



CAPRISA

CENTRE FOR THE AIDS PROGRAMME OF RESEARCH IN SOUTH AFRICA

Newsletter

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Study explores oral PrEP Initiation and Adherence among young women in KwaZulu-Natal South Africa

In this Issue

On page 1 we feature a recent CAPRISA study that highlights the urgent need for less user-dependent HIV prevention options for young women.

On page 2 we congratulate Prof Salim Abdool Karim as the recipient of the Discovery Health Lifetime Leadership Award, & report on the appointment of CAPRISA's Head of Statistics on the Scientific Advisory Board of the Vaccine & Immunology Statistical Center (VISC).

Prof Salim Abdool Karim's participation in the WHO Science Council meeting held in Geneva, and in the Euroscience Open Forum 2022 held in Leiden, features on page 3. We also congratulate Dr Nivashnee Naicker, CAPRISA Research Clinician, who completed her Vaccinology masters degree.

On page 4 we report on the uMlazi Research site recognition by IMPAACT as the International Clinical Research Site for excellence in Data Management; and report on the NGS-SA awards.

A CAPRISA implementation study of oral PrEP initiation and adherence, and the impact of oral PrEP on HIV incidence in young women showed there is a critical need to identify and address barriers to oral PrEP initiation, adherence and sustained use.

The study entitled, 'Prospective study of oral pre-exposure prophylaxis initiation and adherence among young women in KwaZulu-Natal, South Africa,' published in the *Journal of the International AIDS Society*, highlighted the urgent need for less user-dependent HIV prevention options for young women in Africa, who are unable or unwilling to take daily oral PrEP.

The study enrolled 425 HIV negative, sexually active women aged 18-30 years, and followed for approximately 10 months. Oral PrEP was offered as part of a comprehensive HIV prevention

package. Adherence to oral PrEP was measured using pill counts and tenofovir-diphosphate (TFV-DP) levels.

62% of participants initiated oral PrEP; 25% of them stopped using oral PrEP by 3 months and 50% by 12-months.

Although, median pill count adherence was 90%, TFV-DP was only detected in 13% of samples tested. In total, 11 women seroconverted yielding an HIV incidence rate of 2.81 per 100 person-years. Nine of 11 seroconverters had initiated oral PrEP, however all showed drug levels equivalent to taking one to zero tablets per week (see figure below).

In conclusion, despite initiation of oral PrEP in the study, pill count adherence was high, but tenofovir drug levels were poor, with more than half of the women who initiated oral PrEP discontinuing use within 12 months.

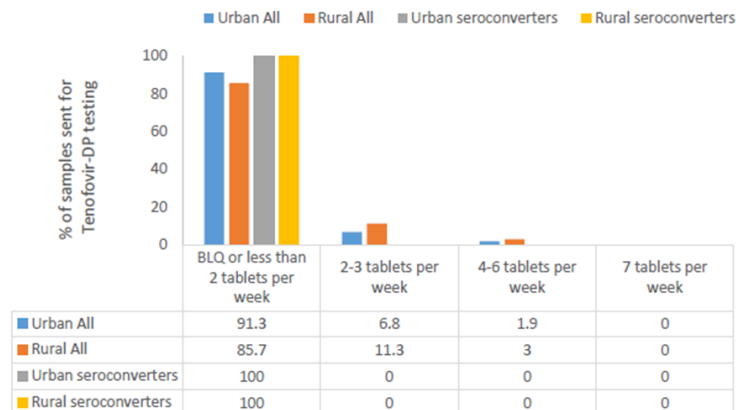


Figure: Adherence to PrEP measured by Tenofovir-DP levels seen amongst young women in the CAPRISA 082 study

For further reading see: Mansoor LE, et al. Prospective study of oral pre-exposure prophylaxis initiation and adherence among young women in KwaZulu-Natal, South Africa. *J Int AIDS Soc. 2022; 25(7):e25957. doi: 10.1002/jia2.25957. https://pub-med.ncbi.nlm.nih.gov/35785472/*

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Discovery Health Lifetime Leadership Award

