



# CAPRISA

CENTRE FOR THE AIDS PROGRAMME OF RESEARCH IN SOUTH AFRICA

## Newsletter

June 2025 Volume 25 Issue 5

### Persistent TB mortality among vulnerable populations signals a call to action

#### In this Issue

**On Page 1**, we feature an article on the findings in the CAPRISA 258 SUTHI study.

**On Page 2**, Professor Salim Abdool Karim speaks out against institutionalised disinformation, which is a threat to science and academia.

**On Page 3**, we highlight the power of collaboration to generate innovative solutions for HIV interventions.

**On Page 4**, our young scientists remind us that the future remains hopeful and inspiring.

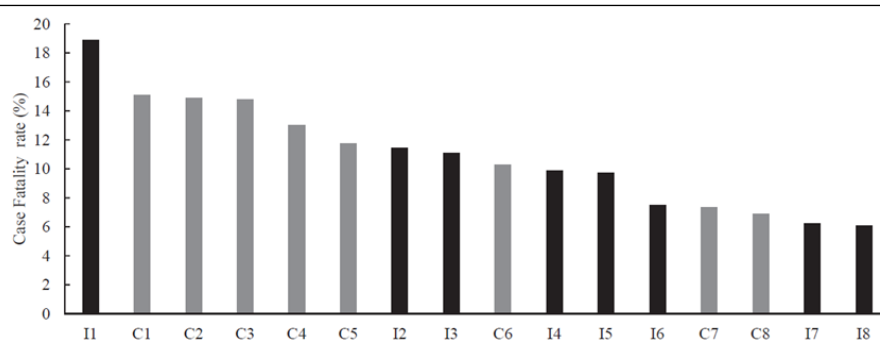
**M**ortality in patients with tuberculosis (TB) remains persistently high, despite global efforts. This recently published secondary analysis of the CAPRISA 258 SUTHI study, assessed whether a quality improvement (QI) intervention reduced 18-month mortality in known TB patients accessing primary healthcare (PHC) services.

A total of 5,817 newly diagnosed TB patients were enrolled across 40 clinics and randomized to either a QI intervention (n= 3473) or standard of care (SOC, n= 2344). Overall, 562 deaths were observed over 18-months [case-fatality rate (CFR) = 9.7%], with ninety percent of the deaths occurring within six months of TB treatment initiation, highlighting the vulnerability of patients to mortality in this period. Mortality in TB patients was disproportionately higher in males over the age of 50, patients residing in rural communities, and viraemic people living with HIV/AIDS (PLWHA), including those that were ART naïve, had recently commencing ART, or had unknown ART status.

An important finding from this study was that one in ten patients diagnosed with TB still die, primarily within months of diagnosis despite linkage to care. Importantly, the findings reinforce the need for close clinical observation and early triage of high-risk groups such as older men, rural patients, and viraemic PLWHA. While the QI intervention did not significantly reduce overall mortality, it was associated with improved outcomes in subgroups, suggesting potential for targeted refinement.

TB mortality persists even among patients engaged in care highlighting the need for continued investment in health system strengthening, and focused support for vulnerable sub-populations to help reach the WHO End TB strategy goals of substantially reduced TB incidence and mortality by 2035.

**For further reading:** Naidoo K, Yende-Zuma N, Moodley M, *et al.* High mortality among patients with tuberculosis accessing primary care facilities: secondary analysis from an open-label cluster-randomised trial. *EClinicalMedicine*. 2025 Mar 18;82:103151. <https://doi.org/10.1016/j.leclim.2025.103151>



