infection, when the pharynx becomes infected with GAS, neutrophils, macrophages and dendritic cells phagocytose the bacteria and antigens are presented to T cells. The initial response is the production of antibodies by B cells, followed by T cell activation of mostly CD4+ cells. In susceptible individuals, this response triggers an autoimmune response against the heart, brain and joints through an abnormal immune response and molecular mimicry. Molecular mimicry is the sharing of antibodies or T cell epitopes between the host and microbe. An example is streptococcal M proteins and cardiac myosin. The bacterial M protein alpha-helical coiled-coil shares structural homology with human cardiac myosin and this cross-reactivity leads to myocarditis. In an abnormal immune system response, there is a dysregulation of cytokine signalling and inflammatory vesicle activation. During infection, the NLRP3 inflammatory vesicles induce pro-inflammatory cytokines that activate $CD4^+$ T cells, worsening the inflammatory response. The TGF-β1 production activates the IL-1β-GM-CSF axis, promoting inflammation and T-cell migration to the heart. These inflammatory cascades lead to acute inflammatory damage and development of RHD.

ARF is diagnosed using clinical criteria (Jones Criteria) while excluding other differential diagnoses. The diagnosis is made when the patient presents with two primary symptoms or one primary manifestation and two secondary symptoms. Additionally, streptococcal serology must show a GAS infection. For treatment, primary and secondary prophylaxis are important. Primary prophylaxis involves treating GAS pharyngitis with antibiotics (penicillin) to prevent GAS infection from causing ARF. While secondary prophylaxis (benzathine penicillin G) prevents recurrent ARF and progressive RHD.

Raising awareness and advocating for action are vital in the fight against ARF and RHD. Given that RHD disproportionately affects low-income populations who often lack political or social influence, dedicated representation is important.



https://www.nature.com/articles/s41572-026-00685-y

Figure 3: Prevalence of rheumatic heart disease in WHO-Afro countries

SAIS MEMBER SPOTLIGHT

DR CHRISTINE TSHIBUAYI MWENGE KAHINDA

Interviewed by S. Fischart

In this edition of the SAIS Member Spotlight, we are delighted to introduce Dr Christine Tshibuayi Mwenge Kahinda, a Product Researcher and Developer and Immunologist at Design Biologix. Christine has extensive international research experience spanning South Africa, the United Kingdom and France, with expertise in immunopathology, biomarker discovery and veterinary vaccine development.

Q1: How were you first introduced to immunology and microbiology, and who or what inspired you to pursue a career in this field?

I was introduced to both subjects during my first year as an undergraduate. Microbiology was not really my favourite subject; I think it was something I stumbled into because I realised I could not study immunology without studying microorganisms. Immunology, on the other hand, was the subject I fell in love with. The complexity of the immune system blew my mind and made me extremely curious to understand how it all functions. At the same time, it challenged me because I could never fully grasp the subject, no matter how hard I studied. I kept focusing on it because I wanted to prove to myself that I could master it, and because I believed that understanding the role of the immune system in pathology could help us use it to our advantage in disease prevention.

Q2: Which vaccine-development project has challenged you the most scientifically, and what did that experience teach you?

The most challenging project I have worked on by far has been the development of vaccines against blood-borne pathogens, particularly *Babesia*, *Anaplasma*, and *Ehrlichia ruminantium*. I think it has been especially challenging because the goal is not simply to replicate the existing temperature-sensitive blood vaccines, but to develop improved vaccines that are more stable, don't require a cold chain, and are still safe, efficacious, and practical to use in the field. These are complex organisms that are difficult to culture in the laboratory, and because of their biological complexity, we can't rely on a single antigen to provide effective protection. Developing better vaccines therefore requires a much deeper understanding of the pathogen, the immune response, and how to produce the vaccine in a way that is both scientifically sound and scalable. The experience has taught me that vaccine development is rarely straightforward. It requires patience, persistence, and the willingness to rethink your approach when the science doesn't give you the answers you expected.

