

In this Issue...

Our feature story this month focuses on the NRF Science for Society lecture on "Getting to Zero" that was held to commemorate World AIDS Day on 1 December 2015.

On page 2 we provide highlights from the annual HIV Prevention Workshop that was held in Jozini, Kwa-Zulu-Natal and focused on understanding HIV transmission, passive transfer of broadly neutralizing HIV antibodies, active vaccination strategies against HIV, and a variety of other pathogenesis and basic immunology topics.

We congratulate Professor Lynn Morris on her A rating from the NRF and Ms Natasha Samsunder on her selection to the ACTG/IMPAACT Laboratory Technologist Committee on page 3.



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Commemorating World AIDS Day "There is no room for complacency"



Answering questions from the audience during the panel discussion at the NRF Science for Society lecture on "Getting to Zero" were (L-R): Naledi Moleo from SAfm; Professor Salim Abdool Karim from CAPRISA; Professor Koleka Mlisana from UKZN, Ms Gethwana Mahlase from Comosat and Mr Bonginkosi Mafuze, UKZN medical student

World AIDS Day – Getting to Zero. CAPRISA and UKZN hosted the NRF Science for Society lecture titled Getting to Zero to commemorate World AIDS Day on Tuesday 1 December. The lecture held at the UKZN Howard College campus was broadcast live on SAfm for two hours with lively audience engagement.

The presenters, Professor Koleka Mlisana Head of Medical Microbiology at UKZN and Professor Salim Abdool Karim Director CAPRISA covered the origins and the current state of the virus and the state of the global HIV response and the prospects of "getting to zero". Panellists Ms Gethwana Mahlase and Mr Bonginkosi Mafuze a fifth year medical student spoke about the importance of active partnerships between communities and researchers.

Prof Mlisana highlighted the disproportionate high rates of infection of young women in sub-Saharan Africa with rates as much as "8-fold higher than their male

counterparts".

Slowing the HIV epidemic in South Africa remains a major challenge explained Prof Abdool Karim. He said there was no room for complacency and much more needed to be done. Combinations of several different HIV prevention options will be needed for "getting to zero". "We can do it by scaling up safe sex education, condom promotion, HIV counselling and testing, voluntary medical male circumcision for men, gender-based violence reduction and the use of antiretroviral drugs for both treatment and prevention. Ultimately, we will also need new tools, especially for South Africa's highest priority group for HIV prevention – young women and adolescent girls.

He said that the future holds great promise "as science generates new effective HIV prevention strategies. Ultimately, the responsibility will fall on each of us to realise the goal of "getting to zero".



HIV Prevention Workshop



Delegates from the HIV Prevention Workshop that was held in Jozini, KwaZulu-Natal

The 6th annual HIV Prevention workshop held in Jozini, KwaZulu-Natal, South Africa from 17-20 Nov 2015, was hosted by CAPRISA, the Ragon Institute, and the HIV Pathogenesis Program and attended by approximately 80 scientists from various local and international research institutions.

Sessions focused on understanding HIV transmission, particularly at the mucosal level, passive transfer of broadly neutralizing HIV antibodies, active vaccination strategies against HIV, and a variety of other pathogenesis and basic immunology topics.

CAPRISA's Director, Salim Abdool Karim, set the stage for the meeting, reminding us of the need for better combination HIV prevention within the scope of the ongoing HIV pandemic. He said that while new cases of HIV are declining globally and in South Africa, "the rate of decline has slowed and new products that do not require regular adherence are urgently needed, especially for young women".

In the HIV transmission session Tom Hope presented exciting new data on the first mucosal cells infected in the macaque model of SIV. Jo-Ann Passmore presented on an expansion of studies of mucosal inflammation in young women. Presentations from Ashley Haase and Adam Burgener highlighted the important role of the mucosal barrier in protecting against HIV transmission. Aida Sivro presented on CD4+ T cell correlates of HIV acquisition in the CAPRISA004 study.

A large segment of the meeting focused on broadly neutralizing antibodies (bNAb)s against HIV. This included basic questions about how to

induce bNAb)s either in natural infection or by active vaccination, whether this be the story of how CAP256 gained breadth (Jinal Bhiman), the immunogenicity of the trimer (Dennis Burton), or a more rational approach toward somatic hypermutation using VRC01 as a model (Bill Schief).

These talks were augmented by engaging presentations on basic B cell immunology, including the rules that govern clonal expansion (Gabriel Victora), modeling affinity maturation (Arup Chackaborty), and how intracellular adjuvants can stimulate B cell activity (Batista Fecundo). From a more practical perspective, thoughts on how to deliver bNAb)s were proposed in talks by John Mascola (passive transfer of bNAb)s, Alex Balzacs (gene therapy), and Dan Barouch (active vaccination with Adenovirus vectors). All of this was considered in light of the fact that a study of passive transfer of VRC01 was just approved by the Medicines Control Council (MCC) in South Africa while the meeting was in progress. An open discussion followed on where passive transfer fit in the context of overall strategies toward long-acting PrEP.

Several other highlights included an update on the immunology of very acute HIV infection in the FRESH study (Jenn Maroa, Zaza Ndlovu, and Kamini Gounder), HIV-infected children who progress slowly despite high viral loads (Philip Goulder), the mechanism of action of PD1 (John Wherry), and several others.

The meeting ended on a hopeful note, with many expressing optimism that several new HIV prevention modalities may be within reach in the next few years.