Clusters	I1	I2	I3	I4	I5	I6	I7	I8
Cluster size	143	245	36	283	832	107	644	1183
Case fatality rate (%) (95% CI)	18.9 (13.3-26.1)	11.4 (8.0-16)	11.1 (4.4-25.3)	9.9 (6.9-13.9)	9.7 (7.9-11.9)	7.5 (3.8-14.1)	6.2 (4.6-8.3)	6.1 (4.9-7.6)
Control arm clusters								
Clusters	C1	C2	C3	C4	C5	C6	C7	C8
Cluster size	278	175	203	622	17	593	123	333
Case fatality rate (%) (95% CI)	15.1 (11.4-19.8)	14.9 (10.3-20.9)	14.8 (10.6-20.3)	13.0 (10.6-15.9)	11.8 (3.3-34.3)	10.3 (8.1-13)	7.3 (3.9-13.3)	6.9 (4.6-10.2)

Cluster-specific case fatality rates at 18 months among all participants with TB, regardless of HIV status, reveal substantial variability within both intervention (black) and control (grey) arms.

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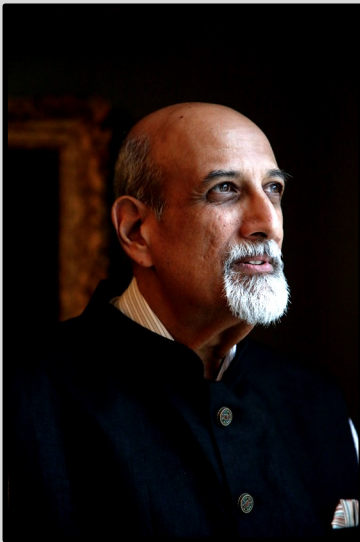
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# Michael Faraday Lecture on the Threat to Science



**S**alim Abdool Karim, FRS unpacked the politics of institutionalised disinformation in delivering the 2024 Michael Faraday Prize Lecture at The Royal Society. The Royal Society Michael Faraday Prize and Lecture is awarded annually to the scientist or engineer whose expertise in communicating scientific ideas in lay terms is exemplary. It is named after the English chemist and physicist Michael Faraday. Ironically, while Faraday had very little formal education, he is remembered for his ability to convey his scientific ideas clearly and concisely.

Abdool Karim’s lecture entitled, “Science under threat: The politics of institutionalised disinformation” unpacked, head-on, the threats to science globally, with a focus on the USA, where disinformation has become institutionalised in the corridors of power. Abdool Karim says “As those in power use the levers of the state to accumulate wealth and yet more power, truth becomes a major obstacle. Hence science, as the rational approach to seeking the truth, becomes the casualty and universities, as custodians of science, have come under attack.” He went on to state that, “The importance of science and its contribution to a better world needs to be communicated to build and maintain the public’s support and confidence in science and the institutions of science.”



**5 elements of Trump's attack on science**

- 1. Annihilate government science:**
  - Fire government scientists
  - Stop collecting data
  - Stop / alter govt. science reports
- 2. Hobble science agencies:**
  - Fire leadership & reduce budgets
- 3. Coerce universities to suppress protests, dissent & self-censor**
- 4. Hold back university funding to force them to be compliant**
- 5. Threaten scientific journals so that they self-censor**

**nature**  
**'Totally broken': how Trump 2.0 has paralysed work at US science agencies**

Researchers who speak to Nature say they don't have the money or staff to do fieldwork or process samples.

Science & Technology | Death by a thousand cuts  
**Trump's attack on science is growing fiercer and more indiscriminate**

It started as a crackdown on DEI. Now all types of research are being cancelled.

CAPRISA



Watch the full lecture here: [Science under threat: the politics of institutionalised disinformation | The Royal Society](#)

**R**ockefeller University conferred Honorary Degrees on CAPRISA’s Director Salim Abdool Karim and Associate Scientific Director Quarraisha Abdool Karim. In delivering her commencement speech, Quarraisha Abdool Karim said, “These are turbulent, volatile and unprecedented times, but they are also times that call for the best in each of us, times for thoughtful, principled science. Science that holds itself to high standards, dares to see the world differently, and chooses always to serve and unite rather than divide.”

