



CAPRISA

CENTRE FOR THE AIDS PROGRAMME OF RESEARCH IN SOUTH AFRICA

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Altruism and perseverance - key to great accomplishments ...*Nature*

In this Issue

Our feature article this month focuses on the article in the journal *Nature* profiling Quarraisha Abdool Karim's research.

On page 2 and 3 we expose the abuse of social media to create fake and deceptive endorsement of the product Topvein.

We highlight and report on the inaugural Global Fellows Academy meeting on 'Towards an AIDS Cure' held in May and congratulate Lynn Morris as the recipient of the Harry Oppenheimer Fellowship award on page 4.

Page 5 - highlights from the South African AIDS conference.

Page 6 - The SUTHI meeting hosted by CAPRISA and CAPRISA's participation in the McGill Global Health Program is profiled.

CONTACT DETAILS

CAPRISA
Doris Duke Medical
Research Institute (DDMRI)
2nd Floor
University of KwaZulu-Natal
Private Bag X7, Congella 4013
South Africa

T: +27-31-260 4555

F: +27-31-260 4566

E-mail: caprisa@caprisa.org

www.caprisa.org.za

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 @CAPRISAofficial



Featured in the article "Patience for patients" were (from L-R): Quarraisha Abdool Karim, Una Ryan, Bahija Jalall and Ripley Ballou (source: *Nature* 2017; 545:S1-S3)

Nature (June 15th issue) profiled the careers and experiences of 5 scientists who have made great accomplishments in new drug discovery. Quarraisha Abdool Karim, CAPRISA's Associate Scientific Director, is one of the scientists featured.

"Personal experience, a love of science and a desire to make the world a better place are all factors that fortify researchers as they move through the long process of drug discovery" writes Neil Savage in a profile entitled 'Patience for patients'.

The researchers share some 'secrets of their success' and emphasise the importance of having a passion for the work that you do and agree that perseverance and an altruistic streak keep them going along the long road to new drug discoveries that can take a decade or more.

Quarraisha Abdool Karim's research on preventing HIV in young women was featured alongside that of Una Ryan, who has

been involved in developing ACE inhibitors for treating high blood pressure and congestive heart failure as well as the development of Rotarix, an oral vaccine against rotavirus in infants; Bahija Jalall, executive vice-president of the biotechnology company MedImmune; Ripley Ballou, vice-president and head of the GSK Global Vaccines US R&D Center in Rockville, Maryland, who has contributed to the development of the malaria vaccine; and Mark O'Connor, who contributed to the development of olaparib that is used in the treatment of cancers with *BRCA* mutations.

Quarraisha Abdool Karim's advice to scientists is not to give up when experiments fail and says "Even when something that you thought was going to work doesn't work, we learn a lot from that process".

Read more about these fascinating scientists here: http://www.nature.com/nature/journal/v546/n7658_supp/full/546S1a.html



CAPRISA's name abused to peddle fake AIDS 'cure' on Facebook... legal action underway

HIV researchers - Be warned! Peddlars of fake HIV cures are using the names and reputations of established scientists to make quick money from patients desperately seeking solutions to their HIV infection on the internet. Ever since the discovery of HIV, it is well known that opportunists have used falsehoods about the virus to capture 'victims', who fall prey to a 'quick remedy' to cure AIDS. This is understandable – HIV is a devastating diagnosis riddled with stigma – any chance of escaping or curing the disease is seized upon in hope, even obviously false hope.

The internet and the reach of social media enables charlatans to flog their wares and push unregulated misinformation on online platforms. This is particularly dangerous when the rumours and hyped up claims pertain to untested herbal medications and bogus claims of cures for AIDS, or any other illness for that matter.

CAPRISA has recently fallen prey to the shenanigans of a company touting a 'cure' for AIDS. On June 23rd, CAPRISA received a call from a person who enquired about Professor Salim Abdool Karim's endorsement of the herbal product Topvein on Facebook. Images, profiles and articles available on the legitimate CAPRISA website were duplicated and posted on a fake Facebook account, created in July 2016, in the name of "Salim A Karim". The fake Facebook page, which promotes Topvein as a cure for HIV as well as diabetes and tuberculosis, had acquired over 1000 Facebook friends and had been regularly interacting and communicating with people following the account, posing as Professor Abdool Karim.

CAPRISA reported the fake Facebook account to the Facebook administrators and received a dismissive automated reply suggesting that complainants should not visit a site if they do not agree with its contents. A request was then posted on CAPRISA's official Facebook page requesting viewers to report the fake account to Facebook. The response was phenomenal and within 4 hours more than 1000 viewers filed reports to the Face-

book administrator objecting to the fake Facebook account. This post was shared 16 times, reaching over 2000 people, and just after 4 hours, the fake account in Professor Abdool Karim's name was disabled by Facebook.

