



# CAPRISA

CENTRE FOR THE AIDS PROGRAMME OF RESEARCH IN SOUTH AFRICA



CAPRISA IS A UNAIDS COLLABORATING CENTRE FOR HIV PREVENTION RESEARCH

FEBRUARY 2011, Volume 10, Issue 1/2

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The lead story for the first issue of the newsletter for 2011 focuses on the CAPRISA 004 tenofovir gel trial paper being nominated as the runner up for the Lancet paper of the year.

On page 2 is a story on how Salim and Quarraisha Abdool Karim met and manage to successfully balance the demands of work and home.

CAPRISA's contribution to food hampers for the Welbedacht community and a summary of the CAPRISA's strategic planning meeting is provided on page 3.



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## CAPRISA 004 paper runner up for The Lancet's Paper of the Year for 2010

### THE LANCET

www.thelancet.com Vol 377 February 19, 2011

### The Lancet's paper of the year 2010

Between Jan 18 and Jan 31, *Lancet* readers voted for the research paper published in 2010 that they felt was most likely to influence practice and research. Two randomised trials led the field. Mark Loeb and colleagues' (figure) study<sup>1</sup> of the effect of influenza vaccination in children on community infection rates won with 38% of the vote. A close second, with 35% of the vote, was a study (CAPRISA 004) of the effectiveness of tenofovir gel to prevent HIV infection in women.<sup>2</sup>

Loeb and co-authors' study was published by *JAMA* in March, 2010, when the influenza A H1N1 pandemic was still ongoing and the question was being asked about how to maximise the effectiveness of vaccination strategies. Observational work had suggested that vaccinating children could provide community protection.<sup>3</sup> With Hutterite religious colonies as the unit of randomisation, nearly 100 children aged 3-15 years were vaccinated against hepatitis A. In those

CAPRISA 004 examined individual protection from HIV transmission in nearly 900 HIV-negative women aged 18-40 years in KwaZulu-Natal who were randomised to a 1% tenofovir vaginal gel or to a placebo gel to be used vaginally before and after sex. The event-driven analysis, published in *Science*, showed that 38 women in the tenofovir group contracted HIV compared with 60 women in the placebo group, an incidence rate ratio of 0.61 (95% CI 0.40-0.94). The atmosphere was electric when the results of CAPRISA 004 were presented last July in Vienna at a packed special session of the XVIII International AIDS Conference. Here at last was proof of concept that a microbicide gel that was acceptable to women could protect against HIV-transmission. Although more work is needed to improve adherence and reduce the 5-6 per 100 women-year incidence rate of HIV transmission with tenofovir gel, these results will certainly provide a paradigm for microbicides and

### The CAPRISA 004 tenofovir gel trial primary paper was runner-up in the vote for "Paper of the Year for 2010" by the Lancet readers.

The winners of the Lancet paper of the year 2010, with 38% of the votes, were Loeb and colleagues, who conducted a randomised trial of the effect of influenza vaccination in children on community infection rates. Their finding that 3.1% of children in the influenza-vaccinated communities developed influenza compared to 7.6% in communities that did not receive the influenza

vaccination, provide critical evidence that vaccinating children against influenza has indirect benefits for herd immunity.

The CAPRISA 004 paper, published in *Science* last year (*Science* 2010; 329: 1168-74), received 35% of the votes. The paper provided the first evidence that antiretroviral drugs can prevent HIV infection in women, thereby providing new hope for HIV prevention.

For more information about the Lancet paper of the year, 2010, see *Lancet*, 2011, 377, 623



## Slim and Quarraisha profiled in IAVI's editorial about science and romance

**I**n February, the IAVI report included a story on how four HIV and AIDS research couples have been successful at intermingling science and love. The extract below is Salim and Quarraisha Abdool Karim's story on how they met and manage to successfully balance the demands of work and home.

Circumstances were not in their favor when Salim and Quarraisha Abdool Karim connected at a party in 1987. The party was being thrown in Salim's honor—five days later he was moving from the University of KwaZulu-Natal in Durban, South Africa, to New York City to study epidemiology at Columbia University. He and Quarraisha managed to squeeze in a few dates in the short time before his departure and there was instant chemistry. "We sort of knew each other for about five days and decided it was time to get married," Salim remembers.

They kept in touch through letters, and then six months later they were married in South Africa. The wedding, a 600-person affair, foreshadowed the couple's ability to organize large-scale events that have come to be some of the hallmarks of their careers together as co-principal investigators of HIV prevention trials.

After the wedding, Quarraisha joined Salim in New York City and also studied epidemiology at Columbia. Ironically, it was here and not in their home country, which is now the epicenter of the pandemic, that their focus turned to HIV. "When we came back to South Africa in 1989, we basically established ourselves as researchers ready to tackle HIV full steam," says Salim. By 1990, they published their first research paper together. At that time South Africa was still under apartheid and the couple was actively involved in antiapartheid activism in addition to their research. Once apartheid was lifted, South African researchers could at last apply for international research grants. In 1997, Salim applied for and received his first research grant from the Wellcome Trust in the UK. Soon after, he received a grant from the US National Institutes of Health.