**C**APRISA Associate Scientific Director Quarraisha Abdool Karim received an Honorary Doctorate from McGill University. She urged the graduates to follow the path of science in service to humanity. She also delivered the Andrew F. Holmes Medicine and Health Sciences Distinction Lecture entitled, "The path to ending AIDS in Africa and the implications of US funding cuts." Abdool Karim urged young scientists to "Ask bold questions. Build bridges. Stay curious. And above all, act with empathy."





## The Dried Urine Strip Test: Fast tracking the detection of STIs

by Nomusa Zondo and Thando Maseko

**A** dynamic research duo from the University of Manitoba's Medical Microbiology and Infectious Diseases Department - PhD candidate Clarissa Klenke and Vanessa Schulz (MSc) - have introduced a promising diagnostic tool that facilitates the early detection of a broad range of STIs. The Dried Urine Strip (DUS) test allows for molecular characterisation, including HPV and AMR testing and holds potential for improving access to STI diagnostics and surveillance in resource-limited settings. It can also be used at home.

Klenke's doctoral research focuses on the early diagnosis of *Chlamydia trachomatis* and *Neisseria gonorrhoeae* in asymptomatic individuals in a cohort of female sex workers in Nairobi, Kenya. By identifying specific molecular profiles and resistance patterns, her research aims to improve estimates of prevalence and incidence, detect emerging AMR strains, and inform more effective, evidence-based treatment strategies for this high-risk population.

Schulz's research focuses on the detection and genotyping of the Human Papillomavirus (HPV) in vaginal swabs and urine samples from the same Nairobi-based cohort. Schulz presented comparative findings on the distribution of HPV genotypes in Canada and Kenya. She highlighted a decline in vaccine-targeted HPV types (such as HPV 16 and 18) among vaccinated populations in Canada, alongside a concurrent rise in non-vaccine types. Notably, HPV 35 - currently not included in the standard vaccine - was identified as the second most prevalent genotype in Kenya. These findings suggest potential type replacement and underscore the urgent need for region-specific HPV genotyping data to guide future vaccine strategies.

Photos: CAPRISA's Head of Mucosal Immunology Prof. Derseree Archary with Clarissa Klenke, Vanessa Schulz and CAPRISA research fellows.



## Fine-tuning clinical trial designs for HIV prevention



**S**enior scientist Doctor Leila Mansoor participated in "The Future of HIV Prevention Clinical Trials Summit" hosted by The Forum for Collaborative Research and co-hosted by WITS RHI in Johannesburg. Dr. Mansoor was a panellist in the session titled, "Establishing efficacy in clinical trials". The summit aims to accelerate HIV prevention research by building consensus on the future of HIV prevention clinical trial designs that are ethical, acceptable, inclusive, feasible, and efficient. It considered future clinical trials in the context of evolving epidemiology, standards of HIV prevention, and availability of funding and support for research. Specific considerations were made on different HIV prevention products, including antiretroviral drug-based pre-exposure prophylaxis (PrEP), broadly neutralizing antibodies (bNAbs) for HIV prevention, and HIV vaccines.



# Solutions for the future, by the scientists of today ... and other news.



**J**une 16th commemorates the 1976 Soweto uprising where learners protested against the then apartheid government's use of Afrikaans as the medium of instruction in black schools. Today in democratic South Africa, the day is commemorated as Youth Day. It serves as a critical reminder for the current generation of the sacrifices made by these brave young girls learners. Visit our digital platforms to learn more about some of our brilliant, young scientists and researchers.

by Sanele Mbeje and Marothi Letsoalo

**A** conversation on open, rigorous statistical modelling was hosted by CAPRISA's Statistics Department in collaboration with experts from the SAMRC and AHRI. Participants shared their expertise on rigorous statistical methodologies for modelling aggregated proportion and, or count data. CAPRISA statistician Sanele Mbeje presented a thought-provoking analysis of a SHAPE project that investigates ongoing challenges in HIV care, titled: Advanced HIV Disease, Treatment Interruptions and Viraemia, using five years of clinical data. The collaborative looked to identify the most optimal and "useful" model for this research.



