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Our feature story this month focuses on a review by researchers at CAPRISA and the University of Oxford which found no evidence that lopinavir/ritonavir improved COVID-19 mortality.

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CENTRE FOR THE AIDS PROGRAMME OF RESEARCH IN SOUTH AFRICA

Newsletter

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Antiretroviral drug lopinavir, boosted with ritonavir, not effective as treatment for COVID-19

The antiretroviral drug Lopinavir/Ritonavir, commonly used in second-line HIV treatment regimens in South Africa, is not an effective treatment for COVID-19 according to a collaborative team of researchers at CAPRISA and the University of Oxford, in the UK.

The study, *The protease inhibitor lopinavir, boosted with ritonavir, as treatment for COVID-19: a rapid review*, was published in the journal, *Antiviral Therapy*.

The authors conducted a rapid review of clinical trials and observational studies which compared COVID-19 outcomes between people who did and did not receive lopinavir/ritonavir. They searched multiple databases and assessed the quality of studies using the GRADE criteria.

The authors found two large, high-quality randomised controlled trials of patients hospitalized with COVID-19, both of which found no evidence that lopinavir/ritonavir improved COVID-19 mortality.

Gastrointestinal side effects were more common among people who received lopinavir/ritonavir.

Three smaller, lower quality randomized controlled trials also found no evidence of a benefit in time to recovery or time to viral clearance in hospi-

talized patients. The authors found no results from trials of lopinavir/ritonavir to treat COVID-19 in the community.

Preliminary evidence from 2005 suggested that lopinavir/ritonavir may be an effective treatment for SARS, and so at the beginning of the SARS-CoV-2 pandemic, there was a lot of interesting in lopinavir/ritonavir as a treatment for COVID-19, explained Dr Jienchi Dorward, Research Clinician and CAPRISA honorary scientist, who led the study.

“Our rapid review clearly shows that lopinavir/ritonavir is not beneficial for patients hospitalized with COVID-19. Further evidence is needed regarding earlier treatment among people with less severe symptoms, and results from community based trials are expected in the coming months.”



For further reading see:

Dorward J, et al. *The protease inhibitor lopinavir, boosted with ritonavir, as treatment for COVID-19: a rapid review. Antiviral Therapy* 2020; 25(7):365-376. <https://pubmed.ncbi.nlm.nih.gov/33704086/>



Head of CAPRISA’s Community Programme aims to bridge the gap between scientists and communities

CAPRISA welcomes Mr Patrick Mdletshe (*right in the photo*), a seasoned health advocate and national deputy chairperson of the Treatment Action Campaign (TAC), as Head of the CAPRISA Community Programme. Mdletshe describes himself as a ‘catalyst for social justice striving for social change’ bringing a wealth of experience in advocacy, community engagement and activism that spans over two decades. He explained that his primary aim is to ‘bridge the gap between scientists and communities’.

Mdletshe has successfully led several major community projects and has extensive practical experience and knowledge of health systems in South Africa. As an advocate for equal access to health care, Mdletshe engages directly with communities to advance quality and equitable health care services in the country. “I see my role to integrate and position CAPRISA at community levels where CAPRISA’s presence can be seen and felt through various community programs as part of our community investment to those communities we work with,” said Mdletshe.

“Patrick Mdletshe brings two decades of experience in advocacy, community engagement and activism to CAPRISA,” says Professor Kogie Naidoo, Deputy Director of CAPRISA. “His skill in leading engagement and consultation with local, national and international civil society groups, his knowledge as a health advocate and experience with both monitoring and strengthening public health systems brings immense strength to CAPRISA’s community programme.”

Mdletshe, who hails from KwaZulu-Natal, has spent most of his working career in Gauteng where he gained extensive experience and knowledge as a health advocate, leading engagement and consulta-



tion with various civil society groups and key stakeholders, monitoring and strengthening the public health system. He has worked as a field researcher - conducting community research whilst at TAC and Section27.

He has held several leadership positions and currently also serves as co-chair in the KwaZulu Natal Provincial Council on AIDS (KZN PCA), and he is Chairperson of the KZN Civil Society. Mdletshe attended the US International Visitors Leadership Program (IVLP) and spent four weeks in the US learning about the health care system and the role of civil society in responding to global challenges of the 21st century.

