



CAPRISA

CENTRE FOR THE AIDS PROGRAMME OF RESEARCH IN SOUTH AFRICA

Newsletter

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HIV prevention: Vaginal tract inflammation as a measurable contributor to HIV risk

Inflammation in the female genital tract is a well-recognised risk factor for HIV acquisition, offering a plausible target for prevention. However, it remains unclear whether clinical or immunological measures best predict risk.

A key finding was that women with clinical signs alone, without cytokine elevation, still had about a two-fold higher risk than women with no inflammation suggesting that clinical assessment can serve as a useful proxy for identifying higher-risk women. At the same time, a subset of women exhibited inflammatory cytokine profiles with no symptoms at all, reinforcing that asymptomatic inflammation is common and would go undetected in routine care.

These findings have implications for HIV prevention. Where laboratory testing is not feasible, attention to cervicitis and abnormal discharge offers a practical entry point for identifying women at higher risk and prioritising them for intensified prevention services, yet closing the remaining gap will require affordable point-of-care tests for inflammation itself.

Overall, the study underscores genital inflammation as a measurable contributor to HIV susceptibility and highlights the value of combining clinical and immunological assessment in women's HIV prevention. - Farzana Osman

A recent article from CAPRISA researchers compared the two approaches directly, using data from the CAPRISA 004 tenofovir gel trial, in which 889 HIV-negative South African women were followed for up to 34 months with genital signs and symptoms recorded at monthly visits.

Specific observable signs of inflammation, particularly cervicitis and abnormal discharge were strongly associated with HIV acquisition. Cytokine-defined inflammation, present in 18% of women, was associated with roughly double the risk, and women with both clinical signs and elevated cytokines were at highest risk of all.

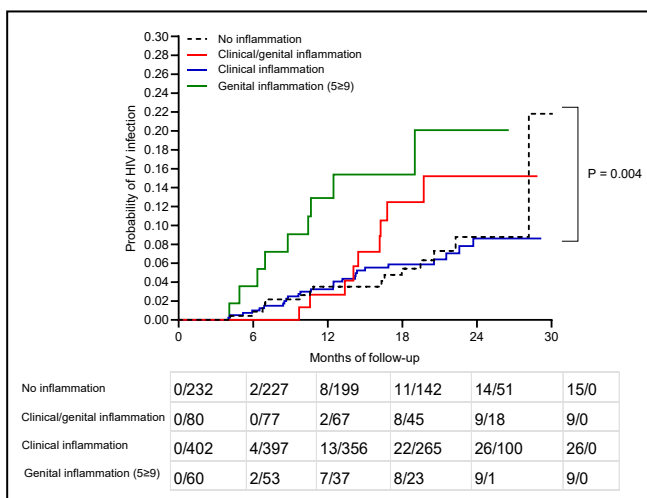


Figure 1: Kaplan-Meier curves representing the relationship between inflammation profiles and HIV risk. Associations of HIV incidence were determined by modelling time to HIV infection with multivariable Cox proportional hazards regression models, where time spent in the study was calculated from randomization to the estimated date of HIV infection or the date of study exit.

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For further reading: Osman F, Yende-Zuma N, Zewotir T, et al. Comparing Clinical and Cytokine Profiling of Genital Inflammation as Predictors of HIV Acquisition in Women. *J Acquir Immune Defic Syndr*. 2026 Oct 1;101(10):1179-1186. <https://doi.org/10.1097/QAI.0000000000003915>



Forum on Big Data for Sustainable Development Goals

Professor Quarraisha Abdool Karim attended the 6th International Forum on Big Data for Sustainable Development Goals in Beijing, China earlier this month. This year's meeting was held under the theme, "Inheriting the Future: Innovations in Digital Intelligence for Global Sustainable Development". As President of The World Academy of Sciences (TWAS), Professor Abdool Karim delivered a lecture entitled, "From Promise to Prediction: Reimagining the SDGs in an era of Big Data and Artificial Intelligence."



Pic credit: FBAS 2026



WFPHA

Professor Salim Abdool Karim receives Hugh Leavell Award 2026

Professor Salim Abdool Karim was bestowed with the Hugh Leavell Award for Outstanding Global Health Leadership, which is the highest award of the World Federation of Public Health Associations. In accepting the award, Professor Abdool Karim delivered the Hugh Leavell lecture entitled, "Public health response to 5 epidemics: AIDS, TB, Covid-19, Mpox & Ebola". Dr. Hugh Leavell was a Professor of Public Health and Preventative Medicine. At the 18th World Congress on Public Health organised by the WFPHA in Cape Town, Professor Abdool Karim delivered a plenary lecture entitled, "AIDS: An illustration of the interconnectedness of human, environmental and animal health."



