



CAPRISA

CENTRE FOR THE AIDS PROGRAMME OF RESEARCH IN SOUTH AFRICA



CAPRISA IS A UNAIDS COLLABORATING CENTRE FOR HIV PREVENTION RESEARCH

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In this issue...

Professor Salim Abdool Karim's election to the prestigious Institute of Medicine is our cover page story.

Coverage of the launch of the Lancet South Africa series report appears on page two.

On page three, CAPRISA hosts a distinguished Canadian academic.



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Professor Salim Abdool Karim elected to the Institute of Medicine

The Institute of Medicine (IOM) announced late last year the election of Professor Salim Abdool Karim to the Institute.

His appointment as a foreign associate is in recognition of his pioneering contributions to research into HIV prevention and treatment. Following the announcement, the South African Parliament granted a motion of congratulations to Professor Abdool Karim.

The IOM, which is part of the US National Academy of Sciences, made its announcement at its 42nd Annual Meeting in Washington DC, USA. A total of 70 new members and 10 foreign associates were recognized for their scientific achievements. Election to the IOM is considered to be one of the highest honours in the fields of medical sciences, health care and public health.

"I am humbled by this honour," said Professor Abdool Karim, "It's wonderful to know that South African science on AIDS is being recognized in this way."



During his 30-year career in medical science, Professor Abdool Karim has made several ground-breaking contributions in the control of infectious diseases, particularly AIDS and tuberculosis.

He, together with Quarraisha Abdool Karim, reported the first HIV prevention technology for women. This research on tenofovir gel, presented at the 2010 International AIDS Conference in Vienna, was ranked as one of the Top 10 Scientific Breakthroughs of 2010, by the journal Science. His research on HIV vaccines includes the testing and development, as patent co-inventor, of vaccines specifically



Life expectancy in South Africa rises to 60 years

Huge strides in meeting health goals for South Africans is attributed to increased political will, but there still remain many challenges ahead

In its country profile, “*Health in South Africa*” launched in November 2012 in Johannesburg, The Lancet concluded that “much remains to be done to improve the health and living conditions of large sections of the population. However, for the first time in two decades, the progress instils a basis for hope.”

Three years on from the 2009 report, the authors warn that progress towards Millennium Development Goals (MDGs) to reduce child mortality, improve maternal health, and combat HIV / AIDS, malaria and other diseases has made more progress than expected then but is still “generally insufficient” according to United Nations assessments.

As well as building on successes – such as the scaling-up of antiretroviral therapy (ART) programmes for HIV / AIDS and prevention of mother-



Left to right: Main author of the paper, Professor Bongani Mayosi—University of Cape Town, Dr Sabine Kleinert—The Lancet, and Minister of Health Dr Aaron Motsoaledi, who wrote a comment on the report.

to-child transmission of HIV – other problems that need to be addressed include low quality of maternal and newborn care, high levels of tuberculosis, ongoing high rates of new HIV infections as well as the reduction of non-communicable diseases (NCDs) and injuries.

The authors identified four key challenges to accelerate progress towards health targets, including:

- Improving social determinants of health in South Africa, particularly housing, unemployment and poor standards of education, and gender equality.
- Strengthening public health care systems as a first step towards universal health care.
- Improving health surveillance and information gathering, in view of the rapid changes in health outcomes that have occurred in the past few years.
- Providing the opportunity— through the establishment of national health insurance—for wider implementation of successful service delivery innovations.

For further reading:

Mayosi BM, Lawn JE, van Niekerk A, Bradshaw D, Abdool Karim SS, Coovadia H. *Health in South Africa: 4 Colliding Epidemics, 4 Changes and 4 Challenges*. *Lancet* 2:dx.doi.org/10.1016/S0140-6736(12)61997-7

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developed for the type of HIV found in South Africa. His clinical research on TB-HIV treatment has shaped international World Health Organisation (WHO) guidelines on the clinical management of co-infected patients.

Professor Abdool Karim has previously contributed to the IOM investigations and reports on “Envisioning a Strategy to Prepare for the Long-Term Burden of HIV/AIDS”, “Methodological Challenges

in HIV Prevention Trials” and the IOM report on the emerging threat of drug-resistant tuberculosis.

Esteemed Harvard University immunologist, Professor Bruce Walker, commented, “Dr Abdool Karim is an absolutely exceptional scientist whose work at the epicentre of the HIV and TB epidemics is transforming the way we treat and prevent these infections. The CAPRISA

004 tenofovir gel trial is a landmark study on preventing HIV transmission to women. This microbicide is a game-changing advance for women.”

The Institute of Medicine was established in 1970 by the National Academy of Sciences in Washington DC, USA, and has become recognized as a national resource for independent, scientifically informed analysis and recommendation on health issues. With their election, members make a commitment to volunteer their service on IOM committees, boards and other activities of the Institute.



Visiting academic: Dr Alan Bernstein

CAPRISA and University of KwaZulu Natal were privileged to host an academic tour by Dr Alan Bernstein, President of the Canadian Institute for Advanced Research (CIFAR).

