



In this issue...

In our feature article this month we summarise the results from a paper recently published in *JAIDS* showing that tenofovir gel has no impact on post-infection CD4 counts or the rate of CD4 decline in women who become infected while on PrEP.

On page 2, we highlight the 2014 UKZN World AIDS Day forum, which focused on Women, Girls and HIV and report on CAPRISA's visit to the Centres for Disease Control in Sichuan, a province in south west China.

The establishment of the MRC-CAPRISA HIV-TB Pathogenesis and Treatment Research Unit and Dr Ahmed Kathrada's visit to CAPRISA is featured on page 3.



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HIV Disease Progression in women who participated in CAPRISA 004

While antiretroviral pre-exposure prophylaxis prevents HIV acquisition, it is not known if its use alters HIV disease progression. This study by Garrett et al assessed whether tenofovir gel impacted on disease progression among 83 women who acquired HIV infection while participating in the CAPRISA 004 tenofovir gel trial.

After adjusting for clinical and behavioural characteristics and protective HLA alleles, the authors found that the mean viral loads within the first two years were higher in women assigned to the tenofovir gel arm than to the placebo gel arm (4.51 vs 4.02 log copies/ml, $p=0.013$).

However, among women with vaginal tenofovir measurements, mean viral loads were similar in those with detectable versus undetectable levels, and there was no significant difference in the overall mean CD4 counts in women assigned to tenofovir and placebo. Re-

assuringly, the proportion of women who reached a CD4 count of <350 , was also similar; 40.6% in the tenofovir gel arm and 37.3% in the placebo arm.

In summary, tenofovir gel had no impact on post-infection CD4 counts or the rate of CD4 decline. While seroconvertors from the tenofovir arm experienced higher viral loads, this did not result in a need for earlier antiretroviral therapy. It is possible, that the increased viral load levels were

caused by a slight delay in the antibody response, which could be related to the pre-exposure prophylaxis, however this needs further investigation.

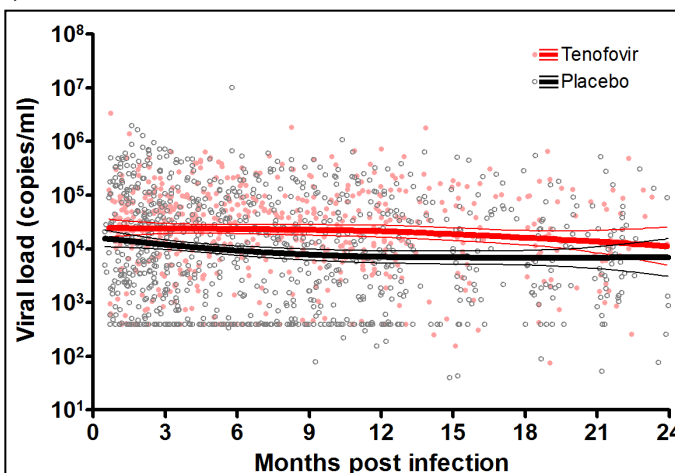


Figure: Scatterplot of viral load measurements within the first two years of HIV infection, with a Loess smoothing line and 95% confidence intervals, stratified by CAPRISA 004 tenofovir gel and placebo arms

For further reading see:

Garrett N, Werner L, Naicker N, Naranbhai V, Sibeko S, Samsunder N, Gray C, Williamson C, Morris L, Abdool Karim Q, Abdool Karim SS. HIV Disease Progression in Seroconvertors from the CAPRISA 004 Tenofovir Gel Pre-exposure Prophylaxis Trial. *JAIDS* 2014; doi: 10.1097/QAI.0000000000000367



Stigma and discrimination remain a challenge

At a forum to commemorate World AIDS Day, eminent HIV scientists, educators and advocates called for the acceleration of women empowerment programmes to reduce the high rate of HIV infection in adolescent females.