Q3: Your work encompasses not only scientific discovery, but also vaccine formulation, regulatory requirements and manufacturing standards. What do you wish more researchers understood about the journey from laboratory research to a vaccine product that can be used in the field?

I think many researchers underestimate how difficult it is to translate a promising laboratory finding into a vaccine that can actually be used in the field. Discovering a good antigen or getting promising experimental results is only the beginning. From there, you have to think about formulation, manufacturing, quality control, stability, regulatory requirements, scalability, and cost. You also have to ensure that the product can be manufactured consistently, meets regulatory standards, and remains practical for the end user. The process is rarely straightforward. Vaccine development can take five to ten years, sometimes even longer, and regulatory approval alone can add significant time because every step has to demonstrate safety, quality, and efficacy. Working in both research and vaccine development has taught me that you should never think only about whether a vaccine works in the laboratory. You also need to ask whether it can be manufactured consistently, whether it will remain stable during storage and distribution, whether it is affordable, and whether it will make a real difference under field conditions. That is what ultimately determines whether good science becomes a useful product.

Q4: Having worked in South Africa, the United Kingdom and France, how have these different research environments influenced your approach to science, collaboration and leadership?

I should mention that while I obtained my PhD through a French university and spent some time in France for training, most of my research was actually conducted in the UK at the National Institute for Medical Research, now the Francis Crick Institute. Working in those different environments really shaped the way I approach science. During my PhD, I had a supervisor who encouraged me to be curious and to explore different ways of answering a research question instead of following a single path. If I had a scientific idea that was well thought out, I was encouraged to test it. I was fortunate to work in an environment where resources were available and where I could learn from world-renowned scientists. One thing that really stayed with me is that there are no stupid questions. However, this was something I learned over time. Early in my PhD, I struggled with impostor syndrome and often felt intimidated. Through the encouragement of my supervisor, participation in summer courses and group work, and being surrounded by approachable scientists, I gradually became more comfortable asking for advice and discussing scientific ideas. I learned that discussing and brainstorming with others often leads to better solutions than trying to work through everything alone.

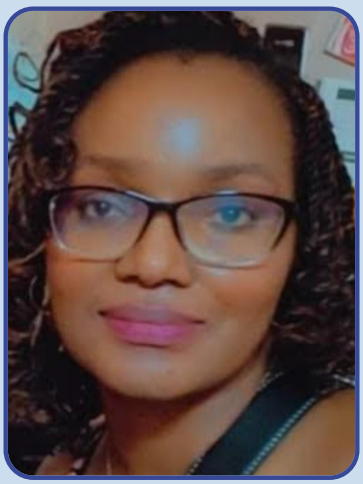
My PhD training also gave me a strong foundation in immunology, parasitology, and rigorous scientific thinking. Then, working in South Africa exposed me to a different reality. Scientific excellence is still essential, but you also have to think about practical challenges such as limited resources, manufacturing, regulation, cost, and whether a product can actually be used under field conditions. Today, I try to combine those experiences. I enjoy asking scientific questions and exploring different approaches, but I also keep the end user in mind. For me, a vaccine isn't successful simply because it works in the laboratory. It has to be manufacturable, safe, affordable, and practical for the people who will use it. Those experiences have also influenced how I work with others. I don't believe good science happens in isolation. Some of the best solutions come from discussing ideas with people who have different expertise and perspectives. That has also shaped my approach to leadership. I try to create an environment where people feel comfortable asking questions, sharing ideas, and challenging assumptions, because I've experienced how valuable that kind of open scientific culture can be.

Q5: You actively mentor young South African scientists. What qualities or skills do you believe early-career immunologists should develop to succeed in both academic and industry-based research?

