CAPRISA
CENTRE FOR THE AIDS PROGRAMME OF RESEARCH IN SOUTH AFRICA

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CAPRISA is the UNAIDS Collaborating Centre for HIV Research and Policy

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In this issue...

Our feature story this month focuses on an analysis from the SAPIT trial, which shows that initiation of ART reduces loss to follow-up.

On page 2 we highlight three new studies including the NIH/PEPFAR-funded study to investigate the impact of implementing a chronic HIV care model that includes POC HIV viral load testing; the MRC/NIH-funded study to investigate the impact of effective STI management on genital inflammation and HIV risk; and the first participant was enrolled into the NIH-funded AMP (Antibody Mediated Prevention) study.

Visits by US Congressional staff, global leaders in HIV and CAPRISA's participation in the DST 2016 Budget Vote Exhibition is featured on page 3.

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Initiation of ART reduces loss to follow up in HIV-TB co infected patients

A secondary analysis on the CAPRISA 003 SAPiT trial, which assessed the optimal timing for initiating antiretroviral therapy (ART) in HIV-TB co-infected patients, shows that the incidence rates of loss to follow-up (LTFU) were not significantly different across the early integrated, late integrated and sequential trial arms (p=0.313). However, LTFU rates among TB patients initiating ART were dramatically reduced compared to those not initiating ART within each trial arm (Table). Rates of LTFU were 5.2; 6.8 and 7.7 fold higher before ART initiation compared to after ART initiation in the early integrated, late integrated and sequential arms respectively.

The SAPIT trial previously demonstrated that ART initiation during TB therapy dramatically improves survival by 56%, and this analysis now demonstrates another added benefit of initiating ART during TB treatment by reducing LTFU in TB patients. The median time to LTFU among patients not initiated on ART was 2.8 (IQR: 0.5 to 6.7) months from TB treatment start.

These results increase the strength of the World Health Organisation's recommendation of initiating ART within the first eight weeks of TB treatment, as ART initiation during TB treatment not only provides a survival benefit, but also confers a programmatic benefit of reducing LTFU among TB-HIV co-infected patients.

Ms Nonhlanhla Yende-Zuma

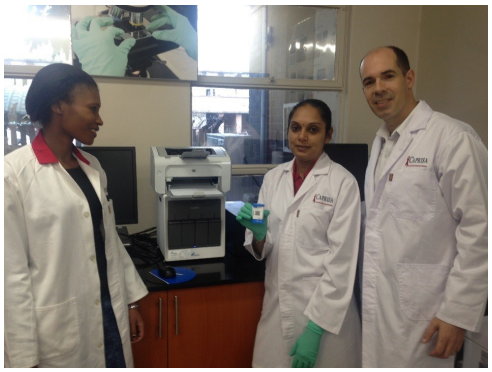
For further reading see:
Yende-Zuma N, and Naidoo K. The effect of timing of initiation of ART on loss to follow up in HIV-TB co infected patients in South Africa: An open label randomized controlled trial. J Acquir Immune Defic Syndr. 2016; doi: 10.1097/QAI.0000000000000995

Table 1: Incidence rate of LTFU at different follow-up time points

Time post TB treatment initiation	Early integrated arm Incidence rate (95%CI)	Late integrated arm Incidence rate (95%CI)	Sequential arm Incidence rate (95%CI)
End of study (24	7.5 (4.9 to 11.0)	10.9 (7.6 to 15.1)	11.0 (7.6 to 15.4)
Before ART initiation	31.7(11.6 to 69.0)	31.9(20.4 to 47.5)	21.9 (14.6 to 31.5)
After ART initiation	6.1 (3.7 to 9.4)	4.7 (2.4 to 8.2)	2.8 (0.9 to 6.6)
Comparing before and after ART initiation	**IRR: 5.2 (95% CI: 2.1 to 13.0) p<0.001**	**IRR: 6.8 (95% CI: 3.4 to 13.6) p<0.0001**	**IRR: 7.7 (95%CI: 3.0 to 19.9) p<0.0001**