CIFAR offers programmes that bring together top international academics to explore “big questions” on global challenges. In his guest lecture at UKZN, Dr Bernstein outlined some of these challenges as climate change, inequity, global health disparities, terrorism, food and water security and HIV/AIDS. Programmes are also offered to gifted young scientists to build future research and leadership capacity, a particular passion of Dr Bernstein.



Seated: Dr Alan Bernstein. Left to right standing: Dr Nigel Garrett (CAPRISA), Prof Quarraisha Abdool Karim (CAPRISA), Dr Muki Shey (CAPRISA), Ms Bongjwe Ndlovu (HPP), Ms Kavidha Reddy (HPP), Dr Cristine Thobekane (HPP), Dr Dersere Archary (CAPRISA), Ms Vanessa Naidoo (HPP), Prof Ayesha Kharsany (CAPRISA)

Academic recognition for Dr Ayesha Kharsany

Dr Ayesha Kharsany, has been appointed as Honorary Associate Professor in the School of Laboratory Medicine and Medical Sciences (Medical Microbiology) at the University of KwaZulu Natal in recognition of her contribution to the field of microbiology. Dr Kharsany is a senior scientist at CAPRISA and is involved in microbicide and epidemiological studies.



Dr Ayesha Kharsany

CAPRISA 008 study initiated

CAPRISA 008 enrolled its first participants in the CAPRISA 008 Tenofovir Gel Implementation Study in early November 2012. Following the CAPRISA 004 findings that tenofovir gel prevented HIV infection by 39%, HSV-2 infection by 51% and was safe, post-trial access will be realized for the CAPRISA 004 participants. CAPRISA 008 is an open-label randomized controlled trial to assess the implementation effectiveness and safety of 1% tenofovir gel provision through family planning services in KwaZulu-Natal. If successful, it will pave the way to more rapid access to microbicides following licensure.

‘Getting to Zero’ research showcase

To mark World AIDS Day, CAPRISA partnered with Health Economics and HIV/AIDS Research Division (HEARD), the Africa Centre and UKZN Press to bring a showcase of KwaZulu Natal research on HIV AIDS to over 150 stakeholders, including scientists, non-profit and community-based organisations, educators, healthcare practitioners and members of the press.



Top left: Well-known speaker and support group founder, Cindy Pivacic. Bottom: Guests visiting the HIV/AIDS research displays of the collaborating institutions.

Team challenge in aid of charity

A team challenge pitting the skills of staff from CAPRISA, K-RITH and HPP against each other in a fun-filled obstacle course provided much entertainment to spectators and, more importantly, raised over R6000 for an HIV/AIDS charity. The teambuilding event coincided with a World AIDS Day banner campaign entitled ‘Getting to Zero—one breakthrough at a time’ sponsored by the three institutions and UKZN.

K-RITH were the winners of the challenge on the day, but CAPRISA and HPP vowed to return in 2013.