Pics (left to right): Left & middle: Professor Salim Abdool Karim addressing a plenary at the Congress. Right: Professor Salim Abdool Karim receives the High Leavell Award from the President of the WFPHA, Professor Raman Bedi. Pic credit: WFPHA



Mucosal Immunology on the Global Infectious Diseases Agenda

The 2nd International Conference on Emerging and Re-emerging Infectious Diseases was held at the SRM Institute of Science and Technology in Kattankulathur, Chennai in India. Organised by the Infectious Diseases Society of India (IDSI), the meeting drew more than 400 scientists, clinicians, researchers and public health professionals. A keynote lecture, "From systems vaccinology to universal vaccines", was delivered by Prof. Bali Pulendran, Director of the Stanford Institute for Immunity, Transplantation and Infection. Together with Prof. Rafick Sékaly (Emory University), he anchored the immunology and HIV programme. CAPRISA's Head of Mucosal Immunology Professor Derseree Archary presented a plenary in the Mucosal Immunity and Translational Innovations in Antiviral Research session, with a talk titled "The mucosal interface: where immunity, microbes and therapies meet." Her presentation examined mucosal surfaces as the decisive battleground in infectious disease, the site where host immune responses, the resident microbiome and therapeutic or preventive PrEP interventions converge. Drawing on HIV prevention and immunology research, understanding local mucosal immunity, rather than systemic markers alone, is central to designing interventions that work in the populations that need them most. iCER-ID 2026 reaffirmed the value of South-South and global scientific exchange in infectious disease research. - Prof Derseree Archary



CAPRISA PhD Fellow Damian Naidoo shares some of his highlights from the 18th World Congress of Public Health. According to Damian, the Congress marked an important milestone for men's health, as it featured the first-ever dedicated session on men's health at the World Congress on Public Health, titled "Men's Health: A Concern or a Real Concern? The Case for a New Global Public Health Policy Approach."

Key takeaways from his presentation, "The Case to Vaccinate Boys in

Africa Against HPV":

- Sub-Saharan Africa carries the world's highest burden of both HIV and high-risk HPV. Protecting boys and men from HPV is not just about men's health—it's about creating a healthier, more equitable future for all
- Protecting boys and men from HPV is not just about men's health—it's about creating a healthier, more equitable future for all
- Across Africa, HPV-related diseases in boys and men remain under-recognized, with significant health implications - Damian Naidoo

CAPRISA's Pandemic Prevention, Preparedness and Response team hosted the latest in their series of law seminars. This time, the topic of the Certificate of Need (CON) came under the spotlight. The team's Dr Petronell Kruger and Nosihle Zingani led the discussion.

In May 2026, South Africa's Constitutional Court declared a certificate of need scheme for health practitioners, unconstitutional. This type of scheme gives the State some powers to limit the provision of health services and goods in already saturated areas, in an attempt to incentivise those goods and services to rather be provided in underserved areas. The Court however declared this scheme to be unconstitutional, finding fatal flaws in the vehicle (structure) for this scheme. This leaves the following questions; Will the government seek to reintroduce this scheme correcting the shortcomings the Constitutional Court could not look past? This process will take many years, and will face opposition only emboldened by this judgment? Or, will it look to other steps first, which might signal a reprieve to those health practitioners who worried about their freedom to choose where they work? - Dr Petronell Kruger & Sihle Zingani



Celebrating our 2026 Spring graduates!



Pics (Left to right): CAPRISA Associate Scientific Director Professor Quarraisha Abdool Karim and her student Dr Gethwana Mahlase (Doctor of Philosophy, UKZN), Dr Winnie Ramaloko obtained her PhD in Microbiology, UKZN, Khanyisile Vilakazi from our King Dinizulu Clinical Research site obtained her Master of Social Science, UKZN and Anokhee Leela from our eThekweni Clinical Research site obtained her Masters of Pharmacy from UKZN Congratulations to all our Spring 2026 graduates!

Well spotted!

Met two of our frontline solution drivers, Research Assistant Doctor Ziyaad Moolla and Research Clinician Doctor Gillian Dorse from our Springfield Clinical Research Site. CAPRISA's iSpot U Award recognises colleagues who go above and beyond, contributing innovative, exceptional value.

Dr Ziyaad Moolla developed a laboratory results application scanner using artificial intelligence that significantly reduces the time required to capture participants' laboratory results into the REDCap data system. This innovation has streamlined a previously time-consuming, manual data capture process, reducing the risk of transcription errors and freeing up valuable staff time for other critical study activities. Beyond the PROBE-TB study, this tool can be adapted for other studies using REDCap, extending its value across our broader research portfolio.