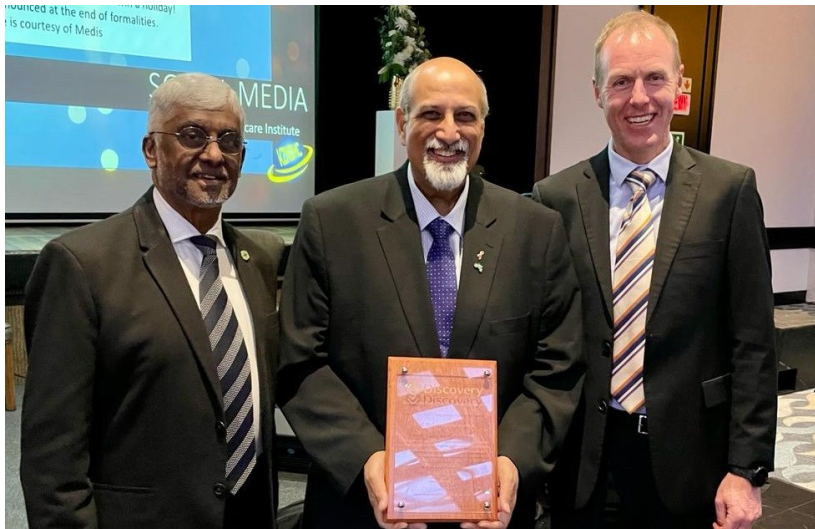


Photo above: (L-R) Dr Morgan Chetty KZN Doctors Healthcare Coalition, Prof Salim Abdool Karim Director, CAPRISA and Dr Ron Whelan Chief Commercial Officer, Discovery Health

Professor Salim Abdool Karim received the distinguished 2022 Discovery Health Lifetime Leadership Award for his global thought leadership in the research and scientific field, from Discovery and the KwaZulu-Natal Doctors Healthcare Coalition. The presentation was made at the KZN Doctors Healthcare Coalition conference gala dinner on 16th July, in Durban.

“This is in recognition of the leadership that you have demonstrated over many decades,” said Dr Maurice Goodman, Chief Medical Officer of Discovery Health. “Most particularly, however, we would like to recognise your leadership role during this very challenging period for health systems globally and in South Africa.”

“Now, more than ever, do our healthcare systems require leaders of your calibre to ensure that our healthcare systems emerge with greater resilience in this post-pandemic era,” said Goodman.

Dr Nonhlanhla Yende-Zuma invited to serve on the SAB of the Vaccine & Immunology Statistical Center

Dr Nonhlanhla Yende-Zuma (PhD), CAPRISA’s Head of Statistics has been invited to serve on the Scientific Advisory Board (SAB) of the Vaccine & Immunology Statistical Center (VISC), in the Vaccine and Infectious Disease Division (VIDD), of The Fred Hutchinson Cancer Center.

VISC partners with world-class research programs and immunological laboratories to tackle global public health initiatives in infectious diseases including tuberculosis, COVID-19, malaria, and HIV. Yende-Zuma said she was ‘honoured and privileged to be given an opportunity to work with brilliant Biostatisticians and Scientists.’ “In my role as a board



member of VISC, I’m going to function as an ambassador to help connect VISC faculty to statistical research communities in Africa.”

Yende-Zuma served as the protocol Statistician for the Sisonke Phase 3B open label implementation study assessing the safety and effectiveness of the COVID-19 vaccine and has substantial expertise in the design and analyses of randomised controlled trials, developing

research protocols, statistical analyses of observational studies, and statistical analyses plan (SAP) development. She is a statistical advisor for *Lancet HIV* and *Lancet Global Health* journals.



WHO Science Council discuss innovations in science and technology relevant for Global Health

CAPRISA's Professor Salim Abdool Karim, Member of the WHO Science Council participated in the WHO Science Council in-person meeting held on 11-12 July in Geneva.

Dr Tedros Ghebreyesus, Director General of the WHO addressed the meeting highlighting the central importance of science in the work of the WHO.

The meeting discussed the WHO Global Health foresight initiative focusing on innovations and guiding principles for a new model of global health R&D. Opportunities for collaboration with International Science Council were explored as well.

At the end of the meeting, the Director-General formally released the WHO Science Council's first report, which focused on the importance of Genomics.

Science Council members participated in the roundtable discussions to share ideas on innovations in science and technology relevant for Global Health over the next 5 to 20 years.



Photo: (L-R) Professor Harold Varmus, Lewis Thomas University Professor of Medicine at the Meyer Cancer Center of Weill Cornell Medicine, USA; Dr Soumya Swaminathan, Chief Scientist WHO; Prof Jean William (Bill) Pape Director and Founder of GHEKIO, Haiti ; Prof Salim Abdool Karim, Director CAPRISA; Prof Adeeba Kamarulzaman, Professor of Medicine & Infectious Diseases, University of Malaya; & Dr Yongyuth Yuthavong Senior Specialist, National Centre for Genetic Engineering and Biotechnology, NSTDA, Thailand

ESOF 2022: Crossing Borders, Engaged Science, Resilient Societies



Prof Salim Abdool Karim, represented the International Science Council in joining 10 eminent speakers at the opening session of the 10th edition of the EuroScience Open Forum (ESOF) 2022 in a discussion of the theme "Crossing Borders, Engaged Science, Resilient Societies", held in Leiden Netherlands from 13-16 July. ESOF is the largest biennial interdisciplinary meeting on science and innovation in Europe, for and with Society. Abdool Karim was also an invited speaker in a session entitled: *Rolling the dice or planning ahead with confidence? New COVID-19 Report Maps out our most realistic, pessimistic and optimistic scenarios*, held on Friday 15th July. His presentation, *Science communication in South Africa during the Covid-19 pandemic*, highlighted the challenges of giving scientific advice in the midst of minimal information & uncertainty. Science is no longer confined to ivory towers, he explained. Language and idiom of epidemiology is now in everyday discussions and in the media.

