



CAPRISA

CENTRE FOR THE AIDS PROGRAMME OF RESEARCH IN SOUTH AFRICA

Newsletter

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Reporter mycobacteriophage-based DST demonstrates potential for resistance detection in DR-TB patients

In this Issue

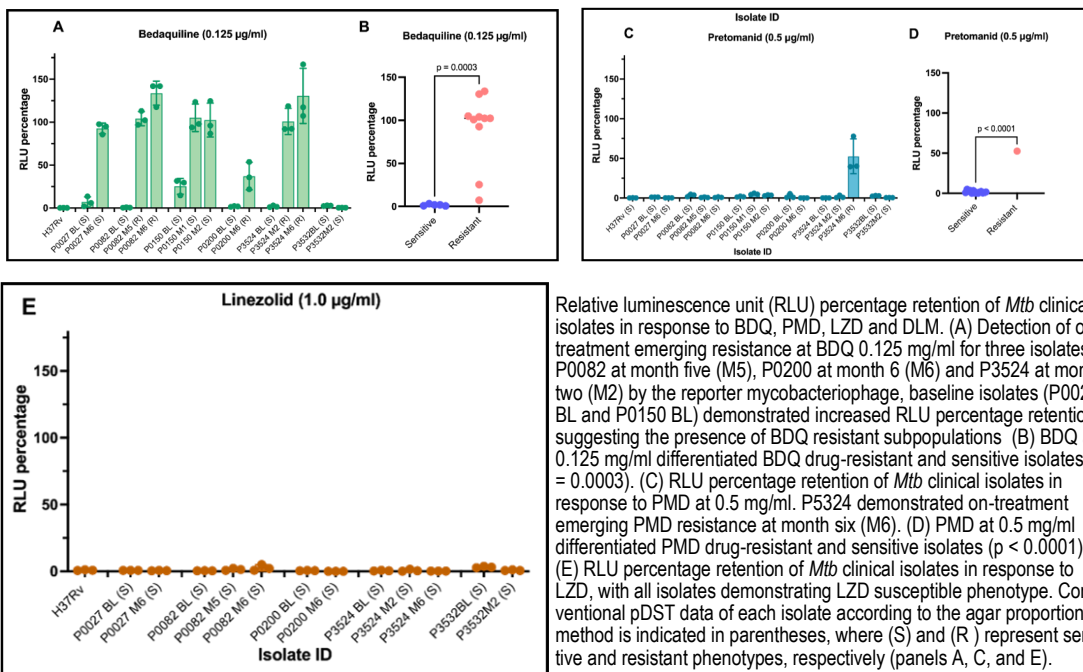
On Page 1, TM4::GeNL reporter mycobacteriophage for rapid phenotypic drug susceptibility testing (pDST) on serial *Mycobacterium tuberculosis* in DR-TB patients

On Page 2, Collaborating across the African continent

On Page 3, Building Africa's pandemic preparedness

Ongoing transmission of drug-resistant tuberculosis (DR-TB), combined with limited access to rapid diagnostics for resistance to key drugs in modern regimens, poses a major challenge to global TB control. Reporter mycobacteriophages provide a phenotypic solution enhanced by brighter luminescent reporters compatible with simple readouts in metabolically active mycobacterial cells. This study applied the novel TM4::GeNL reporter mycobacteriophage for rapid phenotypic drug susceptibility testing on *Mycobacterium tuberculosis* (*Mtb*) clinical isolates with baseline and treatment-emergent resistance to DR-TB drugs

(bedaquiline, pretomanid and delamanid), generating results within 48 hours from a positive culture. The study provided evidence on the utility of the TM4::GeNL mycobacteriophage to infect *Mtb* clinical isolates and distinguish between drug susceptible and resistant isolates, with results correlating well with conventional phenotypic drug susceptibility and whole genome sequencing data. These findings support TM4::GeNL reporter mycobacteriophage as a rapid, multiplexed alternative drug-susceptibility test for DR-TB and has a potential to accelerate detection of resistance to new and repurposed DR-TB drugs in clinical settings.



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For further reading: Ngema SL, Rajagopalan S, Perumal R, et al. Rapid detection of treatment-emergent resistance to bedaquiline and pretomanid in *Mycobacterium tuberculosis* using TM4::GeNL reporter mycobacteriophages. *Microbiology Spectrum*. 2026 Jul 15;1 (8): e0390025. <https://doi.org/10.1128/spectrum.03900-25>



A legacy celebrated - CISM turns 30!

