

In this issue...

Our feature article this month highlights the recent series of papers published in the journal *AIDS and Behavior* on adherence interventions and measurement in the CAPRISA 004 trial.

On page 2, we congratulate CAPRISA staff on their recent awards and honours, and spotlight a visit from Prof Peter Piot from the London School of Hygiene & Tropical Medicine

Recent highlights from the CAPRISA training programme are profiled on page 3.



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Adherence in the CAPRISA 004 tenofovir gel trial



Lead authors of the series of papers on adherence-related issues in the CAPRISA 004 trial include (Left to Right): Leila Mansoor, Tanuja Gengiah, Quarraisha Abdool Karim, and Kathryn Mngadi from CAPRISA and Kate MacQueen from FHI260

A series of 6 papers relating to adherence in the context of the CAPRISA 004 tenofovir gel trial were recently published in the May issue of *AIDS and Behavior*, Volume 18, Issue 5.

The first paper by Mansoor et al on "Adherence in the CAPRISA 004 Tenofovir Gel Microbicide Trial" lays the foundation for all the papers in the series and provides a detailed description of adherence interventions and the adherence rates achieved in the CAPRISA 004 tenofovir gel trial

The second paper by Gengiah et al demonstrates how the visual inspection of returned empty gel applicators in the CAPRISA 004 trial enhanced both the accuracy of the adherence measurement and aided identification of mechanical problems with applicator use experienced by women in the trial.

Results of a nested case-control study, led by Dr Kate MacQueen from FHI360, assessed how the relationship between self-reported adherence and HIV acquisition differed between the tenofovir and placebo gel groups, an interaction effect that should exist if effectiveness increases with adherence.

Results of the pilot "Wisebag" study, which monitored microbicide gel use with real-time notification of opening events of the Wisebag showed that the bag was acceptable as a storage container and the cell phone reminders generated were useful in supporting the CAPRISA 004 before and after dosing strategy. Gengiah et al make the recommendation that the Wisebag be considered for larger scale and lengthier testing in microbicide trials.

The impact of implementing a novel adherence support programme (ASP) on the effectiveness of tenofovir gel was also analysed. Mansoor and Abdool Karim et al showed that, following implementation of the ASP, microbicide adherence improved with a concomitant increase in the effectiveness of tenofovir gel. Median adherence rose from 53.6% pre-ASP to 66.5% post-ASP. Detectable tenofovir levels increased from 40.6% pre-ASP to 62.5% post-ASP in 64 women who had paired tenofovir drug samples. Gel effectiveness improved post-ASP; HIV incidence in the tenofovir gel arm was 24% lower pre-ASP compared to 47% lower post-ASP.

The final paper in the series by Mngadi et al reported on disclosure of microbicide gel use to sexual partners and demonstrated that partner disclosure was significantly associated with a modest 4.2% increased adherence ($p = 0.03$).

For further reading see:

http://link.springer.com/journal/10461/18/5?wt_mc=alerts.TOCjournals



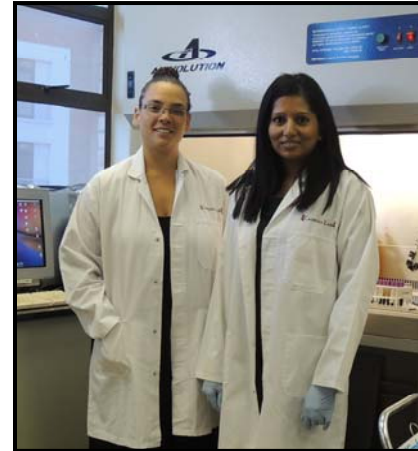


NRF and DST Research Career Advancement Fellowship Awards awarded to CAPRISA Postdocs

Congratulations Dr Lenine Liebenberg (left) and Dr Deresree Archary (right) on being awarded a five-year NRF Career Investigator Award, which aims to encourage the development and nurturing of career scientists within renowned and established research institutions, such as CAPRISA.

Dr Archary's research focus is on understanding the nature and emergence of mucosal specific immune responses in the genital tract, and how these responses may contribute to protection, which in turn can provide rational clues to inform HIV-vaccine design combination prevention strategies, which may prevent the sexual transmission of HIV. She sees this opportunity as a way of paying it forward in training and sup-

porting future budding scientists to grow our knowledge base and lead the field of HIV prevention. For Dr Archary, HIV infection in women, using 1% tenofovir (TFV) gel. Her project builds on key findings from the CAPRISA 004 trial, which demonstrated the role of mucosal inflammation as an independent predictor of HIV acquisition, and that participants with TFV drug levels >1000ng/ml were at lower risk for mucosal inflammation is characterized by increased frequencies of cellular targets for HIV infection, and that breakthrough infection occurs in the context of increased immune activation and subsequent molecular hindrance of TFV activity through increase competition for intracellular phosphates. This study is key to understanding biological contributions to HIV



risk, and will support future strategies to identify and inform appropriate, targeted and specific HIV prevention technologies.