I think the biggest quality is resilience. Research doesn't always work out the way you planned. Experiments fail, hypotheses are wrong, and sometimes you can spend months trying to solve one problem. If you don't have the self-determination, motivation, and passion for what you're doing, it's very easy to give up. I also think young scientists need to stay curious. Don't be afraid to ask questions, even if you think they sound silly. Some of the best things I've learned came from asking questions and discussing ideas with people who knew more than I did. Finally, be open to collaboration. You don't have to know everything. Science is a team effort, and I've learned that some of the best solutions come from bouncing ideas off other people. Being willing to learn from others will take you much further than trying to do everything on your own.

Q6: Outside of the laboratory and your research, what brings you joy or helps you recharge?

My husband and children are my greatest joy. Spending time with them, together with being in the house of God, is what truly helps me recharge. I also find great comfort in spending time with my siblings and simply knowing that they are well. Family means everything to me. No matter how stressful work has been or how many experiments have failed, going home to my family and spending time in God's presence puts everything back into perspective. It reminds me of what is truly important and gives me the strength to keep going.



Christine Tshibuayi Mwenge Kahinda

Product Researcher and Developer and Immunologist
Design Biologix

AN URBAN–RURAL COMPARISON OF ATOPIC DERMATITIS USING ENVIRONMENTAL DUST SAMPLES

Thulja Trikamjee, Wisdom Basera, Maresa Botha, Heidi E. Facey-Thomas, Ben Gaunt, Jon Genuneit, Claudia L. Gray, **Sabelo Hadebe**, Carol Hlela, Frank Kristein, Nahlane Lunjani, Avumile Mankahla, Jordache Ramjith, Michael Levin.

Reviewed by I. Slabbert

Atopic dermatitis serves as a gateway to systemic immune responses through epicutaneous sensitisation. Previous research found a lower prevalence of atopic dermatitis among rural participants than in urban settings. **In this study, researchers compared dust samples from rural and urban areas and correlated them with the prevalence of atopic dermatitis (eczema) to identify which environmental factors might have a protective effect.**

Dust samples were collected via vacuuming from the beds of 156 children in rural (Mqanduli and Mthatha) and urban (Cape Town) areas. Samples were then tested for allergens, bacterial endotoxins, and beta-glucan fungal markers.

The allergens tested were dust mites (Blo t5 and Der p1), pet allergens for dogs and cats (Can f1 and Fel d1), pest allergens for mice and cockroaches (Mus m1 and Bla g1), and the peanut food allergen (Ara h1). The dust mite allergen Der p1 was present in 100% of samples from both rural and urban areas, though rural samples contained higher levels. Rural samples also had higher levels of dog and cat allergens, while the mouse allergen, Mus m1, was significantly more prevalent in urban samples. Neither the cockroach allergen (Bla g1) nor the peanut allergen (Ara h1) was present at statistically significant levels in either group.

Allergen	Atopic dermatitis (AD)	Controls (C)	Total Urban (U)	Total rural (R)	Urban AD (UAD)	Rural AD (RAD)
Endotoxin (EU)	2667.5 (2136.6-8318.9)	6032.6 (2674.8-17516.6)	3150.0 (2514.8-10054.5)	392.6 (218.4-1751.7)	3106.4 ((2413.0-9875.0)	2236.0 (1603.0-2980.3)
Beta Glucan (ug/g)	2.16 (10.9-2.94)	1.39 (0.50-3.72)	1.38 (0.72-2.77)	1.49 (0.68-3.75)	1.38 (1.09-2.45)	2.37 (1.08-2.99.6)
Der p1 (ug/g)	1.54 (0.59-5.28)	3.34 (1.22-9.56)	1.02 (0.29-2.98)	4.73 (2.69-9.56)	0.81 (0.24-1.29)	4.60 (2.75-8.00)
Blo t5 (ug/g)	0.14 (0.02-0.24)	0.23 (0.02-0.27)	0.14 (0.12-0.27)	0.24 (0.22-0.50)	0.04 (0.01-0.31)	0.21 (0.21-0.21)
Fel d1 (ug/g)	0.77 (0.22-1.11)	0.44 (0.11-0.79)	0.08 (0.04-0.22)	0.55 (0.20-0.95)	0.04 (0.04-0.04)	0.94 (0.49-1.15)
Can f1 (ug/g)	0.42 (0.14-0.77)	0.19 (0.14-0.22)	0.31 (0.12-0.85)	0.19 (0.17-0.29)	0.31 (0.14-0.77)	0.45 (0.16-0.75)
Mus m1 (ug/g)	0.21 (0.10-0.36)	0.13 (0.03-1.94)	0.36 (0.13-1.66)	0.03 (0.02-0.17)	0.27 (0.19-0.37)	0.12 (0.02-0.24)
Bla g1 (ug/g)	0.06 (0.06-0.56)	0.09 (0.07-0.18)	0.10 (0.06-0.25	0.07 (0.05-0.33)	0.06 (0.06-0.80)	0.31 (0.05-0.56)
Ara h1 (ug/g)	0 (0.0-0.0)	0 (0.0-0.0)	0 (0.0-0.0)	0 (0.0-0.0)	0 (0.0-0.0)	0 (0.0-0.0)