Impact of STI management on genital inflammation

The Medical Research Council and National Institutes of Health-funded study to investigate the impact of effective STI management on genital inflammation and HIV risk enrolled the first 10 participants this month. The Principal Investigators Dr Nigel Garrett from CAPRISA and Professor Anne Rompalo from Johns Hopkins University are evaluating whether point-of-care diagnostic testing, immediate supervised treatment, and expedited partner therapy can reduce genital cytokine levels in HIV uninfected women. The investigators are hoping that this study will shine further light on why so many young women acquire HIV in South Africa, and provide new cost-effective solutions to treat STIs in low- and middle-income settings.



Left-Right: Nontobeko Ngubane (Nurse Coordinator), Jessica Naidoo (Laboratory Technician) and Principal Investigator Nigel Garrett conducting point-of-care STI testing in the CAPRISA laboratory

NIH AMP Study underway at CAPRISA Clinic

The first participant enrolled in the AMP study receiving an infusion at the CAPRISA eThekwini Research clinic

The NIH AMP (Antibody Mediated Prevention) study, a world first, where antibodies are passively infused every 8 weeks for 10 infusions to assess if it can prevent HIV acquisition, was initiated at the eThekwini Clinic this month. The study is being run in over 15 countries in 3 continents and will enrol 4200 participants, 1500 of which are women at risk in sub-Saharan Africa.

CAPRISA is one of 15 sub-Saharan Africa sites of this study led by CAPRISA's senior research clinician Dr Kathy Mngadi. The CAPRISA eThekwini Research Clinic enrolled their first participant on 26 May 2016; screening is in full swing to reach the target enrolment of 103 participants over the next two years.

NIH/PEPFAR fund point-of-care viral load study

Principal Investigators of the Point-of-care Viral Load Study, CAPRISA's Dr Nigel Garrett (left) and Dr Paul Drain (right) from the University of Washington, Seattle, US received $237 600 from the NIH/PEPFAR fund to investigate the impact of implementing a chronic HIV care model that includes POC HIV viral load testing and task shifting from professional to enrolled nurses. The randomized controlled trial will be conducted in collaboration with the eThekwini Municipality Health team at a facility of the Department of Health in KwaZulu-Natal. The study will evaluate whether the interventions will lead to improved clinical outcomes, an improved patient experience, and substantial cost-savings for the health care system.

Dr Nigel Garrett

Dr Paul Drain

US Congressional staff visit CAPRISA

A United States Congressional Staff Delegation hosted by UNAIDS visited CAPRISA's research facilities on 6th May to obtain insights into effective partnerships that drive accelerated access to prevention and treatment. The delegation visited the CAPRISA headquarters and discussions focused on understanding the scope of work around CAPRISA's research, particularly young women and girls, current research on adolescent girls and young women, as well as new diagnostic, prevention and testing technologies.

AIDS 2016 Scientific Programme Committee visits CAPRISA

CAPRISA hosted prominent global collaborators on 12th April during their visit to Durban to attend a Marathon meeting of the International AIDS Society. Visitors included (L-R): Morenike Ukpong; Peter Godfrey Fausett; Annette Sohn; Chris Beyrer; Judith Auerbach; Catherine Hankins; Wafaa El-Sadr; Patrick Sullivan; David Serwadda; Bruce Walker; Ada Adimora; Ken Meyer; Souleymane Mboup; Mitchell Warren and Meg Doherty.

DST 2016 budget vote exhibit

CAPRISA, a designated DST-NRF Centre of Excellence in HIV Prevention was represented at the DST Budget Vote exhibition by research clinician, Dr Sharana Mahomed. The theme of the exhibition, which was held at the Iziko museum, Parliament Gardens in Cape Town on the 19 April 2016, was "Innovation for sustainable local government and youth development". The CAPRISA stand focussed on the recent discovery of potent and broadly neutralising antibodies that has allowed exploration of passive immunisation as an alternative HIV preventative strategy.