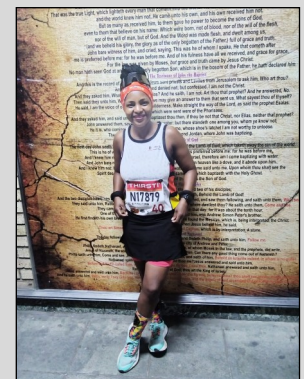
AIDS related stigma throughout South Africa. Gugu Dlamini was not ashamed and became a prominent advocate for disclosing HIV infection. She was interviewed on local radio and television, and stood up for her beliefs at rallies in a nearby stadium.

Gugu Dlamini paid a terrible price for her honesty, her principles, and her activism. Many people in the room to kill us outside, to throw down her friend, to fetch their dog it." The martyr in the fight of HIV and AIDS

One day, at Christmas in 1998, a friend invited Gugu Dlamini to a party and when she left her room it was the last time that her daughter Mandisa would see her.

**T**he community of Ntuzuma in eThekweni was the latest stop for the CAPRISA Community Engagement team. They shared provide an overview of CAPRISA studies engaged in conversations around the crucial intersection of communities and HIV and TB research. Stakeholders - the Gugu Dlamini Foundation, SANCA Durban, Ubhaqa Networks and Kasi to Kasi Boys Conference – also engaged on these talking points and were encouraged to communicate the information back to their networks. CAPRISA Community Advisory Board chairperson - Cebisile Nkosi - reiterated that scientific research without community participation is simply not possible. Significantly, these conversations took place next door to the home of the late HIV activist Gugu Dlamini. Dlamini died in 1998 following a brutal beating after publicly disclosing her HIV-positive status. She is remembered for her bravery and her work to encourage people to disclose their HIV status, banishing stigma and stereotype.

**R**esearch assistant at CAPRISA's Vulindlela research clinic - Khosi Madlala - completed her 4<sup>th</sup> Comrades Marathon. She crossed the finish line in a personal best time of 11 hours and 17 minutes. The proud mother of four said of her achievement, "It was not easy and the road was a bit brutal this year, but I conquered it with the support that my family, friends and colleagues had in me. It gave me the courage to push through the Ultimate Human Race". Khosi's advice to prospective runner's: "Nelson Mandela once said, "It always seems impossible until it's done" and I'm looking forward to the next six medals to complete my Comrades Marathon running journey". Congratulations Khosi!