Prof Peter Piot Visits CAPRISA

Earlier this month, Former and Founding Executive Director of UNAIDS and Assistant-Secretary-General of the United Nations, Prof Baron Peter Piot, visited CAPRISA to explore the possibility of expanding collaborations and synergizing research among the many institutions he is affiliated with. Prof Piot is currently the Director of the London School of Hygiene & Tropical Medicine, as well as Professor at the Imperial College of London. Furthermore, he is a

member of the Mailman School of Public Health Board at Columbia University. He has a wide portfolio of research interests, including clinical, microbiological, epidemiological, and public health aspects of STDs, AIDS, TB, women's health in Africa, and more recently, on the politics of AIDS



From left: Dr Heidi Larson, Prof Quarraisha Abdool Karim, Prof Baron Peter Piot

and global health, including chronic diseases.

African Academy of Sciences Vice President for Southern Africa

At the 9th African Academy of Sciences (AAS) General Assembly held between 14-16 April 2014, Brazzaville, Congo, Prof Quarraisha Abdool Karim was announced as a member of the new AAS Governing Council (2014-2017), in her capacity as Vice President for Southern Africa.



Founded in 1985, the AAS is an Africa-wide scientific organisation, with a vision of honouring internationally renowned African scientists, and encouraging the development of the research and technology base throughout Africa, and other continents. CAPRISA congratulates Prof Abdool Karim on this appointment.



HIV Congress 2014 Lifetime Achievement Award

Congratulations to Prof Salim Abdool Karim (right) on receiving the HIV Congress 2014 Lifetime Achievement Award for

his invaluable contribution in the field of HIV medicine, medical education and research, presented at the 2014 HIV Congress, 21-23 March 2014, Mum-

bai, India. This prestigious award was presented to Prof Abdool Karim by Indian Actor, Vivek Oberoi (left).



Trainee Profiling: **Aliza Waxman, Fulbright-Fogarty Public Health Fellow, CAPRISA**



Aliza Waxman, Fulbright-Fogarty Public Health Fellow, CAPRISA

Originally from Massachusetts, USA, Aliza holds an MSc (Public Health in Developing Countries), from the London School of Hygiene and Tropical Medicine. Her research interests are in the sociological and behavioural underpinnings of HIV/AIDS, which stems from her first trip to South Africa in 2007, during which she engaged in HIV and TB treatment and pre-

vention, in Cape Town, as well as women's sexual and reproductive health. Over the years Aliza has undertaken a variety of research projects with HIV/AIDS-related NGOs in Sub-Saharan Africa. She has also completed an MPH, inspired by her experience assessing the needs of vulnerable adolescent girls in Oyugis, Kenya.

Aliza learned about the CAPRISA training programme whilst at a Microbicides meeting, where she met Slim and Quarraisha, and learned about the scientific advances in women's health and HIV at CAPRISA. This attracted Aliza to apply for the Fulbright-Fogarty Scholarship, through which she has joined CAPRISA as a Public Health Fellow.

As an HIV Social Scientist and Medical Anthropologist, Aliza plans to use ethnography to construct a narrative of the lived experiences (contextual factors contributing to high risk behaviour) of marginalized and vulnerable populations at greatest risk for HIV infection.

During her traineeship, Aliza has designed a study entitled "*An ethnographic narrative of the life histories of young women*

(aged 15-19) in KwaZulu-Natal, South Africa, and its implications for the future female controlled prevention technologies". Her study has received HSSRC approval, and she is currently enrolling participants. Aliza has found her experience in KwaZulu-Natal to be enriching, stating that here, the "*HIV landscape is extremely unique*". During her time with CAPRISA she has also engaged in a beginner isiZulu course, through UKZN. Aliza describes her CAPRISA traineeship as one that reinvigorated her ambition, reminding her why she chose to pursue a career as a global health scientist.

Upon completion of her Fulbright-Fogarty fellowship with CAPRISA, Aliza plans to begin her Doctorate in Public Health at Johns Hopkins University in September 2014.

To students considering applying for a research fellowship with CAPRISA, Aliza's advice is to make every effort to integrate knowledge and learn from the energizing environment, enriching your perspective on research in its unique approach to achieving evidence-based science.

CAPRISA Graduates

Congratulations to the following CAPRISA staff/fellows who recently graduated through UKZN:



Research Associate, **Vivek Naranbhai** (right) was presented with his Doctor of Philosophy.

Deputy Study Coordinator (ECRS), **Diantha Pillay**, was presented with her Masters in Public Health.



Laboratory Technician, **Shannie Kamal**, was presented with her Honours in Infection Prevention and Control (IPC)

Laboratory Fellow, **Cheli Kambaran**, was presented with her Honours in Medical Microbiology.



Laboratory Fellow, **Ross Cromarty**, was presented with his Honours in Medical Microbiology.

Head of Diagnostics, **Phindile Tshabalala**, was presented with her BTech, Biomedical Technology.