Note: Allergen levels reported as median (IQR).
P-values derived by Mann–Whitney U-test.

Table 1: Median levels of endotoxin, beta glucan, and allergens in dust from urban and rural AD and urban and rural controls change to landscape format

Results indicated that the fungal marker β-1,3-glucan was present in equal amounts across samples, with no significant variation across environments or between the homes of controls and children affected by atopic dermatitis. Researchers thus concluded that fungi are unlikely to play a protective role or to be a risk factor for the development of atopic dermatitis.

Bacterial endotoxins were found to be present in significantly higher levels in rural than urban samples. In many instances, rural communities rely on rainwater or river water as their primary water source. Along with free-roaming livestock and cow dung floors in most homes, this leads to increased exposure to bacterial endotoxins. These endotoxins were found to be associated with strong protective effects against the development of atopic dermatitis. Even in urban areas, children exposed to bacterial endotoxins had significantly lower rates of atopic dermatitis.

The data from this study support the hygiene hypothesis and the farming effect: early-life exposure to higher microbial loads, especially from livestock, appears to strengthen the innate immune system and is associated with lower susceptibility to atopic dermatitis and systemic inflammation.

PAI Pediatric Allergy and Immunology

FACES OF FAIS

DR PA TAMBA NGOM

Profiled by N. Moloko

Dr. Pa Tamba Ngom is an immunologist, scientist, and respected leader in biomedical research, whose career has been dedicated to advancing immunology, strengthening scientific collaboration, and building research capacity across the African continent. Dr. Ngom holds a PhD in Immunology and an MSc in Molecular Medicine from Imperial College London. He has established himself as a leading authority on clinical immunology, quality assurance, and health infrastructure compliance. He is currently working to advance compliance and ethics in healthcare.

Dr. Ngom has devoted much of his scientific career to advancing immunological research, with interests in infant immunology, nutrition, thymic function, T-cell biology, and immune ageing.

His early research focused on infant immunology and maternal health, demonstrating how early life nutrition and breast milk factors directly drive thymic development and shield infants from disease. His later works explore the role of cytokines in maintaining and restoring immune function, and the biological processes underlying thymic activity and T-cell regeneration. Collectively, his research has contributed to a deeper understanding of immune development and immune restoration, with implications for improving health outcomes in both children and older adults.

Beyond his research, Dr. Ngom has been a passionate advocate for scientific development across Africa. He has played an important role in strengthening research networks, promoting collaboration between African institutions, and supporting initiatives that provide opportunities for emerging scientists to develop their careers. His commitment to mentorship has helped nurture a growing community of immunologists equipped to address the continent's evolving health challenges.

Notably, Dr. Ngom also provided meaningful leadership within the Federation of African Immunological Societies (FAIS), serving as President from 2021 to 2024. During his tenure, he championed greater collaboration among African immunology societies, encouraged partnerships, and worked to raise the international profile of African research. His leadership helped reinforce FAIS as an important platform for scientific exchange, professional development, and regional scientific cooperation.

