



Vivek Naranbhai



Landon Myer



Thumbi Ndung'u



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Tulio de Oliveira



Zenda Woodman

Pregnancy tops list of fears for SA students

ISAAC MAHLANGU

SOUTH African university students are more scared of becoming pregnant than contracting HIV.

A report compiled by sex expert Dorothy Black in collaboration with research company Amoeba Insights, to be released today, reveals that students use contraceptives for the "prevention of pregnancy more than ... sexually transmitted infections".

In the survey for Student Village, an online social networking and marketing organisation, 3 040 students from 21 higher education institutions were questioned. The respondents felt that "nowadays there are antiretroviral [ARV] drugs you can take ... [but] if you fall pregnant that changes your life forever".

Student Village CEO Ronen Aires, a youth marketing specialist, said students were generally driven by fear.

"They act to seek pleasure and avoid pain. The pain of a few years ago was that everyone was worried about Aids. Now, we've seen the shift and the biggest fear they have is making their partner pregnant," Aires said.

He said this was despite years of on-campus HIV/Aids awareness campaigns by the government and non-governmental organisations.

"They see [pregnancy] as a terminal sentence. If they had to contract Aids, they could take ARV's and they'd be fine. That's their view," Aires said.

Ramsek Ahluwalia, director of the Higher Education HIV/Aids Programme, said the right message was not reaching students.

"Young girls on Monday mornings are standing in long queues at campus clinics asking for a morning-after pill or a contraceptive because they had unprotected sex," Ahluwalia said.

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Heroes in the battle for health

There have been major successes in the fight against the disease since it was first identified in 1983. Bianca Capazorio speaks to some young South Africans at the forefront of work in the field

VIVEK NARANBHAI

DURBAN-BORN Naranbhai, 26, who is doing his second PhD at Oxford on a Rhodes scholarship, has science in his DNA. The son of a paediatrician father and a biotechnology professor mother, Naranbhai virtually grew up in a laboratory.

"When my mother was doing her PhD, she would drag us to the lab at all hours. We were always hanging out in labs and science was always a topic at the dinner table," he said.

"I was bored in my first year of medical school and wanted to quit medicine. My mother encouraged me to look at getting involved in research to fill my day."

He started working with Aids research centre Caprisa, where he realised that "to do ground-breaking medicine one had to be trained to do first-rate research".

Naranbhai was involved in the trials for Tenofovir gel and his work now focuses on the science behind why some women get infected and others do not. He aims to return to South Africa to pursue his research interests in HIV and tuberculosis. "Like the migrant labour system that partially drives the HIV epidemic, the epidemic has fundamentally changed the fabric of society," he said.

LONDON MYER

MYER, an associate professor in the University of Cape Town's division of epidemiology and biostatistics, was the

winner of this year's African Union and World Academy of Science young scientist award, and a recipient of the Elizabeth Glaser Paediatric Aids Foundation international leadership award. He is also the editor of the Southern African Journal of HIV Medicine.

"My work focuses on how best to provide antiretrovirals to HIV-infected women when they are pregnant, and what forms of contraception are most appropriate for HIV-infected women," he said.

His decision to focus on HIV and Aids was a personal one. "When I was studying, the HIV epidemic was unfolding across the country and the scope of it all was starting to become clear. It was the late 1990s, and several people close to me were infected or affected before antiretrovirals were available."

THUMBI NDUNG'U

NDUNG'U first arrived at a hi-tech lab at Harvard University in 1995, having never really worked on a computer.

He now heads the HIV patho-

genesis programme at the University of KwaZulu-Natal and is regarded as one of the country's top scientists under the age of 45 working in HIV and Aids research and prevention.

Last year, he received the Howard Hughes Medical Institute's international early career scientist award, and earlier this year he was awarded the Victor Daitz chair in HIV and TB research at the University of KwaZulu-Natal.

Having studied veterinary science in Nairobi, Ndung'u was working in a local "bare bones" lab studying a parasitic worm when he was encouraged to look for opportunities overseas.

He was granted a scholarship to Harvard, where he earned his PhD in virology focusing on HIV.

"HIV/Aids is the biggest public health problem of our generation, affecting primarily sub-Saharan Africa. As an African scientist, I chose to contribute to solving this problem and building the next generation of world-class African scientists," he said.

NTLOTLENG MABENA

IN Orange Farm, south of Johannesburg, Mabena — operations director for the Centre for HIV/Aids Prevention Studies — is working to beat HIV infection through medical male circumcision.

"Circumcision has been

I chose to contribute to solving this problem and building world-class African scientists

proven through research to decrease heterosexual transmission of HIV to men by about 60%," she said.

For a feminist with an interest in issues affecting the lesbian, gay, bisexual and transgender community, her focus on circumcision might seem odd. But for Mabena, who is completing her master's de-

gree in public health, it is all about practicality.

"It's not about just circumcision, it's about HIV prevention. Circumcision was something that has been proven to work," she said.

SINDISIWE VAN ZYL

VAN Zyl has taken to Twitter to bust the various misconceptions about HIV. The HIV clinician works with the Anova Institute, which provides technical assistance and training to public health facilities.