Minister Naledi Pandor (left) and a senior NRF official (centre) engage with Dr Sharana Mahomed at the CAPRISA exhibit

Scientific papers published in 2016

21 **Yende-Zuma N, Naidoo K.** The effect of timing of initiation of ART on loss to follow up in HIV-TB co infected patients in South Africa: An open label randomized controlled trial. *J Acquir Immune Defic Syndr*. 2016 ; doi: 10.1097/QAI.0000000000000995

22 **Abdool Karim SS**. Is the UNAIDS target sufficient for HIV control in Botswana? *The Lancet HIV* 03/2016; DOI:10.1016/S2352-3018(16)30008-X

23 Mkhize N, Durgiah R, **Archary D, Garrett N, Moore P, Abdool Karim, Q, Abdool Karim SS, Passmore JS,** Tomaras G, Ashley V, Yates N, **Morris, L.** Broadly neutralizing antibody specificities detected in the genital tract of HIV-1 infected women. AIDS 2016; 30(7):1005-1014.

24 Wagh K, Bhattacharya T, Williamson C, Robles A, Bayne M, Garrity J, Rist M, Rademeyer C, Yoon H, Lapedes A, Gao H, Greene K, Louder MK, Kong R, **Abdool Karim S**, Burton DR, Barouch DH, Nussenzweig MC, Mascola JR, **Morris L**, Montefiori DC, Korber B, Seaman MS. Optimal Combinations of Broadly Neutralizing Antibodies for Prevention and Treatment of HIV-1 Clade C Infection. *PLOS Pathogens* 2016;12(3):e1005520. doi: 10.1371/journal.ppat.1005520.

25* Desjardins CA, Cohen KA, Munsamy V, Abeel T, Maharaj K, Walker BJ, Shea TP, Almeida DV, Manson AL, Salazar A, **Padayatchi N, O'Donnell MR, Mlisana KP**, Wortman J, Birren BW, Grosset J, Earl AM, Pym AS. Genomic and functional analyses of Mycobacterium tuberculosis strains implicate ald in D-cycloserine resistance. *Nat Genet*. 2016; doi: 10.1038/ng.3548. [Epub ahead of print]

26 **Coovadia H, Moodley D.** Using PMTCT to raise overall health and development. *The Lancet HIV* 2016; 3(5): e192–e193

27 **Shey MS,** Maharaj N**, Archary D, Ngcapu S, Garrett N, Abdool Karim SS, Jo-Ann S. Passmore J-AS.** Modulation of Female Genital Tract-Derived Dendritic Cell Migration and Activation in Response to Inflammatory Cytokines and Toll-Like Receptor Agonists. *PLoS ONE* 2016 May; 11(5): e0155668. doi:10.1371/journal.pone.0155668

28 **McKinnon LR, Abdool Karim Q**. Factors driving the HIV epidemic in southern Africa. *Current HIV/AIDS Reports*. 2016 May 2. [Epub ahead of print]. http://www.ncbi.nlm.nih.gov/pubmed/27137200

**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	354	1	226	1	71

 # for month, ^ since committee initiation

Conference & Workshop Reminders

Conference	Dates	Deadlines: Abstracts	Deadlines: Registration	Website
21st International AIDS Conference (AIDS 2016) - Durban, South Africa	18-22 July 2016	4 Feb 2016	18 Feb 2016	http://www.aids2016.org/
HIV Research for Prevention - Chicago, Illinois, USA	17-20 Oct 2016	11 Apr 2016	1 Jul 2016	http://hivr4p.org/
11th International Workshop on HIV Transmission - Chicago, Illinois, USA	May 15 and 16, 2016	-	-	www.virology-education.com

CAPRISA hosts a DST-NRF Centre of Excellence in HIV Prevention
CAPRISA is the UNAIDS Collaborating Centre for HIV Research and Policy
CAPRISA hosts a MRC HIV-TB Pathogenesis and Treatment Research Unit

Partner institutions: University of KwaZulu-Natal; Columbia University Mailman School of Public Health; National Institute for Communicable Diseases; University of Cape Town; University of the Western Cape

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