Team CAPRISA: Devenie Latchmanan, Mbali Mlangeni, Muki Shey and Day Munatsi



Research papers published in 2012

- 40* Dezzutti CS, Richardson BA, Marrazzo JM, Tugetman J, Ramjee G, Taha T, Chirenje ZM, **Abdool Karim SS**, Hillier SL, Herold BC, on behalf of the MTN Biomedical Sciences Working Group and the HPTN 035 Protocol Team. Mucosal Escherichia coli Bactericidal Activity and Immune Mediators Are Associated With HIV-1 Seroconversion in Women Participating in the HPTN 035 Trial. *Journal of Infectious Disease* 2012; [Oct 8. [Epub ahead of print]
- 41 **Moore PL**, Gray ES, Wibmer CK, Bhiman JN, Nonyane M, Sheward DJ, Hermanus T, Bajimaya S, Tumba NL, Abrahams M-R, Lambson BE, Ranchohe N, Ping L, Ngandu N, **Abdool Karim Q**, **Abdool Karim SS**, Swanstrom RH, Seaman MS, **Williamson C**, **Morris L**. Evolution of an HIV glycan-dependent broadly 1 neutralizing antibody 2 epitope through immune escape. *Nature Medicine* 2012 Oct 21. doi: 10.1038/nm.2985. [Epub ahead of print]
- 42 **Naidoo K**, **Yende-Zuma N**, **Padayatchi N**, **Naidoo K**, **Jitho N**, **Nair G**, **Bamber S**, **Gengiah S**, El-Sadr W, Friedland G, Abdool Karim SS The Immune Reconstitution Inflammatory Syndrome After Antiretroviral Therapy Initiation in Patients With Tuberculosis: Findings From the SAPIT Trial. *Annals of Internal Medicine*. 2012;157:313-324
- 43 **Archary, D.**, Rong, R., Gordon, M.L., Boliar, S., Madiga, M., Gray, E.S., Dugast, A.-S., Hermanus, T., Goulder, P.J.R., Coovadia, H.M., **Werner, L.**, **Morris, L.**, Alter, G., Derdeyn, C.A., **Ndung'u, T.** Characterization of anti-HIV-1 neutralizing and binding antibodies in chronic HIV-1 subtype C infection. *Virology* 2012; 433 (2012): 410–420.
- 44 Hanifa, Y., Fielding, K.L., Charalambous, S., Variava, E., Luke, B., **Churchyard, G.J.**, Grant, A.D. Tuberculosis among adults starting antiretroviral therapy in South Africa: The need for routine case finding. *International Journal of Tuberculosis and Lung Disease* 16 (9): 1252-1259
- 45 Taylor DJ, **Grobler A.**, **Abdool Karim SS**. An adaptive design to bridge the gap between Phase 2b/3 microbicide effectiveness trials and evidence required for licensure. *Clinical Trials*, 2012 9 (4): 377-384
- 46 Coggon J, Madden B, Cockburn T, Stewart C, **Singh JA**, Bhan A, Upshur RE, Richards B. Organ Donation, Discrimination After Death, Anti-Vaccination Sentiments, and Tuberculosis Management. *Journal of Bioethical Inquiry* 2012; 9 (2): 125-133.
- 47 Johnston, V., Fielding, K., Charalambous, S., Mampho, M., **Churchyard, G.**, Phillips, A., Grant, A.D. Second-line antiretroviral therapy in a workplace and community-based treatment programme in South Africa: Determinants of virological outcome. *PLoS ONE*; 2012; 7 (5): art. no. e36997
- 48 **Iddriss A**; **Padayatchi N**; Reddy D et al. Pulmonary Resection for Extensively Drug Resistant Tuberculosis in Kwazulu-Natal, South Africa. *Annals of Thoracic Surgery* 2012; 94(2): 381-386
- 49 Mosam, A., **Shaik, F.**, Uldrick, T.S., Esterhuizen, T., Friedland, G.H., Scadden, D.T., Aboobaker, J., Coovadia, H.M. A randomized controlled trial of highly active antiretroviral therapy versus highly active antiretroviral therapy and chemotherapy in therapy-naive patients with HIV-associated Kaposi sarcoma in South Africa. *Journal of Acquired Immune Deficiency Syndromes* 2012; 60 (2) , pp. 150-157
- 50 **Padayatchi N**, Mac Kenzie WR, Hirsch-Moverman Y, Feng PJ, Villarino E, Saukkonen J, Heilig CM, Weiner M, El-Sadr WM. Lessons from a randomised clinical trial for multidrug-resistant tuberculosis. *International Journal of Tuberculosis and Lung Diseases* 2012; 16(12):1582-7
- 51 **O'Donnell MR**, Zelnick J, Werner L, Master I, Loveday M, Horsburgh RC, **Padayatchi N**. Women with drug-resistant tuberculosis are at increased risk for extensively drug resistant tuberculosis (XDR-TB) in KwaZulu-Natal, South Africa: A retrospective hospital-based study. *Emerging Infectious Diseases*. In press DOI: <http://dx.doi.org/10.3201/eid1710.110105>
- 52 Mayosi BM, Lawn JE, van Niekerk A, Bradshaw D, **Abdool Kairm SS**, **Coovadia H**. Health in South Africa: 4 Colliding Epidemics, 4 Changes and 4 Challenges. *Lancet* 2012;dx.doi.org/10.1016/S0140-6736(12)61997-7
- 53 van der Straten A, Montgomery E, **Pillay D**, Cheng H, **Naidoo A**, **Cele Z**, **Naidoo K**, Hartmann M, Piper J, **Nair G**. Feasibility, Performance, and Acceptability of the Wisebag™ for Potential Monitoring of Daily Gel Applicator Use in Durban, South Africa. *AIDS Behav* 2012 DOI 10.1007/s10461-012-0330-y

* continued from previous issue



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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www.caprisa.org

Scientific Reviews

Abstracts submitted for review		Manuscripts submitted for review		Ancillary studies submitted for review	
Total [#]	Cumulative [^]	Total [#]	Cumulative [^]	Total [#]	Cumulative [^]
4	283	2	222	1	41

for month, ^ since committee initiation

Conference & Workshop Reminders

Conference	Dates	Deadlines		Website
		Abstracts	Registration	
Keystone Symposium: HIV Vaccines Colorado, USA	10-15 Feb 2013		10 Dec 2012 (early)	https://www.keystonesymposia.org/index.cfm?e=web.Meeting.Program&meetingid=1223
CROI Atlanta, USA	3-7 Mar 2013		1 Feb 2013	http://retroconference.org
Keystone Symposia: Host Response in Tuberculosis - Understanding the Enemy Whistler, Canada	13-18 Mar 2013		14 Jan 2013	http://www.keystonesymposia.org/index.cfm?e=web.Meeting.Program&meetingid=1227
6th SA AIDS Conference Durban, South Africa	18-22 Jun 2013	19 Sep 2012	From 2 Sep 2012	www.saaids.co.za

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