Dr. Ngom is an exemplary face of FAIS, and we proudly highlight his contributions to science in Africa.

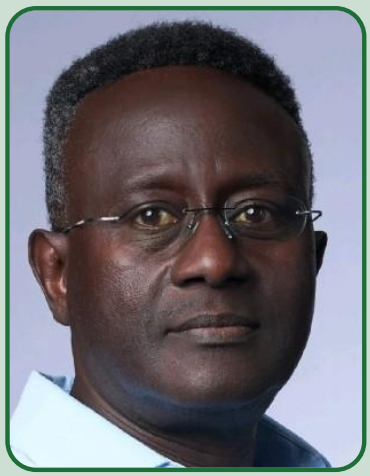
PubMed

FAIS

in

Pa Tamba Ngom

Immunologist and Integrity Compliance Officer (ICO)
Greater Los Angeles Area (GLA) Healthcare System



FOOD FOR THOUGHT: PATHOGENIC RISKS OF RAW MEAT-BASED DIETS FOR COMPANION ANIMALS

By E.C. Rabie

Background

In recent years, there has been a steady increase in the popularity of raw meat-based diets (RMBDs) for companion animals. Raw meat-based diets are also known as Biologically Appropriate Raw Food (BARF) and consist of uncooked food ingredients, including muscle or organ meat and bones from mammals, fish or poultry (wild or farmed animals), uncooked eggs, unpasteurized milk, and sometimes raw fruits or vegetables.

To Feed Raw or Not to Feed?

The use of RMBDs remains a controversial topic, with both strong proponents and opponents citing the benefits and risks of this feeding practice. Nevertheless, this debate is beyond the scope of this article. If you are interested in the current evidence supporting each side of the argument, read this review article.

Pathogenic risks

Raw food is at risk of contamination with pathogens, including bacteria (e.g. *Salmonella* species, *Escherichia coli*, and *Listeria monocytogenes*), viruses (i.e. avian influenza H5N1 and H5N6), protozoa (e.g. *Toxoplasma gondii* and *Cryptosporidium* species), and parasites (i.e. *Echinococcus granulosus*). All these pathogens have been detected in commercial raw pet food, except for *E. granulosus*, which thus far has only been evidenced in homemade raw pet food. Given the pathogenic risk, the source of the BARF is of utmost importance.

A One Health Perspective

The impact extends far beyond the health of the pet ingesting the RMBD:

- **Pet owners are also at risk** when handling raw food, disposing of faeces, and having frequent contact with potentially infected companion animals. This risk is heightened for immunocompromised individuals, young children, and pregnant women. Therefore, stringent hygienic practices are essential if an RMBD is chosen.
- Feeding pets an RMBD may inadvertently **facilitate the transmission cycle of zoonotic parasites**. If no thermal treatments are used, raw muscle and organ meat can harbour the larval stages of parasites (e.g., *E. granulosus*). Pets such as dogs could serve as definitive hosts for the parasites to complete their life cycle, after which parasites can be released by the pets into the domestic environment (i.e., faecal shedding of parasite eggs). Occasionally, humans can serve as intermediate hosts in the absence of livestock and could develop disease after contact with the contaminated environment.
- Livestock-derived bacteria (commensal and pathogenic species) can carry antibiotic resistance genes and have been detected in RMBD products and animals fed this diet. Therefore, feeding animals an RMBD could potentially lead to increased shedding of antibiotic-resistant bacteria and contribute to the **spread of antimicrobial-resistant bacteria**.

Conclusion

Although there is some limited evidence supporting the benefits of RMBDs, pet owners choosing this diet should be aware of the associated pathogenic risks. Further research into the impact of these diets on pets, as well as on the One Health sphere (humans, livestock, wildlife, and the environment), is required.

