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The feature story this month focuses on the results of a CAPRISA-led study recently published in JAIDS which examined the impact of home-based HIV testing.

On page 2 we congratulate Dr Desh Archary, scientist in the CAPRISA Mucosal Immunology laboratory, who was awarded an EDCTP senior fellowship grant, and report on the visit by officials from the ministries of Zimbabwe and Malawi to gain insight into the CAPRISA AIDS Clinical Care programme.

We report on the Padmashri Dr. Suniti Solomon Memorial Oration delivered by Prof Salim Abdool Karim at the HIVe meeting held in India on page 3 and congratulate NICD post-doctoral research fellow, Dr Thandeka Moyo, on winning the best poster presentation at the Biophysics & Structural Biology workshop held in Cape Town.



# CAPRISA

CENTRE FOR THE AIDS PROGRAMME OF RESEARCH IN SOUTH AFRICA

## Newsletter

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## Home-based HIV testing enhances progress towards the 90-90-90 UNAIDS targets

**H**ome-based HIV testing services (HBHTS) led to an increase in knowledge of HIV status in HIV-positive men (62.9% to 74.2%) and women (73.4% to 80.5%) in a KwaZulu-Natal district, according to results from the HIPPS (HIV Incidence Provincial Surveillance System) study, recently published in the *Journal of Acquired Immune Deficiency Syndromes*.

The results underscore the importance of regular testing in regions with high HIV incidence and highlight the importance of community-based testing strategies in increasing HIV status awareness among people living with HIV.

The study showed that the largest impact was observed among young men and women (15–24 years) where the knowledge of status increased from 36.6% to 59.3% and from 50.8% to 64.8%, respectively (Figure below).

A total of 51.4% of those who had previ-

ously never tested received their first test.

This study was conducted using data from the second cross-sectional HIPPS survey in 2015/2016 conducted in the Vulindlela and Greater Edendale areas of the uMgungundlovu district of KwaZulu-Natal, South Africa.

In several sub-groups in South Africa, awareness of HIV infection falls well below the 90% target proposed by UNAIDS. Men and youth continue to lag behind in knowing their HIV status.

There is an urgent need to find alternative testing strategies to facilitate regular testing in these hard-to-reach HIV-positive populations.

Home-based testing is one such strategy.

### For further reading see:

Lewis L et al. *J Acquir Immune Defic Syndr*. 2019; 80:135–144. <https://www.ncbi.nlm.nih.gov/pubmed/?term=30422908>

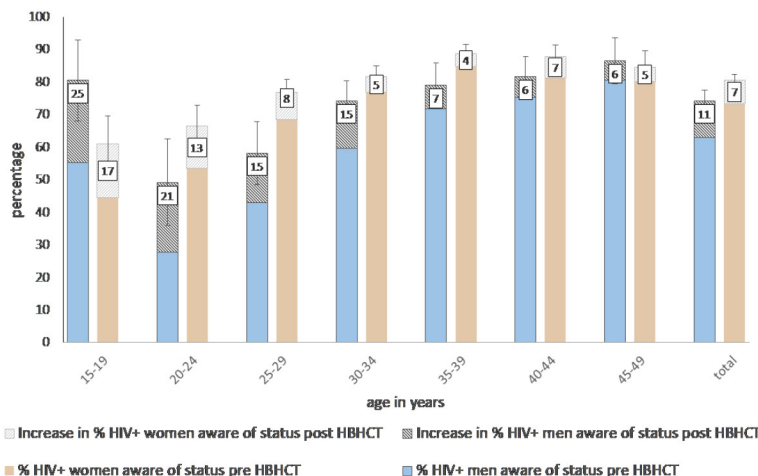
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**Figure:** Impact of HBHTS on knowledge of HIV-positive status among participants enrolled in the second baseline HIPSS study (2015–2016)



## Scientist awarded EDCTP senior fellowship

**W**e congratulate Dr Desh Archary, a scientist in the mucosal immunology laboratory at CAPRISA, who was awarded a 5-year Senior Fellowship Grant for €500,000 through the European & Developing Countries Clinical Trials Partnership (EDCTP).

Archary received the grant for her study entitled: **PrEP- Underlying Mucosal immunity Before & After (PUMBA)**. The study aims to elucidate the effects of PrEP on immunity in at risk populations for HIV acquisition.

Archary said the findings of this study “will likely inform on circulating and genital tract immunity for future combination HIV prevention strategies using both HIV vaccines and PrEP.” As part of this fellowship, Dr Archary will support a number of postgraduate students.



## CAPRISA’s ACC programme benchmarked to strengthen health systems in Zimbabwe and Malawi

**S**enior officials from the Zimbabwean and Malawian ministries of health, together with delegates from South African Department of Health from The National, KZN Provincial and eThekweni District office, and representatives from local partner NGO’s, MatCH and AHF, held a meeting with CAPRISA’s head of HIV and TB Treatment research, Dr Kogile Naidoo, towards the end of 2018.

The aim of the visit was to benchmark best practices from the CAPRISA Advanced Clinical Care (ACC

programme specifically, the viral load utilisation and suppression project. “The success of the ACC programme lies in improved awareness and use of viral load monitoring for identification of unstable patients. Patients with unsuppressed viral loads on ART pose a threat to both ART program outcomes and HIV prevention efforts”, explained Naidoo. “The programme is responsive to local needs on the African continent and we are delighted to share the programme materials with our colleagues in Zimbabwe and Malawi.”