Dr Gillian Dorse demonstrated astuteness and care in her swift response during a medical emergency at the site when a colleague experienced a medical emergency. Her calmness under pressure, professional judgment, and willingness to step forward in a moment of crisis made a significant difference at a time when it mattered most. Dr Dorse's actions exemplified compassion, courage, and leadership.



Pics, top: Study co-ordinator Mbali Zulu, Dr Ziyaad Moolla and CAPRISA Deputy Director Professor Kogie Naidoo. Bottom: Dr Gillian Dorse with Professor Kogie Naidoo



A selection of scientific papers published in 2026

- 60 **Madurai LS**, Reddy K, Nair S, Manivannan B, Pillay K, **Mahomed S**. Validation of a Low-Volume (100 µL) Plasma Protocol for HIV-1 RNA Quantification Using the Hologic Aptima HIV-1 Quant Dx Assay. *J Mol Diagn*. 2026 Jun;28(6):461-468. doi: 10.1016/j.jmoldx.2026.03.006
- 61 Ochieng F, Wambua P, Kimani J, Wanjiru M, Agingu W, Kabuti R, Mdletshe N, **McKinnon LR**, Otieno FO, Mehta SD. Prevalence of and Factors Associated With Urethral and Rectal STIs Among a Cross-Sectional Sample Men Who Have Sex With Men. *Sex Transm Dis*. 2026 Jul 1;53(7):435-443. doi: 10.1097/OLQ.0000000000002320
- 62 Shimbire MS, Gibbs A, Mthiyane N, Dreyer J, Chimbindi N, **Garrett N**, Tomita A, Shahmanesh M. Spatial mapping of HIV testing and antiretroviral therapy initiation uptake among the adolescents and youth in rural KwaZulu-Natal, South Africa. *AIDS Care*. 2026 Jun;38(6):1310-1325. doi: 10.1080/09540121.2025.2611339
- 63 **Harkoo I**, **Sobia P**, **Archary D**, **Garrett N**, **Mahomed S**. A case of transient hepatocellular injury in an HIV monoclonal antibody trial. *Int J STD AIDS*. 2026 Aug;37(9):1051-1054. doi: 10.1177/09564624261458750
- 64 Bishop K, Moosa F, Makhasi M, Kleynhans J, Naby F, du Plessis M, Reubenson G, **Dawood H**, Zar HJ, Meiring S, Quan V, Wolter N, von Gottberg A, Cohen C, de Voux A, Walaza S. Comparing Respiratory Illness Surveillance Case Definitions to Detect Bordetella pertussis in Children Aged <5 Years With Respiratory Illness in South Africa, 2017-2023. *J Infect Dis*. 2026 Jan 17;233(1):e34-e43. doi: 10.1093/infdis/jiaf501
- 65 **Mahomed, S.**, Khan, A. & **Archary, D**. South Africa's next viral emergence may already be here: under-recognized zoonotic and arboviral transmission as a surveillance blind spot. *Discov. Viruses* 3, 16 (2026). <https://doi.org/10.1007/s44370-026-00051-2>
- 66 Abdelgawad N, Chirehwa M, McIlIeron H, Kanyama C, Mwelase N, **Naidoo A**, Kumwenda J, Nyirenda M, Samaneka WP, Lama JR, Mohapi L. Pharmacokinetic modelling as a tool to assess TB treatment adherence: application to the REMEMBER study. *IJTLD Open*. 2026 Feb 1;3(2):77-83
- 67 Han N, Loosli T, Sauermann M, Çelikağ İ, Anderegg N, Baye BC, Bolton Moore C, Buzaalirwa L, Byakwaga H, Chimbete C, Ebasone PV, Goodrich S, Huwa J, Kasozi C, Mafoua A, Massamba AC, Messou E, Minga A, Murenzi G, Muula G, Muyindike W, Naidoo SJ, Nsonde DM, Poda AG, Ramdè R, Semeere A, Singh L, Günthard HF, Egger M, Giandhari J, **Lessells R**, Kouyos RD. Novel integrase mutations linked to genotypic DTG resistance in African non-B HIV-1 strains: the DTG RESIST study. *J Antimicrob Chemother*. 2026 Mar 4;81(4):dkag088. doi: 10.1093/jac/dkag088
- 68 **Milford C**, Hardwick TS, Bosman S, Cavanagh T, Wilson M, Smit JA, Zononi BC. Recruiting people who inject drugs (PWID) into research: benefits and challenges of respondent driven sampling (RDS) in a sample in KwaZulu-Natal, South Africa. *Subst Abuse Treat Prev Policy*. 2026 Feb 18;21(1):24. doi: 10.1186/s13011-026-00712-x

For the complete list of publications see here: <https://www.capriza.org/Publication/1/1>



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