Clinical Researcher completes Vaccinology masters degree

We congratulate Dr Nivashnee Naicker, CAPRISA Research Clinician and Site Principal Investigator of the Ensemble, Sisonke, Ubuntu, and SHERPA Trials at CAPRISA eThekweni Research clinic who completed the International Master in Vaccinology (IMVACC) degree at the University of Lausanne, Switzerland, achieving perfect scores in her final exam and Masters thesis defense. Naicker was one of 6 South African students who received a schol-



arship from the SAMRC to study for the IMVACC. "It was a phenomenal experience to study vaccinology against a backdrop of an ongoing global pandemic and to simultaneously run several COVID-19 vaccine trials," said Naicker. She explained the Masters thesis component offered her the opportunity to pursue research in HPV, "which is an area of research that I had been planning to undertake for some time," she said.



uMlazi Research site recognised for excellence in Data Management

CAPRISA uMlazi Research site Data Management team are responsible for transmitting data collected at study visits and responding to data queries from the Data Management Centre (DMC) for the IMPAACT (International Maternal, Paediatric, Adolescent AIDS Clinical Trial Network) network studies. Data Management team accurately and timeously capture data collected at study visits and address data queries within the stipulated time frame.

At the 2022 IMPAACT annual meeting a hybrid conference held in Washington Hilton Hotel, Washing D.C. USA from 28 June -1 July, the DMC team received an award in recognition of best International Clinical Research site with excellent data management services.

The presentation was made by Philippa Musoke, MD IMPAACT Network Vice Chair to Dr Mohern-dran Archary.



Professor Daya Moodley, uMlazi Site Director, presented CAPRISA recognition awards to the Data Management team on the 13th of July in recognition of their exceptional accomplishment in the IMPAACT network studies.



In the photo above (L-R): Mr Samukelo Boo, Quality Control Officer; Ms Natasha Pillay, Quality Control Manager; Ms Linda Ngaleka, Data Manager; Mr Ntuthuko Khumalo, Data Capturer

Award for NGS-SA



Photo: (L-R) Dr Jinal Bhiman, NICD & Mr Buti Manamela, Deputy Minister for Higher Education, Science and Innovation

The National Science and Technology Forum-South32 awards were held as a hybrid event with a venue in Cape Town and another in Johannesburg and the entire Gala dinner streamed live on YouTube.

The Data for Research Award, for an outstanding contribution to science, engineering and technology (SET), is given to an individual or team that advanced the availability, management and re-use of research data.

At the 2022 NSTF-South32 Awards, the Network for Genomics Surveillance in South Africa (NGS-SA) was awarded for bringing together virologists, scientists, bioinformaticians and clinicians in an engagement that resulted in one of the most successful genomic surveillance networks globally, having detected the Beta and Omicron SARS-CoV-2 variants of concern.

Gordon Research Conference on Immunochemistry and Immunobiology



The NICD's Dr Dale Kitchin (right in the photo) and PhD student Boitumelo Motsoeneng, attended and presented posters at the Gordon Research Conference (GRC), held from 5th-

10th June in Castelldefels, Spain. The meeting was chaired by Facundo Batista (Ragon Institute of MGH, MIT, and Harvard, United States) and Alexander Rudensky (Memorial Sloan Kettering Cancer Center, United States). The meeting covered diverse topics in immunology with a particular focus on the activation of immune cells during infection and vaccination, neuroimmunology and tumour immunology.

Boitumelo also attended the associated Gordon Research Seminar from 4th-5th June, prior to the main meeting, which focused on giving students and post-docs a solid grounding in interdisciplinary approaches in immunology and the application of modern analytic tools in the context of vaccines, diagnostics, and immunotherapeutics.



A selection of scientific papers published in 2022

- 55 **Mansoor LE, Lewis L, Naicker CL, Harkoo I, Dawood H, Naidoo K, Gengiah TN, Samsunder N, Beesham I, Abdool Karim SS, Abdool Karim Q.** Prospective study of oral pre-exposure prophylaxis initiation and adherence among young women in KwaZulu-Natal, South Africa. *Journal of the International AIDS Society* 2022; 25(7):e25957. doi: 10.1002/jia2.25957.
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- 59 **Soogun AO*, Kharsany ABM***, Zewotir T, North D, Ogunsakin RE. Identifying Potential Factors Associated with High HIV viral load in KwaZulu-Natal, South Africa using Multiple Correspondence Analysis and Random Forest Analysis. *BMC Medical Research Methodology* 2022; 22(1):174. doi: 10.1186/s12874-022-01625-6
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A selection of scientific papers published in 2022

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