



CAPRISA

CENTRE FOR THE AIDS PROGRAMME OF
RESEARCH IN SOUTH AFRICA

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A multi-institutional collaboration, incorporated as an independent non-profit AIDS Research Organisation
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<http://www.caprisa.org>
Centre for the AIDS
Programme of Research
in South Africa

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Three senior researchers, Prof Salim Abdool Karim, Prof Quarraisha Abdool Karim and Dr Jerome Singh, from the Centre for the AIDS Programme of Research (CAPRISA) contributed articles to the health and human rights section of *The Lancet* for the 24 April 2004 issue in recognition of ten years of democracy in South Africa. On Page 2 we feature some of the issues under the spotlight.

Girl power in the workplace



On 27th May 2004 South Africa's second Take a Girl Child to Work Day, initiated by a South African mobile phone company Cell C, was celebrated.

It was a rewarding day, not only for the children but for us too, writes CAPRISA's Administrative Director, Marian Swart, who helped organise the special day at CAPRISA's headquarters at the Doris Duke Medical Research Institute in Umbilo Road. "We got to know the families of our colleagues and the children (the boys insisted on not being left out) were able to understand a

lot more about the work their parents were involved in." The Take a Girl Child to Work Day initiative is described as "as a means of enabling government, business and the general public to collaborate publicly in a focused way on reversing centuries of gender stereotyping." "Approximately 10 children joined us on the day, ranging in age from two to 15." The children were first given refreshments which went down "extremely well" (see picture above). The two-year olds were kept busy by their mothers while the rest of the group were taken around the CAPRISA offices and introduced to various staff.

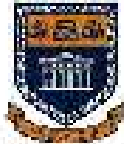
They were also taken through to the laboratory after strict instructions, not to touch anything." The children, says Marian, were particularly impressed with the cold air coming out of the nitrogen freezers. "Lastly, Lucky explained to them what she does as the Community Liaison Officer of CAPRISA. There were many more staff members that we wanted to involve in this project but unfortunately we ran out of time. "The staff enjoyed sharing their place of work with the children and we hope that the children choose science as a future career. We hope also to arrange more such days."



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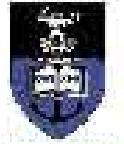
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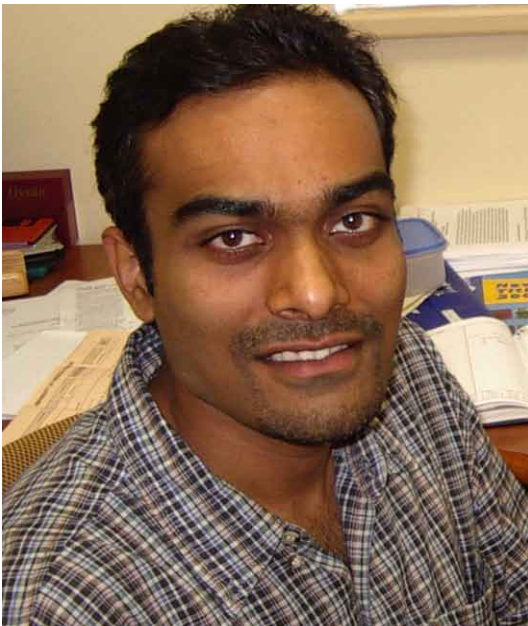
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Dr Jerome Singh: focus on health and human rights

Competent leadership needed to address past shortcomings

Dr Jerome Singh provided an article on how well South Africa had fostered health and human rights through reforms in health research during 10 years of democracy.

In it he highlighted the challenge in post-apartheid South Africa and the shortcomings of the present health research policy which, in his view, had not reached the stage where the country's critical health needs had been adequately addressed.

Dr Singh discussed the proposed Essential National Health Research (ENHR) approach of the government that has as its goal to promote development in a manner that achieves equity and social justice. Dr Singh also discussed the government's Health Research Policy which sets out the process necessary for developing an equitable research agenda.

South Africa's imminent National Health Act, which will be derived from the above policy, will provide for a National Health Research Committee (NHRC), which will serve many functions including providing advice to the Health Minister.

However, Dr Singh cautioned that the high degree of control that this Act allowed the Health minister to exercise over the NHRC threatened the realization of the Health Research Policy. Dr Singh concluded that only when the South African government committed itself to transparent, competent leadership would the country truly realize health and human rights.

From Page 1

Charting the history of HIV/AIDS in South Africa

Prof Quarraisha Abdool Karim's article on the HIV treatment in South Africa: overcoming impediments to get started, detailed the important milestones already achieved in access to treatment for HIV in South Africa.

In doing so Prof Abdool Karim observed that while stability had been achieved in the transition from apartheid to democracy in South Africa, it had been overshadowed by the effects of HIV/AIDS, particularly on previously disadvantaged groups.

Against this background Professor Abdool Karim discussed the impact the disease had on all aspects of medical care emphasising the fact that HIV-1 prevalence had reached 24.5% in pregnant women attending public health services in 2002.