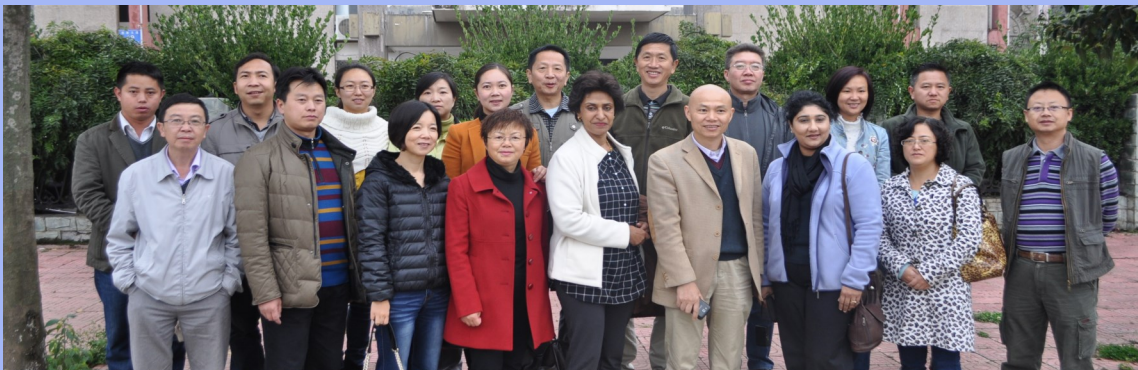
The multi-institutional panel discussion held on 26 November at the University of KwaZulu-Natal brought together experts from CAPRISA, MRC, HEARD, HST, UKZN and K-RITH to share insights on the current size and shape of the HIV epidemic. The panellists examined why a gender-conscious response to HIV is necessary, how to reduce the burden of HIV on women and girls, and good practice models for protecting women's human sexual and reproductive health rights.

The panellists agreed that women and girls still bear the disproportionate burden of HIV/AIDS from an earlier age than men due to gender roles and economic dependence. The experts were unanimous that local community partnerships had to be strengthened to avert new infections.



Back Row (L-R): Prof Quarraisha Abdool Karim (CAPRISA); Prof Miriam Adhikari (Health Sciences); Jennifer Maroa (K-RITH); Front Row (L-R): Andrew Gibbs (HEARD); Neetha Morar (MRC); and Sibongile Shezi (HST).

Co-operation with Sichuan CDC



Dr Nesri Padayatchi (front row centre) and Dr Kogie Naidoo (front row third from the right) with members of the Sichuan Provincial CDC, the Prefecture and County CDC and the mayor of Butou County (in the red coat).

Dr Nesri Padayatchi, CAPRISA's Deputy Director, and Dr Kogie Naidoo, Head of CAPRISA's Treatment Programme, visited various health facilities, research projects and laboratories in Chengu and in Botou County in Xichang as guests of the Sichuan Provincial Centre for Disease Control (CDC). During the

visit Dr Padayatchi and Naidoo delivered lectures to scientists and research clinicians employed by the CDC and participated in a number of information exchange sessions. The visit symbolised the implementation of the co-operation agreement signed by the Sichuan CDC and CAPRISA earlier this year.



MRC-CAPRISA HIV-TB Pathogenesis and Treatment Research Unit

The establishment of the MRC-CAPRISA HIV-TB Pathogenesis and Treatment Research Unit was officially announced by Professor Glenda Gray, President of the South African Medical Research Council (MRC), on 27 November.

The Unit will address the number one cause of death in HIV infected patients, in a setting where HIV infection is the largest single contributor to South Africa's mortality burden and is among the highest research priorities in the current MRC Strategic Plan. The overarching research theme of this unit is the interaction between HIV and TB, focusing on treatment and pathogenesis.

This unit seeks to "fill an important gap within the intramural MRC research programme by undertaking research on HIV-TB co-infection, with a strong clinical focus on treatment of HIV-infected patients with either first-episode or recurrent TB," said Professor Salim Abdool Karim Director of CAPRISA.

The MRC-CAPRISA HIV-TB Pathogenesis and Treatment Research Unit plans to: enhance the translation of clinical trial evidence into effective integrated HIV-TB services through implementation science and thereby improve survival in HIV-TB co-infected patients; improve survival of HIV-TB co-infected patients by optimizing their treatment; generate new knowledge on the pathogenesis and biological interaction between HIV and TB,



From L-R: CAPRISA's Deputy Director, Dr Nesri Padayatchi; MRC President, Dr Glenda Gray; and Head of CAPRISA Treatment Programme, Dr Kogjie Naidoo

specifically focusing on identifying immunological mechanisms associated with the high risk of TB recurrence in HIV-infected patients; impact on policies and practices aimed at reducing the burden of the dual epidemics in South Africa; and build research capacity in South Africa.

The research agenda for the proposed unit includes the disciplines of clinical medicine, epidemiology, biostatistics, immunology, microbiology and public health with 5 focus areas that target HIV-TB co-infection.