Dr Lyle Mckinnon



NRF A rating for leading scholar

Professor Lynn Morris, head of the HIV Virology Section at the NICD, Research Professor at Wits University and CAPRISA Research Associate, was awarded an A rating by the National Research Foundation (NRF).

An NRF-A rated researcher is recognised by the overwhelming majority of reviewers as a leading scholar in her field, and internationally for the high quality and impact of her recent research outputs.

Morris has published 195 peer reviewed publications and has an H-Factor of 47. She has supervised or is currently supervising 22 PhD and MSc students and serves on the Boards of the Poliomyelitis Research Foundation and the Global HIV Vaccine Enterprise.



Visitors to CAPRISA



Well known for his fight to provide low cost HIV drugs to poor countries, Dr Yusuf Hamied, CIPLA's chairman, visited CAPRISA's eThekweni Clinical research site and the CAPRISA headquarters at the Nelson R Mandela School of Medicine on 20th November. Prof Salim Abdool Karim welcomed the scientist who met with CAPRISA executive and senior scientists.



Dr John Mascola Director of the Vaccine Research Centre at the National Institutes of Health (NIH) with Prof Salim Abdool Karim at the CAPRISA offices. Mascola had a tour of the CAPRISA eThekweni Clinical Research prevention clinic and met with Drs Kathy Mngadi and Nigel Garrett



Natasha appointed to Laboratory Technologist Committee

CAPRISA congratulates Ms Natasha Samsunder, Head of CAPRISA's Laboratories, on her appointed as a member of the ACTG/IMPAACT Laboratory Technologist Committee



Scientific papers published in 2015

- 66* Moodie Z, Metch B, Bekker LG, Churchyard G, Nchabeleng M, Mlisana K, Laher F, Roux S, **Mngadi K**, Innes C, Mathebula M, Allen M, Bentley C, Gilbert PB, Robertson M, Kublin J, Corey L, Gray GE. Continued Follow-Up of Phambili Phase 2b Randomized HIV-1 Vaccine Trial Participants Supports Increased HIV-1 Acquisition among Vaccinated Men. *PLoS One*. 2015 Sep 14;10(9):e0137666. doi: 10.1371/journal.pone.0137666. eCollection 2015.
- 67 Palanee-Phillips T, Schwartz K, Brown ER, Govender V, Mgodini N, Kiweewa FM, **Nair G**, Mhlanga F, Siva S, Bekker L-G, Jeenarain N, Gaffoor Z, Martinson F, Makanani B, Naidoo S, Pather A, Phillip J, Husnik MJ, Van Der Straten A, Soto-Torres LI, Baeten J. Characteristics of women enrolled into a randomized clinical trial of dapivirine vaginal ring for HIV-1 prevention. *PLoS One* 2015; 10(6): e0128857. DOI: 10.1371/journal.pone.0128857
- 68 Hanifa Y, **Telisinghe L**, Fielding KL, **Malden JL**, **Churchyard GJ**, Grant AD, Charalambous S. The diagnostic accuracy of urine lipoarabinomannan test for tuberculosis screening in a South African correctional facility. *PLoS One* 2015; 10(5): e0127956
- 69 Doria-Rose NA, Bhiman JN, Roark RS, Schramm CS, Gorman J, Pancera M, Cale EM, Erandes MJ, Louder MK, Asokan M, Bailer RT, Druz A, Frascilla IR, **Garrett NJ**, Jarosinski M, Lynch RM, McKee K, O'Dell S, Pegu A, Schmidt SD, Staube RP, Sutton MS, Wang K, Wibmer CK, Haynes BF, **Abdool-Karim S**, Shapiro L, Kwong PD, Moore PL, Morris L, Mascola JR. A new member of the V1V2-directed CAP256-VRC26 lineage that shows increased 2 breadth and exceptional potency. *Journal of Virology* 2015; 10.1128/JVI.01791-15
- 70 MacQueen, K.M, Bhan, A, **Frohlich J**, Holzer J, Sugarman J. Evaluating community engagement in global health research: The need for metrics Ethics in Biomedical Research (Review). *BMC Medical Ethics* 2015; 16(1): Article number 44 DOI: 10.1186/s12910-015-0033-9
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- 72 **Mngadi K**, **Frohlich J**, **Montague C**, **Mvandaba N**, **Nkomonde N**, **Singh J**, **Luthuli L**, **Abdool Karim Q**, **Mansoor L**. Challenges with Participant Reimbursement: Experiences from a Post-trial Access Study. *Journal of Medical Ethics* 2015;41(11):909-13
- 73 Balkus JE, Brown ER, Hillier SL, Coletti A, Ramjee G, Mgodini N, Mkanani B, Reid C, Martinson F, Soto-Torres L, **Abdool Karim SS**, Chirenje ZM. Oral and injectable contraceptive use and HIV acquisition risk among 1 women in 4 African 2 countries: a secondary analysis of data from a microbicide trial. *Contraception* 2015; pii: S0010-7824(15)30033-0. doi: 10.1016/j.contraception.2015.10.010

*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	330	2	221	0	64

for month, [^] since committee initiation

Conference & Workshop Reminders

Conference	Dates	Deadlines		Website
		Abstracts	Registration	
Conference on Retroviruses and Opportunistic Infections - Boston, Massachusetts, USA	22-25 Feb 2016	30 Sept 2015	26 Jan 2016	http://www.croiconference.org/
21st International AIDS Conference (AIDS 2016) - Durban, South Africa	18-22 July 2016	4 Feb 2016	18 Feb 2016	http://www.aids2016.org/



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