Professor Salim and Quarraisha Abdool Karim joined the Manhiça Health Research Centre (CISM) to mark its 30th anniversary. Delivering the keynote address at the 5th Manhiça Foundation Global Health Symposium, CAPRISA Director, Professor Salim Abdool Karim said that the institution exemplifies Africa's ability to generate high-impact scientific knowledge to address public health challenges across the continent and beyond. In his address entitled, "A Research Response to 4 pandemics: AIDS, Covid-19, Mpox and Ebola" Abdool Karim spoke to the value of mutual independence and share responsibility in a time of pandemics, with a particular focus on his visit to the DRC earlier this year.



Pics (Left:) CISM Director Dr Francisco Saúte and Professor Salim Abdool Karim. Right: Professor Jahit Sacarlal (Dean of the Faculty of Medicine at Universidade Eduardo Mondlane (UEM) Professor Tufária Mussá (UEM), Dr. Ussene Hilario Isse (Minister of Health of Mozambique), Professors Salim & Quarraisha Abdool Karim and Eduardo Gudo, Director General (INS)

CAPRISA hosts the scientists of the future

CAPRISA's 2026 Young Adults Workplace Experience Programme welcomed Grade 11 and 12 learners who spent time with several teams at CAPRISA, from our Fellows in the laboratory to our Finance and Compliance Departments and data management among others. The annual programme encourages learners to make confident careers decisions by providing them with valuable insight into the world of science and research. The learners had the opportunity to explore study options that align with their aspirations, engage with professionals in various fields, and gain hands-on experience. - Siphesihle Chamane





Professor Kogie Naidoo has been awarded the Lotus FM, “Women of Substance” Award in the category of Health and Medicine. The annual award celebrates extraordinary women who inspire, uplift and make a meaningful impact in their communities and globally. Meaningfully the finalists were nominated by members of the community and the winners were voted in similarly too. On receiving the award, Professor Naidoo said, “This award serves as an inspiration to scientists and women in Africa and in South Africa, to inspire them to do more to find solutions that affects the poorest communities. We must bring equity to life-saving drugs and diagnostics to improve TB control in our communities.”

Building Africa's Pandemic Response: Whose job is it?

Africa is responding to an active Ebola outbreak in the Democratic Republic of the Congo, in a global health landscape that has shifted sharply beneath it. This webinar brings together a clinician leading the response in eastern DRC, a constitutional litigator from Kenya, a human rights lawyer from Physicians for Human Rights, and one of Africa's leading infectious disease epidemiologists, to examine what the outbreak reveals about preparedness, financing and accountability, and what a more self-reliant and equitable response would look like.



Professor Salim Abdool Karim
Director and Co-Founder, CAPRISA, and
CAPRISA Professor of Global Health, Columbia
University



Karen Naimer
Director of Programs,
Physicians for Human Rights



Chris Kerkering
Interim Director of Strategic Litigation
Katiba Institute



Dr Paluku Lwanzo Pablo
Médecin Chef de Zone, Zone de Santé de
Butembo, North Kivu, DRC



Moderator: Paula Fray
Publisher, bird story agency

CAPRISA and Physicians for Human Rights co-hosted a webinar looking at Africa's response to the ongoing Ebola outbreak in the Democratic Republic of the Congo, with the backdrop of communities in that country already strained by conflict, and in a global health landscape reshaped by shrinking donor financing. Director of Programs at PHR Karen Naimer said, “So on May 17, when the WHO declared the current outbreak of Ebola in DRC and the region a public health emergency of international concern, this occurred in a context that was already profoundly dire. the outbreak is now the deadliest in DRC's history. It's now the second largest Ebola outbreak on record, and it is spreading faster than any previous Ebola outbreak. More than 5,500 people have now been infected, and more than 2,600 people have died across 6 provinces and 55 health zones in DRC.”

