



In this issue...

Our feature article this month highlights the recent paper published in *Sexually Transmitted Infections* that shows that prevalence of HIV, HSV-2 and pregnancy is high among adolescent girls in high schools.

On page 2, we spotlight visits from US Ambassador, Jimmy Kolker, as well as Linda Roach from Janssen Pharmaceuticals, South Africa. We also congratulate Dr Gonasagrie Nair on being appointed as a member of the Biomedical Research Ethics Committee.

A visit by CAPRISA to FHI360 in North Carolina is profiled on page 3, along with recent highlights from the CAPRISA training programme.



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Urgent need for adolescent-targeted HIV prevention in South Africa



High school learners from one of the high schools in Vulindlela KwaZulu-Natal that participated in the study

CAPRISA's research among South African high school students shows that they already bear a substantial burden of HIV, HSV-2 and pregnancy. Results from this cross-sectional study, which was conducted in 14 high schools in the rural sub-district of Vulindlela, KwaZulu-Natal, between September and November 2010, were published in an advanced online version of the journal of *Sexually Transmitted Infections* on 29 May 2014.

A total of 2675 (1423 females, 1252 males) consenting students were enrolled and the median age of the students was 16 years (IQR 15–18). Female high school students were shown to be at significantly greater risk of HIV and HSV-2 infection compared with male high school students. HIV prevalence was 1.4% (95% CI 0.9 to 1.9) in males and 6.4% (95% CI 4.6 to 8.3) in females ($p < 0.001$). HSV-2 prevalence was 2.6% (95% CI 1.6 to 3.7) in males and 10.7% (95% CI 8.8 to 12.6) in females ($p < 0.001$). Pregnancy prevalence was 3.6% (95% CI 2.6 to 4.5).

Risk factors for prevalent HIV infection in female students included being over 18 years of age (adjusted OR (aOR)=2.67, 95% CI

1.67 to 4.27; $p < 0.001$), prevalent HSV-2 infection (aOR=4.35, 95% CI 2.61 to 7.24; $p < 0.001$), previous pregnancy (aOR=1.66, 95% CI 1.10 to 2.51; $p = 0.016$) and experience of two or more deaths in the household in the previous year (aOR=1.97, 95% CI 1.13 to 3.44; $p = 0.016$). Students from child-headed households seem to be particularly vulnerable to HIV infection in generalised epidemic settings with high mortality rates pre-antiretroviral treatment provision.

The high prevalence of HIV, HSV-2 and pregnancy observed in this study underscore the need for school-based sexual and reproductive health services. Adolescents in southern African high schools are a key population for HIV prevention interventions and should be included in behavioural and biomedical trials with HIV incidence endpoints.

For further reading see:

Abdool Karim Q, et al. Prevalence of HIV, HSV-2 and pregnancy amongst high school students in rural KwaZulu-Natal: a bio-behavioral cross-sectional survey. *Sex Transm Infect* 2014;





US Ambassador Jimmy Kolker Visits CAPRISA's Clinical Research Sites

US Ambassador, Jimmy Kolker: Assistant Secretary for Global Affairs, and his delegation recently visited CAPRISA to see how CAPRISA integrates ART and TB services for co-infected patients. During their visit, the delegation was taken through the CAPRISA eThekweni Clinical Research Site (CRS) to the Prince Cyril Zulu Communicable Disease Centre (PCZCDC), for a tour of the PCZCDC and its facilities, as well as a demonstration of equipment, such as the Sputum booth, Magic View and a GeneXpert demonstration. This was followed by a tour of the CAPRISA eThekweni CRS Treatment and Prevention clinics, which included discussion on how CAPRISA contributes to South Africa's HIV/AIDS/TB response. The delegation also had an opportunity to talk to research participants in the CRS community room.



