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Our cover story reports on a recent editorial on ethical questions raised in striving for new paradigms in the HIV/AIDS response.

On page 2, this month's training column features interviews with two research fellows

Renowned neurobiologist, Dr Susan Hockfield, gives her perspective on creating a world-class research organisation on page 3



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The need for a new paradigm in HIV/AIDS response

Editorial in Developing World Bioethics raises some complex ethical questions about the future of HIV-prevention research and implementation strategies

In the last three years, several studies have demonstrated the prevention benefits of the prophylactic use of antiretroviral drugs in diverse populations—discordant couples, men who have sex with men, heterosexual men and women, and in injecting drug users. There is newfound optimism for HIV prevention following the US Food and Drug Administration's approval for Truvada to be used prophylactically in HIV-negative, but at-risk groups.

Whilst scientific advances have raised hope for controlling the epidemic, there has also been much debate about the future of prevention science, implementation of new findings and optimising use of ARVs to prevent HIV transmission and acquisition. Whereas medical male circumcision is a once-off procedure, the use of ARVs for treatment and prevention requires a commitment by the patient to use the medication consistently to ensure effectiveness.

For every advancement reached, another complex issue presents itself, for example the challenges of global funding, priority setting, national prevention strategies and clinical decision-making.

The response to HIV/AIDS to date has set new precedents in responding to a public health crisis. ARV treatment is now available in resource constrained settings. Even with modest coverage rates, life expectancy and prevention benefits from treatment provision have increased.



With the expanded options available to reduce transmission and acquisition of HIV, there needs to be more focus on achieving more by being smarter and more efficient. The diversity of the epidemics in different countries calls for localised responses rather than 'one size fits all' approach.

It is fundamental to recognise that the challenges are not solely technical or administrative and it is equally important to address the questions of clinical and public health ethics as well as human rights, for example:-

- The rights claimed by uninfected persons make for access to ARVs for prophylactic purposes when there are still millions of AIDS-related deaths because ARV treatment cannot be accessed?
- The justification of moral claims to provide ARV therapy to those who do not yet clinically require treatment as a way of reducing the risks of HIV transmission?



Meet our fellows: Rachael and Kshama

In this month's training feature, we interview two fellows on their research interests and experiences.

Originally from Somerset, UK, basic scientist Rachael Dellar holds a MBiochem from Oxford University. Her re-



Rachael Dellar, CAPRISA Research Fellow

search focus has shifted to epidemiology, with a particular interest HIV-prevention intervention design, implementation and evaluation, risk factors for HIV acquisition and transmission dynamics.

'I have always been interested in global health and social justice, and as such epidemiology seemed a natural extension from basic science,' she says.

Attracted by CAPRISA's 'impressive publication record' and with encouragement from Vivek Naranbhai to apply to the CAPRISA fellowship programme, Rachael is enjoying the opportunity to develop and discuss her own interpretation from large-scale trials. She is currently analysing data

from the CAP007 Reducing HIV in Adolescents (RHIVA) study, editing papers and exploring the dynamics of HSV2/HIV coinfection. 'I think it's great that CAPRISA has a format which enables young scientists to voice their own research ideas.'

She is passionate about accessible healthcare for people from all socioeconomic backgrounds. In the longer term, Rachael would like to apply her knowledge, experience and skills for the World Health Organisation or similar organisation.

Kshama Haribhai is a Fogarty-funded Research Fellow, who has recently returned to South Africa after several years of studying in India.



Kshama Haribhai, Fogarty Research Fellow

She gained her MBBS at Kasturba Medical College (affiliated to Manipal University) and plans to specialise in paediatric infectious diseases in the future.

With a keen interest in public health, Kshama's research exposure at CAPRISA

has deepened her understanding in what causes adolescents to be at high risk of HIV infection. Currently, she is working on describing the informed consent process and providing research support on the RHIVA study.

Commenting on the unique opportunity of being a part of the fellowship programme, she says: 'It has provided that unique advantage for me to collaborate with different disciplines, such as epidemiology and basic science.'

What would Kshama say to students who are considering applying to be a research fellow? 'It is a wonderful opportunity to be part of this great learning environment in which your capacity as a research fellow grows from strength to strength.'

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- The normative issues in making the determination that there is sufficient evidence to demonstrate the effectiveness of either PrEP or treatment for prevention?
- The social and biological vulnerability of women and the allocations of resources for either PrEP or treatment as prevention?

- Will PrEP increase the risk of drug resistance and compromise treatment options for those already infected?
- What conceptions of procedural fairness and inclusiveness should shape decision making processes about these allocation decisions?
- How should current research findings inform the ethics of trial design?

- The moral issues involving the protection of research subjects regarding the extent of ancillary services and care that should be provided in prevention trials?

For further reading:

Abdool Karim Q, Bayer R. Anti-retrovirals for treatment and prevention - time for new paradigms in our response to the HIV/AIDS epidemic? *Developing World Bioethics* 2013; 13(2): ii-iii. 0.1111/dewb.12033



Visits to CAPRISA

Past President of MIT in SA

Dr Susan Hockfield, Past President of the Massachusetts Institute of Technology and renowned Professor of Neuroscience, recently visited CAPRISA during her family holiday in South Africa.

During a stimulating round table discussion with CAPRISA's leadership team, Dr Hockfield raised the three essential factors in creating a world-class research institution. These were leadership, recruitment of top scientists and shaping an environment for creativity and innovation.