Interim Director of Strategic Litigation, Katiba Institute Chris Kerkering spoke to the halted construction of a controversial United States backed Ebola quarantine and treatment facility at the at the Laikipia Air Base in Nanyuki in Kenya, exclusively to monitor and treat U.S. citizens exposed to the Bundibugyo Ebola virus strain. Kerkering shared his first hand experience involving the halted construction of a controversial U.S.-backed Ebola quarantine and treatment facility in Nanyuki in Kenya, intended exclusively to monitor and treat U.S. citizens exposed to the Bundibugyo Ebola virus strain. Kerkering said, “Doing the litigation kept this on the front page for weeks. It gave the Lake Keepia County and the residents a voice where they could say, this is harming us. This is a threat to us. this is not about whether, as a continent, we can build a pandemic response, but whether we can do it in a way that protects health care workers, that protects the community, and keeps people safe. And right now, I think what the litigation shows is that is not something that the governments are interested in.”

Other panelists included Dr Paluku Lwanzo Pablo (Médecin Chef de Zone, Zone de Santé de Butembo, DRC) and Professor Salim Abdool Karim. Catch the recording here if you missed it! https://youtu.be/k-eE_3VEH_E



A selection of scientific papers published in 2026

- 51 **Abdool Karim Q, Mohan J.** Professor Solomon Benatar's legacy in transforming bioethics in global health research. *S Afr Med J.* 2026 Aug 6;116(6b):e3843. doi: 10.7196/SAMJ.2026.v116i6b.3843
- 52 Mphothulo N, **Loveday M.** Designing and evaluating the acceptability of a psychosocial and socio-economic support package for people with drug-resistant tuberculosis in Johannesburg, South Africa. *PLoS One.* 2026 Mar 3;21(3):e0343154. doi: 10.1371/journal.pone.0343154
- 53 Barth J, **Abdool Karim S,** Barnhill A, Esmonde K. "The win-win is we need to talk about it": how US and Canadian food system actors navigate trade-offs in food system transformation. *Agric Human Values.* 2026;43(3):131. doi: 10.1007/s10460-026-10927-0
- 54 Gaur AH, Baltrusaitis K, Capparelli EV, Moye JH, Yin DE, Masheto G, Buisson S, Harrington CM, Marzinke MA, Lowenthal ED, Scheckter R, Ace A, Ward S, Milligan R, Whitson K, Huang J, Cheung SYA, Best BM, Townley E, Roberts G, Kakuda TN, Birmingham E, Mathiba SR, Aupibul L, Korutaro V, Smith C, Patel F, **Moodley E,** Bolton-Moore C; IMPAACT 2017 Collaborators; IMPAACT 2017 Team. Safety, antiviral activity, and pharmacokinetics of long-acting injectable cabotegravir-rilpivirine in virologically suppressed adolescents living with HIV-1 (IMPAACT 2017/MOCHA): 48-week results of a multinational, phase 1/2, single-arm study. *Lancet HIV.* 2026 Feb;13(2):e85-e94. doi: 10.1016/S2352-3018(25)00242-5
- 55 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
- 56 **Loveday M,** Clarence E, Hlangu S, Singh N, Chotoo S, Brust JCM, Waitt C, Court R, Furin J. Pregnant Women With Multidrug-Resistant/Rifampicin-Resistant Tuberculosis and the All-Oral 6-Month Regimen: Experiences From a Patient Series in South Africa. *Clin Infect Dis.* 2026 May 20;82(5):e1063-e1071. doi: 10.1093/cid/ciag032. Erratum in: *Clin Infect Dis.* 2026 Jul 25:ciag448. doi: 10.1093/cid/ciag448
- 57 Ayres F, Lambson B, Mkhize NN, Makhado Z, Mhlanga D, Serage R, **Moore PL,** Wibmer CK, Moyo-Gwete T. Defining the mechanism of cross-reactivity for a SARS-CoV-2 Beta-elicited antibody toward omicron sub-lineages. *Structure.* 2026 Apr 2;34(4):552-561.e4. doi: 10.1016/j.str.2026.01.006
- 58 Zhang Y, Bradshaw CS, **Masson L,** Smith E, Vodstrcil LA, Ong JJ. The cost-effectiveness of male-partner treatment to prevent recurrence of bacterial vaginosis. *Sci Rep.* 2026 Feb 18;16(1):9493. doi: 10.1038/s41598-026-39160-9
- 59 Khoza N, **Desmond AC, Moodley D.** Adherence to Oral HIV Pre-exposure Prophylaxis During Pregnancy and the Post-partum Period: Lessons Learned in an Open-Labelled Clinical Trial. *AIDS Behav.* 2026 Apr;30(4):1097-1108. doi: 10.1007/s10461-025-04952-z

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



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