*Photo: Senior officials from the Zimbabwe and Malawi ministries of health at CAPRISA’s headquarters in Durban.*



## CAPRISA Director delivers the Dr Suniti Solomon Memorial Oration



Professor Salim Abdool Karim (seated) Director CAPRISA with from (L) Mr KS Gururaja conference secretary, Dr I Gilada of the AIDS Society of India, Dr S N Mothi conference chair and delegates.

at the HIVE meeting held in Mysore, India on 2<sup>nd</sup> – 3<sup>rd</sup> February. Hosted by the Asha Kirana Charitable Trust, the meeting brought together clinicians, scientists and researchers from a range of disciplines working in the HIV/AIDS field. Reducing high rates of HIV in young women in Africa, is key to the control of the global HIV epidemic said Abdool Karim.

In his presentation he said Africa has a staggering 70% of all people living with HIV followed by Nigeria and India and outlined the need to develop less-adherence dependent new strategies, particularly new HIV prevention tools for women.

Abdool Karim paid tribute to Dr Suniti Solomon (1939-2015), who detected and documented the first cases of HIV infection in India in 1986 during her tenure as a professor of microbiology at Madras Medical College. She founded the Y R Gaitonde Centre for AIDS Research and Education (YRG CARE) - one of the first community-based treatment, research and education centers in India in 1993.

**P**rofessor Salim Abdool Karim, Director of CAPRISA delivered the Padmashri Dr. Suniti Solomon Memorial Oration, titled ‘HIV prevention in women in Africa – Challenges and opportunities’

### Prize for postdoc research fellow

**D**r Thandeka Moyo, a postdoctoral research fellow from the HIV Virology Section at the National Institute for Communicable Diseases (NICD), was the winner of the best poster presentation prize at the Biophysics & Structural Biology workshop held from 17<sup>th</sup> – 24<sup>th</sup> January in Cape Town.



The workshop was aimed at African structural biologists, to provide information on synchrotron-based techniques and the applications of structural biology in vaccine design and industry.

Thandeka’s poster was entitled “Structural characterization of neutralizing antibody lineages from an HIV-infected donor” and focused on CAPRISA donor CAP314. Moyo’s research interests lie in understanding the nature of broadly neutralizing antibodies that target HIV in the context of an HIV vaccine; focusing mainly on structural characterization of antibody-antigen binding. She is mentored by CAPRISA Research Associate, Professor Penny Moore, through the South African Research Chairs Initiative.

### SUTHI study tests QI model



Delegates at the meeting held at the CAPRISA headquarters

**T**he CAPRISA 013 **Scaling up TB/HIV integration (SUTHI)** study held its final annual progress meeting on 21 – 22 February at CAPRISA’s headquarters, attended by external collaborators from the South African Medical Research Council, Institute for Healthcare Improvement and the MRC University College London. The study is testing the effectiveness of a quality improvement model to integrate TB and HIV services in Primary Health Care clinics in two rural districts, King Cetshwayo and Ugu in KwaZulu-Natal. The study outcomes show an overall improved clinic performance in the screening for TB, HIV testing in TB-infected patients and initiating Isoniazid Preventive Therapy (IPT) in eligible HIV-infected patients.



# Scientific papers published in 2019

1 **Harichund C**, Moshabela M, **Kunene P**, **Abdool Karim Q**. Acceptability of HIV self-testing among men and women in KwaZulu-Natal, South Africa. *AIDS Care* 2019 ; 31(2):186-192.

2 Phoswa WN, Naicker T, **Ramsuran V**, Moodley J. Pre-eclampsia: the role of highly active antiretroviral therapy and immune markers. *Inflammation Research* 2019; 68(1):47-57.

3 Law S, **Daftary A**, **O'Donnell M**, **Padayatchi N**, Calzavara L, Menzies D. Interventions to improve retention-in-care and treatment adherence among patients with drug-resistant tuberculosis: a systematic review. *European Respiratory Journal* 2019; 53(1):1801030. doi: 10.1183/13993003.01030-2018.

4 **Harichund C**, **Abdool Karim QA**, **Kunene P**, **Simelane S**, Moshabela M. HIV self-testing as part of a differentiated HIV testing approach: exploring urban and rural adult experiences from KwaZulu-Natal, South Africa using a cross-over study design. *BMC Public Health*. 2019; 19(1):53. doi: 10.1186/s12889-018-6366-9.

5 **Lewis L**, Maughan-Brown B, **Grobler A**, Cawood C, Khanyile D, Glenshaw M, **Kharsany A**. The impact of home-based HIV testing services on progress towards the UNAIDS 90-90-90 targets in a hyperendemic area of South Africa. *JAIDS* 2019;80(2):135-144.

6 **Masson L**, Barnabas S, Deese J, Lennard K, Dabee S, Gamielien H, Jaumdally SZ, Williamson AL, Little F, Van Damme L, Ahmed K, Crucitti T, Abdellati S, Bekker LG, Gray G, Dietrich J, Jaspan H, **Passmore JS**. Inflammatory cytokine biomarkers of asymptomatic sexually transmitted infections and vaginal dysbiosis: a multicentre validation study. *Sexually Transmitted Infections* 2019 ;95(1):5-12. doi: 10.1136/sextrans-2017-053506

7 **Padayatchi N**, Daftary A, **Naidu N**, **Naidoo K**, Pai M. Tuberculosis: treatment failure, or failure to treat? Lessons from India and South Africa. *BMJ Global Health* 2019; 4(1):e001097 doi:10.1136/bmjgh-2018-001097.



CAPRISA hosts a DST-NRF Centre of Excellence in HIV Prevention



**UNAIDS**  
CAPRISA is the UNAIDS Collaborating Centre for HIV Research and Policy



CAPRISA hosts a MRC HIV-TB Pathogenesis and Treatment Research Unit  
CAPRISA hosts a DoH-MRC Special Initiative for HIV Prevention Technology



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