"My exposure to HIV-infected patients at medical school and my time as an intern at Chris Hani Baragwanath Hospital touched my heart. I always knew that I wanted to make a difference in the public sector, hence my passion for primary healthcare," she said.

The mother of two and "mother hen" has now taken her mothering to social media, through which she answers questions about HIV and the prevention of mother-to-child transmissions.

She answers anonymously

posted questions ranging from "My CD4 count was 560. I started treatment when I was four months [pregnant], do you think my baby is going to be positive?" to "I've heard they found a cure to HIV, is this true?" Van Zyl said there were still many myths about HIV.

TULIO DE OLIVEIRA

DE Oliveira is a Brazilian-born scientist who came to Southern Africa in 1997, when his mother was sent to work in Mozambique by the UN.

He finished his BSc at the then University of Natal and is now a professor at the University of KwaZulu-Natal's Nelson R Mandela School of Medicine.

Earlier this year, he was awarded a R16-million research grant from the Medical Research Council and the Department of Health to continue his research into the transmission of the virus and drug resistance. "I started working on HIV in 1997. From an evolutionary point of view, it is a very interesting virus as it

evolves very fast," he said.

ZENDA WOODMAN

WOODMAN has focused her research on an HIV protein that allows it to attach to the white blood cell, enter it and take over. "This process is very important to HIV growth because the better the virus can get inside a cell, the better and faster it is able to grow, resulting in more rapid progression to Aids-defining illness. My research is focused on how this mechanism works and to identify weaknesses that we can ultimately target in vaccine and drug design."

A lecturer in the University of Cape Town's department of molecular and cell biology, her work earned her the prestigious Sydney Brenner fellowship, which is awarded to outstanding young scientists.

She said she focused on HIV because "I wanted to use my scientific training to contribute to stopping an epidemic that's destroying Africa — young women in particular."

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Roller coaster of the HIV pandemic

1982: A year after it is recorded in the US, the first case of HIV is diagnosed in South Africa. Two gay flight attendants who had recently travelled to the US are believed to be South Africa's first recorded cases.

1983: French scientists Luc Montagnier and Françoise Barré-Sinoussi of the Pasteur Institute identify the virus that causes Aids. But similar discoveries by US scientist Robert Gallo lead to a spat between the countries. It is solved only in 1987 when presidents Ronald Reagan and Jacques Chirac sign a deal splitting the royalties for the patented Aids test between them. The virus is named HIV only around 1986.

1988: International World Aids Day is launched.

1991: The red ribbon, the symbol of Aids awareness, is launched at the Tony Awards, the US awards show for Broadway theatre.

Queen lead singer Freddie Mercury dies and basketball star Magic Johnson announces



HIGH LIFE: Queen frontman Freddie Mercury dies in 1991

he tested positive for HIV. 1998: Thabo Mbeki becomes president of South Africa. He appoints Manto Tshabalala-Msimang as his health minister.

The Treatment Action Campaign is launched in Cape Town. 2000: Mbeki announces that HIV does not cause Aids and

Tshabalala-Msimang says that antiretrovirals will not be used in South Africa. She says they are toxic and not a cure for Aids.

2001: Médecins Sans Frontières starts an ARV programme in Khayelitsha using private funding.

2002: The Treatment Action Campaign takes the Department of Health to court in a bid to allow pregnant women access to Nevirapine, a drug shown to reduce mother-to-child transmission. The Constitutional Court rules in favour of the TAC, thereby compelling the government to provide Nevirapine to pregnant HIV-positive mothers. This effectively launches South Africa's prevention of mother-to-child transmission programme.

2003: The Department of Health starts rolling out ARVs in the public sector.

2005: Tshabalala-Msimang says a diet consisting of beetroot, olive oil, lemons, garlic and African potatoes



DENIAL: Thabo Mbeki said HIV did not cause Aids

can prevent HIV infection. She is called Dr Beetroot.

2006: A group of prisoners at Durban's Westville prison and the TAC go to court to fight for their access to ARV treatment. The Department of Health loses the case and the subsequent appeal.

2008: Timothy Ray Brown becomes "the Berlin patient" after receiving a stem cell transplant that cures his HIV. A genetic defect in the donor means the virus cannot attach



GET OUT: Treatment Action Campaign members protested against a cohort of Thabo Mbeki's denialism, former health minister Manto Tshabalala-Msimang

to Brown's cells anymore, rendering him cured.

Montagnier and Barré-Sinoussi win the Nobel prize for science. Gallo is snubbed. 2011: The Department of Health introduces a new breastfeeding policy in a bid

to improve child health. The policy encourages exclusive breastfeeding for six months, coupled with ARV treatment.

2012: A new R5.9-billion ARV tender, supplying drugs to 1.7 million South Africans, is announced by Health

Minister Aaron Motsoaledi.

South African scientists take positive steps in their research towards finding a vaccine to fight HIV. 2013: Fixed-dose ARVs, a simpler, single pill treatment, is rolled out in South Africa.

To Mornay Tait & Marius Cook.

For being my pillars since I became unemployed in January and always picking me up at home and providing for me.

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