Chairman of kENUP Foundation visits CAPRISA



The Executive Chairman of the kENUP Foundation visited CAPRISA on 12th August and held discussions on CAPRISA HIV prevention technologies under development. In the photo from left to right: Dr Sharana Mahomed, Research Clinician, Mr Holm Keller, Executive Chairman and Director kENUP Foundation, Profs Salim & Quarraisha Abdool Karim of CAPRISA.



Human rights in the response to Covid-19: Are we getting it right?

Justice Edwin Cameron, Prof Salim Abdool Karim and Mr Mark Heywood



Photo (L-R): Justice Edwin Cameron, former Constitutional Court Judge; Prof Salim Abdool Karim, Director CAPRISA; and Mr Mark Heywood, Editor of the *Maverick Citizen*.

On Tuesday 24th August, Professor Salim Abdool Karim and Justice Edwin Cameron, former Constitutional Court Judge, discussed human rights in the Covid-19 pandemic during a webinar hosted by civil rights activist and editor of the *Maverick Citizen*, Mark Heywood.

The discussion titled, *Human rights in the response to Covid-19: Are we getting it right*, touched on several critical areas of the South African response, especially on approaches to vaccination. "The future of the pandemic lies in the creation of new variants and in our ability to identify new variants, and to look for them, we must test. "Every person who is

not vaccinated runs an increased risk of creating new variants. It is about the whole globe. The original strain of the coronavirus came into one person and spread to the whole world. No-one is an island in the pandemic," Abdool Karim warned.

Listen to the discussion here: <https://www.youtube.com/watch?v=bmbDhFxagw> Click on the link below to read the news report of the webinar in *The Daily Maverick*. <https://www.dailymaverick.co.za/article/2021-08-25-should-anti-vaxxers-working-in-key-sectors-submit-to-mandatory-weekly-covid-19-tests/>

Congratulations to our graduates!

Congratulations to Alaine Marsden (*top in the photo*) and Itai Ncube (*bottom*) at the National Institute for Communicable Diseases (NICD, who graduated with their MSc degrees from the University of the Witwatersrand in July.



Alaine was supervised by Dr. Cathrine Scheepers and Prof. Lynn Morris and her MSc focused on characterizing antibody genetic diversity in Black Women from Kwazulu-Natal.



Itai's MSc focused on characterizing IgA1 and IgG1 constant region diversity in South Africans, supervised by Dr. Cathrine Scheepers, Prof. Penny Moore, Dr. Bronwen Lambson and Dr. Clare Cutland.

Recognition as a vaccine luminary: Dr Simone Richardson

Dr Simone Richardson, post doctoral fellow at the NICD received recognition as a vaccine luminary by the UK government for her partnership with Project Halo (<https://teamhalo.org>).



As part of this initiative, Simone draws cartoons of important vaccine concepts to dispel COVID-19 vaccine hesitancy. Team Halo consist of a group of scientists and healthcare professionals from around the world, working to end the COVID-19 pandemic by volunteering their time to address vaccine concerns and misinformation.

The initiative was established as part of the United Nations Verified initiative in partnership with the Vaccine Confidence Project at the University of London's School of Hygiene and Tropical Medicine.