WOMEN IN SCIENCE

DR NONHLANHLA NONO MKHIZE

Profiled by S. Bhebhe

Dr Nono Mkhize is a Senior Medical Scientist specialising in medical virology and translational immunology at the SAMRC Antibody Immunity Research Unit (AIRU), within the Centre for HIV and STIs at the National Institute for Communicable Diseases (NICD). Her work focuses on advancing HIV-1 vaccine development and antibody-mediated prevention platforms, particularly through multicolour flow cytometry, antigen-specific B-cell isolation, and the evaluation of clinical trial endpoints.

Dr Mkhize leads and contributes to several multidisciplinary projects designed to track viral sensitivity of broadly neutralizing antibodies (bNAbs), passive immunisation studies in adults and infants as well as overseeing vaccine trial endpoint assays in the laboratory. Alongside her current laboratory leadership, she plays a key role in global scientific capacity building, collaborating with international networks such as the HIV Vaccine Trials Network (HVTN) and the Collaboration of AIDS Vaccine Discovery (CAVD).

During her PhD at UCT in 2010 she was awarded the L'Oréal-UNESCO For Women in Science Sub-Saharan Africa Fellowship which provided much needed support and encouragement early in her career. This award inspired her to mentor and support others and she remains deeply committed to training the next generation of STEM researchers in South Africa and across Africa.

Dr Nono Mkhize served as a key investigator overseeing VRC01 (an HIV-1 bNAb) sensitivity profiling during the international Antibody Mediated Prevention (AMP) trials. Notably, she and her team characterised breakthrough viruses from the trials' placebo arms, establishing a current, globally used reference panel of contemporary circulating HIV-1 strains to update virus libraries. More recently, Dr Mkhize was laboratory lead for a specialised paediatric HIV vaccine clinical trial (HVTN 135) enrolling infants in South Africa. This study investigated whether targeted HIV immunogens could trigger and expand bNAb precursors early in life, laying a foundation for paediatric prevention strategies within the public healthcare sector. Furthermore, in support of current trials such as the Gates Foundation funded GRAd-vectored HIV-1 vaccine ongoing in South Africa and Zimbabwe and the Brilliant-011 trial, Nono is leading teams working on flow cytometry, binding antibody and neutralisation assays.

Through her work at AIRU, Dr Mkhize has made significant, internationally recognised contributions to translational virology and HIV-1 research.

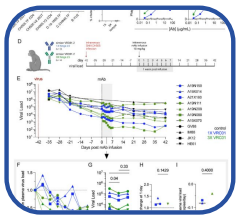
NATIONAL HEALTH LABORATORY SERVICE
NATIONAL INSTITUTE FOR COMMUNICABLE DISEASES

iD

Nono Mkhize

Senior Medical Scientist
SAMRC Antibody Immunity Research Unit (AIRU)
National Institute for Communicable Diseases (NICD)

PUBLICATIONS & INTERESTING READS



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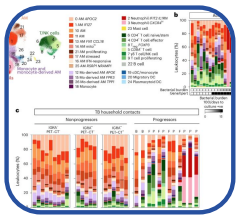

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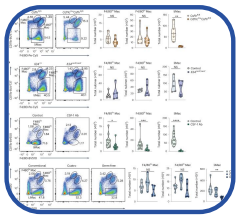

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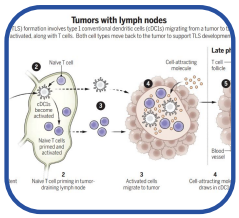

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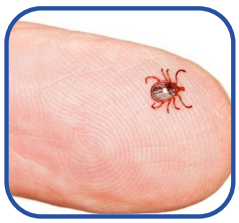

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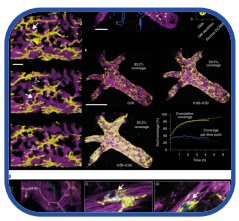

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AFRICAN RESEARCHERS' SMALL GRANTS PROGRAM (SGP VIII)

Position: Early-Career Grant Request for Applications, maximum funding of $30,000 (USD) per grant (4 grants available)

Nationality and Location: This call for applications is targeted at outstanding early-career researchers, PhD students, and academics based at research institutions or universities in Africa. Read the full funding call here.