From left: Londiwe Luthuli, CAPRISA research participant, Nancy Knight, Jose Morales, Ambassador Jimmy Kolker, Mary Wakefield, Austin Demby, Steven Smith

Linda Roach, GCO Country Manager of Janssen Pharmaceuticals in South Africa Visits CAPRISA

Linda Roach, Global Clinical Operations (GCO) Country Manager of Janssen Pharmaceuticals in South Africa recently conducted a site assessment at CAPRISA for an upcoming international mosaic HIV vaccine trial. This trial will

review the safety and immunogenicity of a new vaccine developed by Crucell Biotechnology Company of the Netherlands, and will cover the predominant HIV viruses in South Africa (sub-type-C), as well as the United States and Europe (sub-type B).



CAPRISA staff who met with Linda Roach (centre) during her visit included (from left): Tanuja Gengiah, Nigel Garrett, Salim Abdool Karim and Natasha Samsunder

Prof Salim Abdool Karim Attends Presidential Inauguration Ceremony



Professor Salim Abdool Karim (left) was honoured to be amongst the invited dignitaries from around 47 countries attending President Jacob Zuma's inauguration ceremony on Saturday, 24th May 2014 at the Union Building in Preto-

Dr Gonasagrie Nair becomes member of BREC

Congratulations to Dr Gonasagrie (Lulu) Nair on being appointed as a member of the University of KwaZulu-Natal Biomedical Research Ethics Committee (BREC), for a three year, renewable period. BREC is the University's appointed committee that manages the ethics submissions, reviews, approvals and monitoring of studies involving humans.





CAPRISA Visits FHI360 Offices in North Carolina

Drs Leila Mansoor and Sarah Dlamini recently visited the FHI360 offices in North Carolina, where they met with Dr Kate Macqueen to discuss the initial processing and dissemination plans for the results from the CAPRISA 106 study. CAPRISA 106, the Tenofovir Gel Social and Health Systems Research Study, is a qualitative ancillary study nested in the CAPRISA 008 study, which aims to explore the interface between social context and user experience with open label tenofovir gel use as well as the CAPRISA 008 experience with implementing the Health Systems Strengthening/Quality Improvement approach for integrated Family Planning/TFV gel service provision.



Trainee Profiling: Ross Cromarty, CAPRISA Laboratory Fellow

Originally from KwaZulu-Natal, Ross holds an Honours degree in Medical Microbiology, from the University of KwaZulu-Natal. He is a basic scientist with a keen interest in the adaptive side of immunology and immunological signalling involving cytokines and chemokines, and how these molecules drive one's immune system.

Organic chemistry was appealing for Ross during his school career, which subsequently led to an interest in biochemistry, and landed him in the field of microbiology. He thoroughly enjoys investigating how and why things work the way they do, rather than just being handed the answer.

Ross learned about CAPRISA following the release of CAP 004 clinical trial results. With an interest in HIV research, CAPRISA seemed like a great environment for Ross to grow into a developing scientist, and he has not been disappoint-

ed.

As a Lab Fellow, Ross processes samples and engages in general lab work, such as running assays, microscopy and the likes. He is currently pursuing his Masters' degree, for which he is undertaking a project focusing on the effects of anti-inflammatories in an inflammation model.

During his Fellowship, Ross has gained much hands-on experience and has been given the opportunity to work unsupervised on certain activities in the laboratory, showing the confidence the CAPRISA Staff have in their Fellows. Ross feels that he has gained an outstanding magnitude of knowledge during his time with CAPRISA, and he looks forward each day, nurturing his further development.

Ross is currently concentrating on building himself as a scientist, improving on the skills he has already gained. He values the resources available at CA-



Photo: VWW, Johannesburg

PRISA, and would like to spend more time in this environment over the next few years.

To future potential CAPRISA fellows, Ross encourages students to embrace the opportunity and make the most out of it, improving yourself and building yourself into a competitive scientist. Ross feels that "there will not be a better opportunity to get your toes into the scientific doorway!"

CAPRISA Graduates

Congratulations to **Thulasizwe Buthelezi** (Research Fellow) who recently graduated with a Masters' in Medical Science through UKZN and **Tshana Watkins** (Administrative & Research Support Officer—right) who graduated with a BA (Psychology) through UNISA.