Scientific papers published in 2021

- 41* Miot J, Leong T, Takuva S, Parrish A, **Dawood H**. Cost-effectiveness analysis of flucytosine as induction therapy in the treatment of cryptococcal meningitis in HIV-infected adults in South Africa. *BMC Health Services Research* 2021; 21(1):305. doi: 10.1186/s12913-021-06268-9.
- 42 Atkins S, Banerjee AT, Bachynski K, **Daftary A**, Desai G, Gross A, Hedt-Gauthier B, Mendenhall E, Meier BM, Nixon SA, Nolan A, Palermo TM, Phelan A, Pyzik O, Roach P, Sangaramoorthy T, Standley CJ, Yamey G, Abimbola S, Pai M. Using the COVID-19 pandemic to reimagine global health teaching in high-income countries. *BMJ Global Health* 2021; 6(4):e005649. doi: 10.1136/bmjgh-2021-005649.
- 43 Engelbrecht S, Delaney K, Kleinhans B, Wilkinson E, Tegally H, Stander T, van Zyl G, Preiser W, **de Oliveira T**. Multiple Early Introductions of SARS-CoV-2 to Cape Town, South Africa. *Viruses* 2021; 13(3):526. doi: 10.3390/v13030526.
- 44 Sharma M, Mudimu E, Simeon K, Bershteyn A, Dorward J, Violette LR, Akullian A, **Abdool Karim SS**, Celum C, **Garrett N**, Drain PK. Cost-effectiveness of point-of-care testing with task-shifting for HIV care in South Africa: a modelling study. *Lancet HIV* 2021; 8(4):e216-e224.
- 45 **Abdool Karim SS**. Vaccines and SARS-CoV-2 variants: the urgent need for a correlate of protection. *Lancet* 2021 April; 397(10281):1263-1264.
- 46 Lockman S, Brummel SS, Ziemba L, Stranix-Chibanda L, McCarthy K, Coletti A, Jean-Philippe P, Johnston B, Krotje C, Fairlie L, Hoffman RM, Sax PE, Moyo S, Chakhtoura N, Stringer JS, Masheto G, Korutaro V, Cassim H, Mmbaga BT, João E, **Hanley S**, et al. Efficacy and safety of dolutegravir with emtricitabine and tenofovir alafenamide fumarate or tenofovir disoproxil fumarate, and efavirenz, emtricitabine, and tenofovir disoproxil fumarate HIV antiretroviral therapy regimens started in pregnancy (IMPAACT 2010/VESTED): a multicentre, open-label, randomised, controlled, phase 3 trial. *Lancet* 2021; 397(10281):1276-1292.
- 47 **Pillay K**, Lewis L, Rambaran S, Yende-Zuma N, Archary D, Gengiah S, Govender D, Hassan-Moosa R, Samsunder N, **Abdool Karim SS**, McKinnon LR, Padayatchi N, Naidoo K, Sivo A. Plasma Biomarkers of Risk of Tuberculosis Recurrence in HIV Co-Infected Patients from South Africa. *Frontiers in Immunology* 2021; 12:631094. doi: 10.3389/fimmu.2021.631094
- 48 **Loveday M**, Hughes J, Sunkari B, Master I, Hlangu S, Reddy T, Chotoo S, Green N, Seddon JA. Maternal and infant outcomes among pregnant women treated for multidrug/rifampicin-resistant tuberculosis in South Africa. *Clinical Infectious Diseases* 2021;72(7):1158-1168.
- 49 Treffry-Goatley A, Moletsane R, **de Oliveira T**, Seeley J, **Lessells R**. Using the Emanuel Framework to Explore the Ethical Issues Raised in a Participatory Visual Research Project in Rural South Africa. *Journal of Empirical Research on Human Research Ethics* 2021 Feb-April; 16(1-2):3-14. doi: 10.1177/1556264620987034. <https://pubmed.ncbi.nlm.nih.gov/33550880/>
- 50 **Mzobe GF**, **Ngcapu S**, Joubert BC, Sturm WA. Differential expression of groEL-1, incB, pyk-F, tal, hctA and omcB genes during Chlamydia trachomatis developmental cycle. *PLoS One* 2021 (4):e0249358. doi: 10.1371/journal.pone.0249358.

*continuation from previous newsletter

Abstract submissions for the International Workshop on HIV Transmission 2021

SPEAKER HIGHLIGHTS



Christophe Fraser, PhD
PANGEA, University of Oxford, United Kingdom
Emerging Trends on HIV Transmission in Africa



Monica Gandhi, MD, MPH
University of California San Francisco, United States
Point-of care Adherence Testing for HIV Prevention and Treatment



Rahima Benhabbour, PhD, MSc
University of North Carolina, United States
Longer-acting Cabotegravir for HIV Prevention



Paolo Lusso, MD, PhD
NIAID/NIH, United States
RNA-based Vaccines for HIV

There are **4 weeks** left until the deadline for **abstract submission** for the International Workshop on HIV Transmission 2021. **Deadline: Friday, 17 September 2021**

Abstract Link: <https://virology.eventsair.com/PresentationPortal/Account/Login?ReturnUrl=%2FPresentationPortal%2Fhivtransmission2021%2Fabstracts>

Full Program: <https://academicmedicaleducation.com/hiv-transmission-2021>



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