A Founding Son of our Democracy



Professor Salim Abdool Karim presents a CAPRISA gold medal to Dr Ahmed Kathrada in recognition of his selfless contribution to South Africa.

Anti-apartheid stalwart, Dr Ahmed Kathrada, fondly known as Kathy (85) shared his personal experience

as a political prisoner for 26 years on Robben Island and Pollsmoor prisons and his memories of the infamous Rivonia Trial. His riveting account of life in prison, the dignity of freedom and the critical importance of education held medical students, scientists and administrators spellbound.

In welcoming Dr Kathrada, who was a close friend of the late Nelson Mandela, Director of CAPRISA, Professor Salim Abdool Karim, paid tribute to one of the "founding sons of our democracy in South Africa, an icon that made the country great."

Prof Abdool Karim said that the "mark of true greatness lies in Kathy's humility and his passion to always do more for society." CAPRISA and the UKZN College of Health Sciences in collaboration with the Ahmed Kathrada Foundation hosted Dr Kathrada on the 25th anniversary of his release from prison.

The occasion held at the Nelson R Mandela School of Medicine campus on Friday 31 October was particularly significant as Dr Kathrada was instrumental in the naming of the medical school after Nelson Mandela.



Scientific papers published in 2014

- 57* Hicks RM, **Padayatchi N**, Shah NS, Wolf A, **Werner L**, Sunkari VB, **O'Donnell MR**. Malnutrition associated with unfavorable outcome and death among South African MDR-TB and HIV co-infected children. *Int J Tuberc Lung Dis* 2014; 18(9): 1074-1083
- 58 Mastro TD, Sista N, **Abdool Karim Q**. ARV-based HIV prevention for women where we are in 2014. *JIAS* 2014; 17(Suppl 2):19154
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- 61 Nandla VI, Moodley D, **Grobler A**, Bagratee J, Maharaj NR, Richardson P. Anaemia in Pregnancy is Associated with Advanced HIV Disease Stage: a HPTN046 Substudy. *PLOS One* 2014; 9(9):e106103. doi: 10.1371/journal.pone.0106103.
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- 64 **Abdool Karim SS**, **Baxter C**, **Frohlich J**, **Abdool Karim Q**. The need for multipurpose prevention technologies in sub-Saharan Africa. *Br J Obstet Gynecol* 2014; 121 (Suppl. 5): 27–34.
- 65 **Abdool Karim Q**, **Baxter C**, **Abdool Karim S**. Microbicides and their potential as a catalyst for multipurpose sexual reproductive health technologies. *Br J Obstet Gynecol* 2014;121 (Suppl. 5): 53–61.
- 66 **Frohlich JA**, **Mkhize N**, **Dellar R**, **Mahlase G**, **Montague C**, **Abdool Karim Q**. Meeting the Sexual and Reproductive Health Needs of High School Students in South Africa: Experiences from rural KwaZulu-Natal. *SAMJ* 2014; 104(9):687-690
- 67 **Abdool Karim S**. Mervyn W. Susser – His Contributions to the Acquired Immune Deficiency Syndrome Response in South Africa. *Paediatric and Perinatal Epidemiology*, 2014; doi: 10.1111/ppe.12158
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*continuation from previous newsletter

Scientific Reviews

Abstracts submitted for review		Manuscripts submitted for review		Ancillary studies submitted for review	
Total#	Cumulative [^]	Total#	Cumulative [^]	Total#	Cumulative [^]
0	325	2	202	0	52

for month, [^] since committee initiation

Conference & Workshop Reminders

Conference	Dates	Deadlines		
		Abstracts	Registration	Website
8th IAS Conference on HIV Pathogenesis, Treatment and Prevention (IAS 2015) - Vancouver, British Columbia, Canada	19-22 July 2015	27 Jan 2015	25 Feb 015	http://www.ias2015.org/
International Conference on HIV and AIDS - London, United Kingdom May 25 - 26, 2015	25-26 May 2015	25 Nov 2014	25 Jan 2015	https://www.waset.org/conference/2015/05/london/ICHA

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CAPRISA is an official research institute of the University of KwaZulu-Natal and Columbia University.

CAPRISA was established in 2002 through a CIPRA grant from the NIH, as a multi-institutional collaboration, incorporated as an independent non-profit AIDS Research Organization

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