Penny Moore Receives Promotion to Readership

Penny Moore (below), Senior Medical Scientist at the HIV Viral Laboratory within the Centre for HIV & STI's of the National Institute for Communicable Diseases and a Research Associate of CAPRISA was recently promoted to a Readership (Professorship) through the University of the Witwatersrand Facul-

ty of Health Sciences. Prof Moore is highly deserving of this promotion, since she is one of the leading young scientists worldwide working on HIV vaccines. Her ground-breaking publication in *Nature Medicine* (2012), showed for the first time, how virus evolution shapes broadly neutralizing antibody

responses.

CAPRISA congratulates Prof Moore on this appointment.





Scientific papers published in 2014

34	van Loggerenberg F , Grant AD, Naidoo K , Murrman M, Gengiah S , Gengiah TN , Fielding K, Abdool Karim SS . Individualised Motivational Counselling to Enhance Adherence to Antiretroviral Therapy is not Superior to Didactic Counselling in South African Patients: Findings of the CAPRISA 058 Randomised Controlled Trial. <i>AIDS and Behavior</i> 2014; DOI 10.1007/s10461-014-0763-6
35	Derdeyn CA, Moore PL , Morris L . Development of broadly neutralizing antibodies from autologous neutralizing antibody responses in HIV infection. <i>Current Opinion in HIV & AIDS</i> 2014; 9(3): 210–216.
36	They MS , Nemes E, Whatney W, de Kock M, Africa H, Barnard C, van Rooyen M, Stone L, Riou C, Kollmann T, Hawn TR, Scriba TJ, Hanekom WA. Maturation of Innate Responses to Mycobacteria over the First Nine Months of Life. <i>The Journal of Immunology</i> 2014; 192(10):4833-43
37	Montague C , Ngcobo N , Mahlase G, Frohlich J , Pillay C , Yende-Zuma N , Humphries H , Dellar R , Naidoo K , Abdool Karim Q . Implementation of Adolescent-Friendly Voluntary Medical Male Circumcision Using a School Based Recruitment Programme in Rural KwaZulu-Natal, South Africa. <i>PLOS ONE</i> 2014; e96468. doi:10.1371/journal.pone.0096468
38	Shiboski CH, Chen H, Ghannoum MA, Komarow L, Evans S, Mukherjee PK, Isham N, Katzenstein D, Asmelash A, Omoozoe AE, Gengiah S , Allen R, Tripathy S, Swindells S, the AIDS Clinical Trials Group Network and the Oral HIV/AIDS Research Alliance. Role of oral candidiasis in TB and HIV co-infection: AIDS Clinical Trial Group Protocol A5253. <i>The International Journal of Tuberculosis and Lung Disease</i> 2014; 18(6): 682-688.
39	Tomita A , Garrett N , Werner L , Burns JK, Ngcobo N , Zuma N , Mlisana K , van Loggerenberg F , Abdool Karim SS . Impact of Antiretroviral Therapy on Health-Related Quality of Life among South African Women in the CAPRISA 002 Acute Infection Study. <i>AIDS & Behavior</i> 2014; DOI 10.1007/s10461-014-0800-5
40	Dlova NC, Mankahla A, Madala N, Grobler A , Tsoka-Gwegweni J, Hift RJ. The spectrum of skin diseases in a black population in Durban, kwazulu-Natal, South Africa. <i>International Journal of Dermatology</i> 2014; DOI: 10.1111/ijd.12589
41	Loveday M, Padayatchi N , Wallengren K, Roberts J, Brust JCM, Ngozo Jf, Master I, Voce A. Association between health systems performance and treatment outcomes in patients co-infected with MDR-TB and HIV in KwaZulu-Natal, South Africa: Implications for TB programmes. <i>PLoS ONE</i> 2014; 9(4): e94016
42	Abdool Karim Q , Kharsany ABM , Leask K , Ntombela F , Humphries H , Frohlich JA , Samsunder N , Grobler A , Dellar R , Abdool Karim SS . Prevalence of HIV, HSV-2 and pregnancy amongst high school students in rural KwaZulu-Natal: a bio-behavioral cross-sectional survey. <i>Sexually Transmitted Infections</i> 2014; doi:10.1136/sextrans-2014-051548

*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^
17	325	4	186	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	Closed	15 Oct 2014	www.hivr4p.org

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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 Organisation

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