## A selection of scientific papers published in 2025

- 166 Hemmerling A, Mitchell CM, Demby S, Ghebremichael M, Elsherbini J, Xu J, Xulu N, Shih J, Dong K, Govender V, Pillay V, Ismail N, Casillas G, Moodley J, Bergerat A, Brunner T, **Liebenberg L, Ngcapu S**, Mbanu I, Lagenaur L, Parks TP, Ndung'u T, Kwon DS, Cohen CR. Effect of the vaginal live biotherapeutic LACTIN-V (*Lactobacillus crispatus* CTV-05) on vaginal microbiota and genital tract inflammation among women at high risk of HIV acquisition in South Africa: a phase 2, randomised, placebo-controlled trial. *Lancet Microbe*. 2025 Jun;6(6):101037. doi: 10.1016/j.lanmic.2024.101037.
- 167 Seaton KE, Paez CA, Yu C, Karuna ST, Gamble T, Miner MD, Heptinstall J, Zhang L, Gao F, Yacovone M, Spiegel H, Dumond JB, Anderson M, Piwowar-Manning E, Dye B, Tindale I, Proulx-Burns L, Trahey M, Takuva S, Takalani A, Bailey VC, Kalams SA, Scott H, Mkhize NN, Weiner JA, Ackerman ME, McElrath MJ, Pensiero M, Barouch DH, Montefiori D, Tomaras GD, Corey L, Cohen MS, Huang Y, **Mahomed S**, Siegel M, Kelley CF; HVTN 140/HPTN 101 study team. Safety, pharmacokinetics, and neutralisation activity of PGDM1400LS, a V2 specific HIV-1 broadly neutralising antibody, infused intravenously or subcutaneously in people without HIV-1 in the USA (HVTN 140/HPTN 101 part A): a first-in-human, phase 1 randomised trial. *Lancet HIV*. 2025 Jun;12(6):e405-e415. doi: 10.1016/S2352-3018(25)00012-8.
- 168 Kistan G, Sebiloane M, Lombard C, **Godlwana Z, Desmond AC**, Clark R, Rooney JF, Gray G, **Moodley D**. Tenofovir Disoproxil Fumarate/Emtricitabine Prophylaxis Has No Effect on Bone Mineral Density and Bone Mineral Content in African Breastfeeding Women Receiving Pre-Exposure Prophylaxis for HIV. *J Acquir Immune Defic Syndr*. 2025 Mar 1;98(3):265-273. doi: 10.1097/QAI.0000000000003563.
- 169 Bhiman JN, Madzorera VS, Mkhize Q, Scheepers C, Hermanus T, Ayres F, Makhado Z, Moyo-Gwete T, Crowther C, Singh B, Fortuin M, Marinda E, Jooste S, Zuma K, Zungu N, Morris L, Puren A, Simbanyi L, Moyo S, **Moore PL**. Population shift in antibody immunity following the emergence of a SARS-CoV-2 variant of concern. *Sci Rep*. 2025 Feb 14;15(1):5549. doi: 10.1038/s41598-025-89940-y.
- 170 Matovu Kiweewa F, Stranix-Chibanda L, **Yende-Zuma N**, Dadabhai S, Owor M, **Hanley S**, Nyati M, Chinula L, Pettifor JM, Brummel SS, Aizire J, Taha TE, Brown TT, Fowler MG; Maternal Bone Health Study team. Bone mineral density changes in breastfeeding women with HIV on antiretroviral therapy in Eastern and Southern Africa. *AIDS*. 2025 Jun 1;39(7):848-856. doi: 10.1097/QAD.0000000000004148.
- 171 Chitneni P, Kriel Y, **Mathenjwa M**, Beesham I, Qiya B, Smith PM, Bosman S, Jaggernath M, Smit JA, Matthews LT. A qualitative exploration of sexually transmitted infection (STI) partner notification preferences and practices among women planning for pregnancy and offered HIV pre-exposure prophylaxis in Durban, South Africa. *BMC Public Health*. 2025 Feb 11;25(1):554. doi: 10.1186/s12889-025-21714-7.
- 172 Gangiah TK, Alisoltani A, Potgieter M, Bell L, Ross E, Iranzadeh A, McDonald Z, Allai I, Dabee S, Barnabas S, Blackburn JM, Tabb DL, Bekker LG, Jaspan HB, **Passmore JS**, Mulder N, **Masson L**. Exploring the female genital tract mycobiome in young South African women using metaproteomics. *Microbiome*. 2025 Mar 19;13(1):76. doi: 10.1186/s40168-025-02066-1.
- 173 Perugino CA, Liu H, Feldman J, Marbourg J, Guy TV, Hui A, Ingram N, Liebaert J, Chaudhary N, Tao W, Jacob-Dolan C, Hauser BM, Mian Z, Nathan A, Zhao Z, Kaseke C, Tano-Menka R, Getz MA, Senjobe F, Berrios C, Ofoman O, Manickas-Hill Z, Wesemann DR, Lemieux JE, Goldberg MB, Nündel K, Moormann A, Marshak-Rothstein A, Larocque RC, Ryan ET, Iafrate JA, Lingwood D, Gaiha G, Charles R, Balazs AB, Pandit A, **Naranbhai V**, Schmidt AG, Pillai S. Two distinct durable human class-switched memory B cell populations are induced by vaccination and infection. *Cell Rep*. 2025 Apr 1;44(4):115472. doi: 10.1016/j.celrep.2025.115472.

\*Continued from previous newsletter

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



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