Dr Myat Htoo Razak's Visit to CAPRISA

Dr Myatt Htoo Razak, Program Director of the Fogarty International Clinical Research Training for Scholars and Fellows Program, and the Fogarty International Collaborative Trauma and Injury Research Training Program of the Fogarty International Center (FIC), the U.S. National Institutes of Health (NIH), as well as the FIC Program Team Leader of the Medical Education Partnership Initiative (MEPI) recently spent half a day at CAPRISA

whilst conducting a University of KwaZulu-Natal MEPI visit, to discuss mutual topics of interest with the CU-SA Fogarty Training Program Director, Prof Quarraisha Abdool Karim, and to meet with some of the current US trainees at CAPRISA. During his visit, Dr Razak was able to provide valuable advice and guidance to the trainees regarding their career paths.



From left: Prof Ayesha Kharsany, Dr Nesri Padayatchi, Dr Andrew Tomita, Ms Marian Swart, Mr Sinaye Ngcapu, Dr Myat Razak, Ms Aliza Waxman, Ms Zakiyah Sayeed



Scientific papers published in 2014

- 25* **Mansoor LE, Abdool Karim Q, Yende-Zuma N, MacQueen KM, Baxter C, Madlala B, Grobler A, Abdool Karim SS.** Adherence in the CAPRISA 004 tenofovir gel microbicide trial. *AIDS & Behavior* 2014; 18(5): 811-819.
- 26 **Mansoor LE, Abdool Karim Q, Werner L, Madlala B, Ngcobo N, Cornman DH, Amico KR, Fisher J, Fisher WA, MacQueen KM, Abdool Karim SS.** Impact of an Adherence Intervention on the Effectiveness of Tenofovir Gel in the CAPRISA 004 Trial. *AIDS & Behavior* 2014; 18:841-848
- 27 **Gengiah TN, Mansoor LE, Upfold M, Naidoo A, Yende-Zuma N, Kashuba ADM, Abdool Karim Q, Abdool Karim SS.** Measuring Adherence by Visual Inspection of Returned Empty Gel Applicators in the CAPRISA 004 Microbicide Trial. *AIDS & Behavior* 2014 18:820-825
- 28 **Gengiah TN, Upfold M, Naidoo A, Mansoor LE, Feldblum PJ, Abdool Karim Q, Abdool Karim SS.** Monitoring microbicide gel use with real-time notification of the container's opening events: results of the CAPRISA Wisebag study. *AIDS & Behavior* 2014; 18:833-840
- 29 **Mngadi KT, Maarschalk S, Grobler AC, Mansoor LE, Frohlich JA, Madlala B, Ngcobo N, Abdool Karim SS, Abdool Karim Q.** Disclosure of microbicide gel use to sexual partners: influence on adherence in the CAPRISA 004 Trial. *AIDS & Behavior* 2014; 18:849-854
- 30 **MacQueen KM, Weaver MA, van Loggerenberg F, Succop S, Majola N, Taylor D, Abdool Karim Q, Abdool Karim S.** Assessing adherence in the CAPRISA 004 tenofovir gel HIV prevention trial: Results of a nested case-control study. *AIDS & Behavior* 2014; 18:826-832
- 31 **Dellar RC, Abdool Karim Q, Mansoor LE, Grobler A, Humphries H, Werner L, Ntombela F, Luthuli L, Abdool Karim SS.** The Preventive Misconception: Experiences from CAPRISA 004. *AIDS & Behavior* 2014; 10.1007/s10461-014-0771-6
- 32 **Delva W, Abdool Karim Q.** The HIV Epidemic in South Africa – is an AIDS free generation possible? *Current HIV/AIDS Reports* 2014; 11 (2): DOI: 10.1007/s11904-014-0205-0
- 33 **Perumal R, Padayatchi N, Kogieleum K, Knight S.** Understanding the profile of Tuberculosis and Human Immunodeficiency Virus co-infection: Insights from expanded HIV surveillance at a tuberculosis facility in Durban, South Africa. *ISRN AIDS* 2014; doi.org/10.1155/2014/260329

*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	308	2	182	0	52

for month, ^ since committee initiation

Conference & Workshop Reminders

Conference	Dates	Deadlines		Website
		Abstracts	Registration	
AIDS 2104 - Melbourne, Australia	20-25 Jul 2014	closed	2 May 2014	www.aids2014.org/
Southern African HIV Clinicians Society—Cape Town, Spout Africa	24-27 Sept 2014	Closed	1 May 2014	http://sahivsoc2014.co.za/
Third Global Symposium on Health Systems Research — Cape Town, South Africa	30 Sept - 3 Oct 2014	Closed	2 June 2014	http://hsr2014.healthsystemsresearch.org
HIV Research for Prevention 2014: AIDS Vaccine, Microbicide, & ARV-based Prevention Science — Cape Town, South Africa	28-30 Oct 2014	2 May 2014	15 Oct 2014	www.hivr4p.org

Board of Control: AC Bawa (Chair) • SS Abdool Karim • R Bharuthram • D Clark • LP Fried (US) • S Madhi • S Naidoo • DP Visser • ZM Yacoob

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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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