Prof Abdool Karim also focused on the history of AIDS care and treatment in South Africa which included apartheid's lack lustre approach to dealing with the disease, the Mandela government's attempt to rectify the situation, and President Mbeki's dissenting views on whether HIV caused AIDS together with his questioning of antiretrovirals as a treatment option.

A defining moment came in 2001, when advocacy groups successfully challenged the government's decision not to provide two-dose nevirapine treatment to reduce the risk of mother-to-child transmission of HIV-1.

Charting the course of treatment delivery Prof Abdool Karim discussed the issue of Highly active antiretroviral therapy (HAART) and the problems of access which changed dramatically at the 2000 International AIDS Conference in Durban, South Africa when the emphasis became "when" and not "if."

As part of this changing treatment scenario it was pointed out that the Department of Health aimed to have at least one service point, committed to measure CD4 counts, in every health district within a year.

Prof Abdool Karim described the successful AIDS treatment plans of the Western Cape Province. The operational constraints of implementing the Department of Health's HIV treatment plan are discussed and Prof Abdool Karim concludes that assistance will be needed from all sectors of South African society as well as international support if the South African government are to achieve their ambitious plans to put 233000 people on HAART by March 2005



Prof Quarraisha Abdool Karim: looking at important milestones

All articles can be obtained free of charge from the Lancet website (www.thelancet.com) - Vol 363 April 24, 2004 or requested from the CAPRISA offices (baxterc1@ukzn.ac.za)

Koleka Mlisana, Acute Infection Project Director reports on the Second International Workshop on Acute HIV-1 Infection. 3 – 4 May 2004 held near Washington DC in Bethesda, Maryland. The South African delegates consisted of Prof Salim Abdool Karim, Prof Carolyn Williamson, Dr Koleka Mlisana, Dr Itua Iriogbe, Francois van Loggerenberg, Dr Joanne van Harmelen, Dr Agatha Masemola and Dr Photini Kiepiela from HPP, Durban.



CAPRISA - leading and learning

The streets of Bethesda, says Koleka Mlisana, were “bristling” with people from South Africa attending conferences and workshops in the city. While our heads were down at the Acute Infection workshop at the Holiday Inn Select our HVTN colleagues were meeting in a hotel a few metres away.

The aim of the AI workshop, which brought together more than 130 delegates from all corners of the globe, was to present an overview of current research findings in immunologic, virologic and clinical aspects of acute HIV – 1 infection.

Objectives were:-

- To examine issues affecting HIV infection research in resource poor settings.
- To identify key studies that should be done in the next 3 – 5 years with respect to the pathogenesis of acute/early HIV infection.
- To identify potential intervention approaches, such as antiviral approaches, immune-based therapies, and immunization strategies which should be evaluated in the next 3 – 5 years in acute and early HIV.

The chairman of Acute Infection Early Disease Research Program (AIEDRP) Dr Frederick Hecht gave the opening address, while various presenters in the session on Disease staging, illustrated the challenges encountered in the diagnosis of acute HIV-1 infection.

Some of the identified ways of diagnosing acute HIV-1 infection that need to be further investigated were RNA testing, specifically specimen pooling and RNA screening for Voluntary Counseling and Testing, as well as the use of Western blot patterns and intensity score for monitoring incident HIV infection.

One of the most interesting sessions looked at innate immune responses and their impact on HIV disease and progression. Three presentations looked at (gamma delta) T cells, natural killer T cells and plasmacytoid Dendritic cells.

It was realised that further research is needed on the impact of HIV-1 infection on these immune responses and how this impacts on disease progression as well as on other diseases that occur later in HIV infection e.g. tumours.

A great deal of acute HIV infection research is focusing on early CTL responses and their role in disease progression was outlined by Dr Philip Goulder. Dr Agatha Masemola from the NICD presented on novel CD8+ T cell epitopes in conserved regions of subtype C that are recognized in early infection.

The challenges of dual infections at seroconversion with the seemingly resultant increase in viral load set point, presented by Prof Carolyn Williamson, stimulated a lot of discussion. It became evident that there is a need to define certain terms like HIV superinfection, coinfection and dual infection so as to ensure a common understanding amongst researchers.

The second day plenary was given by Prof Salim Abdool Karim, who aptly presented the golden opportunities available for acute HIV infection research in high prevalence settings whilst



ABOVE: Time for a break, Dr Joanne van Harmelen and Prof Carolyn Williamson relaxing in one of the nearby parks. BELOW: The CAPRISA delegates get down to business. Pictures taken by Dr Itua Iriogbe



acknowledging the constraints that we work under. Whilst new infections are less common in North America, the persistent high rate of new infections in settings like South Africa affords researchers an opportunity to be potential drivers of the acute HIV infection research agenda. The plenary was well-received and was an eloquent showcase of research that has been done by the CAPRISA research team.