From left: Dr Nesri Padayatchi, Prof Quarraisha Abdool Karim, Dr Susan Hockfield, Prof Salim Abdool Karim, Ms Marian Swart

Drawing on her career in top academic institutions and role on the Board of corporates, such as General Electric, she stated that highly successful organisations first and foremost needed to have a strong value proposition.

Supportive organisational structures would offer good training and mentoring programmes, whilst encouraging cross-disciplinary work between employees.

'Organisations needed to be able to recognise extraordinary talent within and to allow those individuals to fly faster than

they would have anywhere else,' she said.

Durban University of Technology

Final year environmental health students from the Durban University of Technology visited the CAPRISA Vulindlela Clinical Research Site to learn how clinical trials increased understanding about HIV epidemiology.

Accompanying lecturer, Ms Joy Kistnasamy said: 'This was a very informative and eye-opening visit and jolly interesting—as noted by the (sometimes humorous) food-for-thought questions asked by the students.'



US Congressional staff visit

A US congressional staff delegation recently visited CAPRISA's eThekweni Clinic in Durban as part of a tour to learn about US-funded HIV/AIDS and TB research and service delivery programmes in sub-Saharan Africa.

Ms Christine Lubinski, Executive Director of the Center for Global Health Policy at the Infectious Disease Society of America (IDSA) led the group, comprising Ms Antigone Barton (IDSA); congressional staffers Ms Katherine Haley, Ms Jenifer Healy, Mr Jirair Ratevosian, Mr Coby Dolan; Mr Steve Smith from the US Embassy in Pretoria and Dr Sipiwe Mndaweni from the KwaZulu-Natal Department of Health.



Quality control in the laboratory

Orlinda Maforo, Quality Assurance and Quality Control Coordinator from SMILE imparted her vast knowledge and experience on DAIDS Good Clinical and Laboratory Practices during a guest lecture delivered to UKZN laboratory staff.



From left: Ms Peggy Coulter (SMILE), Ms Natasha Samsunder, Ms Orlinda Maforo (SMILE)

CAPRISA Vulindlela CAP008 crochet team

Crochet classes are being offered to CAP008 participants as part of the study's retention activities.

Four participants have learnt to crochet and have almost completed their first blankets.

With some of the participants having received orders, these new found skills have the potential to become a skills transfer and job creation opportunity in the community.

- Chanelle Smith



Obituary: Des Sykes

Des Sykes, former finance manager at CAPRISA, sadly passed away after a short illness. Paying tribute to Des, Marian Swart, Chief Operation Officer, said: "Des played a crucial role in developing our finance and admin systems during the early years of CAPRISA and set us on a path of good governance. He will be sorely missed." Des is survived by his wife, Janet, and daughters, Kim, Debbie and Lisa.





Scientific papers published in 2013



33*	Liu MKP, Hawkins N, Ritchie AJ, Ganusov VV, Whale V, Brackenridge S, Li H, Pavlicek JW, Cai F, Rose-Abrahams M, Treurnicht F , Hraber P, Riou C, Gray C , Ferrari G, Tanner R, Ping LH, Anderson JA, Swanstrom R, Cohen M, Abdool Karim SS , Haynes B, Borrow P, Perelson AS, Shaw GM, Hahn BH, Williamson C , Korber BT, Gao F, Self S, McMichael A, Goonetilleke N. Vertical T cell immunodominance and epitope entropy determine HIV-1 escape. <i>Journal of Clinical Investigation</i> 2013; 123(1): 380-393.
34	Amico R, Mansoor LE , Corneli A, Torjesen K, van der Straten A. Adherence Support Approaches in Biomedical HIV Prevention Trials: Experiences, Insights and Future Directions from Four Multisite Prevention Trials. <i>AIDS Behav</i> 2013; 17:2143–2155
35	Chang CC, Dorasamy AA, Gosnell BI, Elliott JH, Spelman T, Omarjee S, Naranbhai V , Coovadia Y, Ndung'u T, Moosa M-YS, Lewin SR, French MA. Clinical and mycological predictors of cryptococcosis-associated immune reconstitution inflammatory syndrome. <i>AIDS</i> 2013, 27:2089–2099

*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	298	4	170	2	52

for month, [^] since committee initiation

Conference & Workshop Reminders

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

Registration Number: 2002/024027/08

Conference	Dates	Deadlines		Website
		Abstracts	Registration	
AIDS Vaccine 2013 — Barcelona, Spain	7-10 Oct 2013	11 Aug 2013	22 Sep 2013	www.vaccineenterprise.org/conference/2013/
New HIV Vaccine & Microbicide Advocacy Society: Biomedical HIV Prevention Forum — Abuja, Nigeria	18-20 Nov 2013	N/A	(early) 31 Aug 2013	www.nhvmas-ng.org
6th International Workshop on HIV Persistence during Therapy —Miami, USA	3-6 Dec 2013	6 Sep 2013	6 Sep 2013	www.informedhorizons.com/persistence2013
17th International Conference on HIV & STIs in Africa — Cape Town, South Africa	7-11 Dec 2013	5 Jul 2013	22 Nov 2013	www.icasa2013southafrica.org/
'Inflammation and chronic hepatitis/HIV infections: Who is the driver? Workshop — Milan, Italy	30-31 Jan 2014	10 Dec 2013	(early) 20 Oct 2013	www.inflammation2014.com
HIV Research for Prevention 2014: AIDS Vaccine, Microbicide & ARV-based Prevention Science — Cape Town, South Africa	28-31 Oct 2014	TBA	TBA	www.hivr4p.org