Around that same time Salim and Quarraisha became co-investigators of a microbicide trial to see if a new gel formulation of the spermicide nonoxynol-9 (N-9) could prevent HIV infection in a cohort of female sex workers. The trial's data and safety monitoring board (DSMB) stopped the trial early, but the investigators were still blinded and didn't know which arm had the higher HIV incidence. "I was so excited to hear that the DSMB stopped the trial," Salim recalls, having assumed at the time that the microbicide had worked. It wasn't until about eight months later that the investigators learned that the HIV incidence was actually substantially higher in the N-9 group. "I was shocked," says Salim. "We were organizing for the AIDS conference in Durban and we thought this microbicide trial was going to be the highlight only to learn that we were going to give the worst news of the conference."

This spectacular failure didn't deter the husband and



wife team. Salim and Quarraisha went on to conduct other microbicide trials together, and last year their determination finally paid off. Although they could not deliver good news in Durban in 2000, they stole the show ten years later at the International AIDS Conference in Vienna, announcing that a Phase IIb trial they co-led in South Africa (CAPRISA 004) had shown that a vaginal microbicide gel containing 1% of the antiretroviral tenofovir reduced HIV incidence by a statistically significant 39%.

The data, published in *Science*, was greeted with unbridled optimism. "It was just so exciting to be involved in it," the couple recalls.

Even their three children—an 18-year-old daughter who studies law at the University of Cape Town, a 15-year-old daughter who is in high school, and a 12-year-old son in primary school—shared in the excitement. Although they both keep hectic travel schedules, they have a rule not to travel together so that one of them is always home with the children. Vienna was an exception. Sundays are reserved for family time and usually involve long walks or bicycle rides.

The biggest advantage they see in working together is in knowing how the other thinks, which isn't to say they always agree. In her spare time, Quarraisha enjoys reading, either alone or with the children.

She discloses that Salim's down time often involves a television. "Salim is not telling you about his passion for watching sports," Quarraisha says. "I like cricket in particular," he admits, "and no one wants to join me for five days of cricket watching."

*- Reprinted with permission from the Jan.-Feb. 2011 issue of IAVI Report. Kristen Jill Kresge, Regina McEnery, and Andreas von Bubnoff. What happens when HIV researchers fall in love at work? Four tales about science and romance.*



## Food hampers for Welbedacht community

Thanks to the staff members who contributed donations and helped prepare food hampers for the Welbedacht community - a total of R5000 was collected. This provided 100 families with food parcels. The hampers were handed out at the Welbedacht Clinic on 23 Dec 2010 and some photos from the day are provided below.

Welbedacht is a peri-urban Durban community with a high TB disease burden. CAPRISA has been conducting Field based Directly Observed Therapy (FDOT) in this community for the past few years. This outreach programme offers doorstep DOT to TB HIV co-infected patients residing in Welbedacht. The aim of the FDOT programme is to improve TB treatment outcomes by providing integrated TB and HIV care.



## Planning CAPRISA's future research



CAPRISA hosted its third strategic planning meeting from 8-10 December 2010. The 3-day meeting was held at Granny Mouse Country House in the KwaZulu-Natal Midlands and was attended by senior CAPRISA researchers, collaborators of CAPRISA's and a representative from the Department of Science and Technology. The first day was dedicated to reflecting on CAPRISA's past achievements and presentation on new research ideas and opportunities. On the second day some of CAPRISA's collaborators, including: Dr Bill Bishai from the KwaZulu-Natal Research Institute for TB and HIV (K-RITH), Dr Thumbi Ndung'u from the HIV Pathogenesis Programme, Dr Umesh Laloo from the Nelson R Mandela School of Medicine and Dr Gavin Churchyard from the Aurum Institute for Health Research, had an opportunity to provide an overview of their organisation's research plans and to discuss potential collaborations. The new research concepts proposed on day 1 were discussed in smaller groups to develop a consensus on the way forward for the organisation. The last day was dedicated to implementation planning for the CAPRISA research support departments.

## Research update - January 2011



**THE AURUM  
INSTITUTE**

CAPRISA is an official research institute of the University of KwaZulu-Natal.  
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

Study	Site	Screened		No. Enrolled	
		Total	Cumulative	Total	Cumulative
Acute Infection	eThekwini (Phase II-IV)	0	62	0	62
	eThekwini (Phase V)	0	17	0	17
TRAPS	eThekwini & Vulindlela	0	98	0	98
CAT	Vulindlela	34	4040	8	1799
	eThekwini	0	3951	40	1638
TRUTH	eThekwini	2	391	2	391
ACTG 5253	eThekwini	0	112	0	112
Microbicide (MTN003 – VOICE)	eThekwini	35	407	17	171
SASHA	eThekwini	0	263	0	191

## Scientific Review Committee update

Abstracts submitted for review		Manuscripts submitted for review		Ancillary studies submitted for review	
Total <sup>#</sup>	Cumulative <sup>^</sup>	Total <sup>#</sup>	Cumulative <sup>^</sup>	Total <sup>#</sup>	Cumulative <sup>^</sup>
13	197	1	85	0	22

# for month, ^since committee initiation

## Upcoming Conference & Workshop Reminders

Conference	dates	Deadlines		
		Abstracts	Registration	website
6th IAS Conference on HIV Pathogenesis, Treatment and Prevention	17-20 July, 2011	23 May (late breaker)	24 February 2011	<a href="http://www.ias2011.org/">www.ias2011.org/</a>
4th SA AIDS Conference	7-10 June 2011	28 January 2011	20 May 2011	<a href="http://www.saids.com/">http://www.saids.com/</a>

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