What's in Scope?
To be considered for funding, the proposed research must be informed by existing evidence and identified knowledge gaps. Applications must demonstrate significant potential to inform or develop further research activities. A maximum of four (4) awards will be made, and each project must be completed within a 10-month period. Applicants must define clear milestones that will ensure the completion of the projects within the project timeline. This call primarily targets projects focusing on **trachoma, onchocerciasis, schistosomiasis, leprosy, lymphatic filariasis and visceral leishmaniasis**.

Eligible proposals may focus on:

- Equitable intervention delivery of neglected tropical diseases (NTD) programme interventions to vulnerable groups, including reaching never-treated populations and special populations (e.g., migrants, mobile populations, etc)
- Addressing the unique needs of women and girls within the context of NTD programme interventions
- NTD integration into Universal Health Coverage (UHC) and Health Systems Strengthening (HSS)
- Morbidity Management and Disability Prevention (MMDP) / Disease Management, Disability and Inclusion (DMDI)
- Integration of NTDs into other sectors (e.g., One Health, education, climate health)
- Identifying ways to improve uptake, adaptation, and adoption of existing evidence -based strategies and tools to achieve elimination and control targets

Candidate Requirements:

- Must be an early-career researcher, defined as a basic biomedical scientist, clinically qualified investigator, or public health researcher, who has not previously successfully completed an SGP research grant as principal investigator or won a research grant worth at least USD 100,000.
- Must either hold a master's degree with demonstrated research experience, ii) currently enrolled in a PhD programme, iii) hold a doctoral degree (e.g. Doctor of Philosophy, Doctor of Public Health, Doctor of Sciences) but must have graduated within the last five years, or iv) be a clinician (e.g. Bachelor of Medicine, Bachelor of Surgery; Doctor of Medicine; Doctor of Veterinary Medicine) with some specialist training (e.g., Membership or Fellowship) or demonstrate relevant research training and experience. For doctoral degree holders who have taken career breaks due to health or family responsibilities, the period of absence from research will be taken into account when assessing the five-year eligibility criteria.
- Must not currently hold the rank of Associate Professor (or its equivalent), or a more senior academic position.
- Must provide written evidence of commitment for mentorship and supervision from a senior researcher with a proven track record and ongoing commitment to NTD research.

Application Procedure:

1. Access the online application form and instructions here, complete all required sections and submit on or before the deadline.
2. The application form provides a link to download a budget template. This can be accessed here.Complete all required sections by following the funding rules as outlined in the Review Guide and Instructions page of the budget template. You will be required to upload the budget during the application process.

Application Deadline: 24 August 2026

COR NTD COALITION FOR OPERATIONAL RESEARCH ON NEGLECTED TROPICAL DISEASES

Global Research and Technology Development Funded by UK Government

African Research Network for Neglected Tropical Diseases RNTD ...towards an NTD free Africa

MSC & PHD OPPORTUNITIES

Position: MSc and PhD opportunities under the SARChi Chair in Emerging Viral Threat One Health Surveillance and Vaccines (EViTOH), 2 years (MSc), 3 years (PhD), NRF bursary funding linked to the EViTOH SARChi Chair

Location: University of the Witwatersrand, Johannesburg.
The SARCHi Chair and Emerging Viral Threats, One Health Surveillance and Vaccines (EViTOH) research chair is within the Faculty of Health Sciences at the University of the Witwatersrand (Wits). Prof Venter has an affiliation with the department Virology in the Faculty of Health, University of the Witwatersrand where students will be registered.

Project background:
You are invited to apply to do a MSc or PhD Degree under the supervision of the NRF-EViTOH Research Chair, Prof Marietjie Venter. This opportunity allows for the completion of a project, focusing on emerging and re-emerging viral threats within a One Health framework for epidemic and pandemic preparedness.