It became very clear throughout the workshop that CAPRISA is at the cutting edge of world-class research. Some of the answers that the world is looking for are contained in the research questions and objectives of the AI Project in CAPRISA, and the data that we propose to collect seem to fill many of the gaps in current research and understanding.

Some of the CAPRISA presentations were posters presented by Dr Koleka Mlisana (HIV-1 viral loads in early HIV-1 subtype C infection and long term follow up) and Francois van Loggerenberg (High risk cohorts – challenges and lessons in recruitment and retention of a female sex worker cohort).

CAPRISA'S research activities - evolving and maturing

The Centre for the AIDS Programme of Research in South Africa, (CAPRISA) has, in 18 months, developed into a highly effective multi-institutional team with well-established local leadership and expertise in the areas of basic and molecular epidemiology, virology, immunology, infectious disease medicine, HIV primary care and service delivery, bioinformatics, ethics, and health policy. Based at the Doris Duke Medical Research Institute at the Nelson R Mandela School of Medicine, University of KwaZulu-Natal, the partners are the University of KwaZulu-Natal, University of Cape Town, National Institute for Communicable Diseases, University of Western Cape, Aurum Health Research, Nell and Shapiro, Columbia University, Duke University, University of Washington, and Yale University.

In the past year, CAPRISA's research activities have evolved and matured to include three CIPRA-funded projects, three research programmes (Women and AIDS, Bioethics and TB/HAART) and a host of associated projects. These research activities are supported by three cores; core A - administration and training, core B - IT data management and statistics support and core C - essential laboratory support.

The second year of the CAPRISA program project has seen great strides and substantial progress towards achieving its goals.

1

CAPRISA published its first article on the START study in the journal AIDS: Implementing Antiretroviral Therapy in Resource Constrained Settings

2

The Acute Infection protocol (CAPRISA 002) was completed and approved by the PSRC as well as two of the three local research ethics committees.

3

CAPRISA successfully secured a PEPFAR

grant as a supplement to the CAPRISA grant from DAIDS to expand AIDS treatment in South Africa which led to the creation of the CAPRISA AIDS Treatment (CAT) programme. The CAT Programme is leading the way in the antiretroviral treatment rollout in South Africa by initiating antiretroviral

CAPRISA fellowship programme will be expanded this year to include two Fogarty-Ellison Fellows, three pre-doctoral Fellows from Columbia University, one post-doctoral Fellow from Ethiopia funded by WHO and several South African Fellows funded by the CAPRISA training supplement.

CAPRISA PUBLICATIONS IN YEAR TWO

Abdool Karim SS, Abdool Karim Q, Baxter C. Antiretroviral therapy: challenges and options for South Africa. Lancet 2003; 362: 1499.

Abdool Karim Q. HIV treatment in South Africa: overcoming impediments to get started. Lancet 2004, 363: 1394

Abdool Karim SS. Medical education after the first decade of democracy. Lancet 2004; 363: 1395.

Singh JA. Health research and human rights in South Africa. Lancet 2004; 363: 1393.

Singh JA. Ten--year review of research in South Africa. Nature 2004; 428: 891

Patel VB, Padayatchi N, Bhigjee AI, Allen J, Bhagwan B, Moodley AA, Mthiyane T. Multidrug resistant tuberculous meningitis in KwaZulu Natal, South Africa. Clin Infect Dis 2004, 38(6): 851-856.

Abdool Karim SS, Baxter C. HIV vaccines and immunity. Current Opinion in Allergy & Clinical Immunology 2003; 16(2): 67-69

therapy in 1000 patients using innovative cost-effective models at two sites in KwaZulu-Natal, an urban TB clinic and in a rural Primary Health Care Clinic.

4

A major stride forward on drug procurement was the eventual approval of the global fund project. Funds have become available for the purchase of antiretroviral drugs for the START project. The first orders have been placed and delivery is expected in early June 2004.

5

The CAPRISA fellowship programme has become a major source of inspiration to the CAPRISA team. Four pre-doctoral Fellowships were awarded to Michelle Govender, Nilam Reddy, Florette Treurnicht and Lillian Mboyi. The two post-doctoral fellowships awarded in year 1 came to an end during in year 2. CAPRISA also hosts a pre-doctoral CFAR Fellow from Brown University. The

6

CAPRISA has established contact with and is building relations with the China and Haiti CIPRAs. The CAPRISA PI was invited to the International Academic Workshop on emerging Diseases in China and had the opportunity to spend time with China CIPRA PI, Dr Shao Yiming, Co-PI, Dr Zheng Dexian and government leader Dr Yin Dakui. Further, Dr Zheng and Dr Zhou from the China CIPRA visited CAPRISA in Durban in March 2004 and Dr Shao has been appointed to the CAPRISA Scientific Advisory Board. The CAPRISA PI has been involved with the

Haitian CIPRA in their efforts to develop a protocol for a TB-HIV treatment study.

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