The available projects are linked to NRF bursaries funded through the EViTOH SARCHi Chair with research funded through the NRF and EPSILON PREPARE network for Epidemic and Pandemic preparedness and will focus on:

1. Development and application of molecular and serological tools for vaccine trials, diagnostics and one health surveillance in humans, animals, and the environment including wastewater and mosquito vectors.
2. Clinical and molecular epidemiology, and pathogenesis of emerging zoonotic vector-borne and respiratory viruses as well as pathogen discovery using NGS sequencing and genomics.
3. Projects on the development of prototype vaccines and therapeutics for priority arbo and respiratory viruses as well as preclinical vaccine trials
4. Arbovirus vector ecology, vector competence, metagenomics and disease modelling in the face of climate change.

Work will be conducted under BSL-2 and BSL-3 laboratory environments and focus on humans, animals and environmental research, including arthropod vectors or wastewater surveillance, depending on your background. The Emerging Viral Threats, One Health Surveillance, and Vaccines (EViTOH) division is led by Professor Marietjie Venter, Distinguished Professor and NRF-SARChI Chair in Emerging Viral Threats and One Health, within the Infectious Diseases and Oncology Research Institute (IDORI) at the University of Witwatersrand.

Prof Venter has extensive experience in One Health research of emerging and re-emerging pathogens, particularly vector-borne and respiratory viruses, aiming to enhance South Africa's capacity to detect, prevent, and respond to novel diseases as part of epidemic and pandemic preparedness.

Candidate Requirements:
An undergraduate degree and BSc Honours in Virology, Molecular and Cell Biology, Microbiology, Genetics, Biochemistry or related field (**for MSc applicants**) or a MSc with a focus on virology, molecular Biology, genomics, immunology, protein expression, epidemiology of infectious diseases, vaccine development or medical entomology focused on arbovirus vectors (**for PhD candidates**).

The candidate must have sound laboratory skills in virology, molecular biology, bioinformatics, immunology or entomology with experience in field work, mosquito morphological and genetic identification, phylogenetics. Experience in disease modelling and vector competence will be welcomed for entomology candidates.

In addition the candidate should have strong written and oral communication skills and publication record. A suitable candidate must show excellent attention to detail and have strong work ethics and be self-motivated.

JOBS & OPPORTUNITIES

MSC & PHD OPPORTUNITIES

Application Procedure:
Student are invited to apply for acceptance for a MSc or PhD in Virology under supervision of Prof Marietjie Venter in the Department Virology, Faculty of Health Sciences. Successful students will be nominated for a bursary on the NRF system under the EViTOH SARChi Chair and needs to comply to NRF requirements for postgraduate studies. Successful candidates will apply for NRF EViTOH SARChi bursary in January 2027.

Include the following in your application:

- A motivation letter outlining your expertise, experience and reason for interest in joining the group
- All academic transcripts (complete record and certificates)
- A copy of your CV
- A copy of your ID or Passport and study VISA or permanent residency, SAQA certified qualifications (foreign students only) and
- Two contactable references
- An email address where we can contact you

Interested candidates that fit the criteria can email evitohinfo@gmail.com with the email subject line: MSc/PhD (NRF-EViTOH Research Chair).

Application Deadline: 31 August 2026

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG 100 1922 2022

WITS EVITOH
Emerging Viral Threats, One Health Surveillance and Vaccines

SCIENCE MEME OF THE MONTH

SAIS MEMBERSHIP

RESOURCES

ALLSA
ALLERGY SOCIETY OF SOUTH AFRICA

FAIS

IUIS
International Union of Immunological Societies

immunopaedia.org
ADVANCING GLOBAL IMMUNOLOGY EDUCATION

SCIENCE SOCIALS

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British Society for Immunology

Mucosal Immunology Podcast

Grab a hot cup of ImmuniTea, and let us know what you think!

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