However, that was not the end of the problem. Shortly after the phony account was disabled by Facebook, two more bogus Facebook pages (one created under the name of @CAPRISAL) using the CAPRISA name and images, including photos of Prof Salim Abdool Karim were found promoting

Topvein and other herbal medicinal products. The fake CAPRISAL account was also created in July 2016 and initially gained credibility by sharing legitimate posts about CAPRISA, which had been taken from the official CAPRISA website and Facebook Page. Later posts on this Facebook site were CAPRISA posts alongside Topvein promotional material. The fake CAPRISAL page offers advice to people living with HIV on how to take their antiretrovirals and also offers information on Alzheimer's and dementia, diabetes, tuberculosis and cancer. The site also falsely claims that CAPRISA is informing the global community about the discovery of a new HIV/AIDS drug called "Anti-Dot". In a post providing patients with advice on how to boost their white blood cells count while taking antiretro-

virals, false claims are made about CAPRISA conducting research on selenium and its impact on white blood cells. The second bogus Facebook page is for the group, '@herbalmedicine!'. It contains posts using images of CAPRISA and Professor Abdool Karim to promote Topvein. Both these Facebook pages have now been disabled.

Topvein originates from Zambia, according to the Facebook page, but can currently be purchased in 10 countries, including South Africa. On their website, Topvein claims that the validity of the drug has been proven through four separate clinical trials. Although Topvein was indeed tested by the Zambian National AIDS Council in 2006, the "trial" was conducted in only 11 participants.



Screenshot from the fake CAPRISA Facebook page showing the apparent CAPRISA promotion of Topvein

 **CAPRISA's name abused to peddle fake AIDS 'cure' on Facebookcontinued from page 2**

The “clinical studies” from China, the Philippines and Nigeria that are provided as proof of the product’s efficacy are even more dubious – two of the studies describe the effect of a protein isolated from a bean plant on an HIV enzyme in a pre-clinical setting and the other is an analysis of the chemical components of two bean species found in Nigeria.

No proper randomised controlled trial has ever been conducted to warrant clinical efficacy claims made on Facebook, i.e., there is no scientific basis to support any claims that Topvein can cure HIV/AIDS. Regardless, Topvein claims on its website (<https://www.topveinhealthshop.com/>) that: “We offer high potency, herbal and alkaline producing products that promote cellular health, pH balance, and well being from the eastern hemisphere's ancient remedies for natural health. Our multi-purpose Topvein formula is the highest quality alkali forming herbal supplement for cellular detoxification and cellular regeneration for strong immune support and infectious disease control.” It seems that nonsensical gobbledegook like this can sell “snake oil” remedies.

ternative Medicine and Wellness consultant from Zambia, is listed as the inventor of Topvein and on other links he is referred to as a medical consultant, who apparently is licensed to practice in Botswana, Zambia, Zimbabwe and South Africa. Most of the posts on the fake Facebook pages provide the contact details, including mobile numbers and physical address, for a Dr Justin. Attempts to call Dr Justin on the telephone numbers listed on the Facebook page have been unsuccessful. The Topvein Health Shop Facebook page includes links to a website on Mendez Clinic, which claims that HIV can be cured (www.aidscorefound.com), and a link to a webpage where the product can be purchased for the hefty price of \$149 (www.topveinhealthshop.com). The Topvein website even includes a revolving banner featuring pictures and quotes from famous people including Nelson Mandela, Barack Obama, Bill Clinton and Nicky Minaj. CAPRISA has reported the trademark infringements on its name and is pursuing legal action against Topvein and Dr Mendez. CAPRISA hopes that this information is helpful to others who may find themselves at the receiving end of false claims using their names.

A Dr Mendez Fernandez, an AI-



Screenshots from the fake CAPRISAL Facebook page showing the apparent CAPRISA promotion of Topvein



Screenshot from the fake Facebook page falsely claiming Professor Abdool Karim's endorsement of Topvein.





Towards an HIV Cure: Global Fellows Research Academy

CAPRISA research associates Professors Jo-Ann Passmore and Carolyn Williamson (UCT, NHLS), joined Prof Françoise Barré-Sinoussi, Dr Steven Deeks, Prof Sharon Lewin and other global fellows at the inaugural meeting of the Global Fellows Research Academy, organised by International AIDS Society and Towards an HIV Cure initiative.

The Towards an HIV Cure: Global Fellows Research Academy was an interactive three-day workshop held in May, designed to provide training on state-of-the-art HIV cure research for talented early to mid-career investigators and clinical scientists conducting research in resource-constrained settings. The meeting was held at the Wits Rural Facility situated in the central Lowveld of Limpopo Province. There were 24 global fellows from different regions of the world including young investigators linked to CAPRISA: Melissa-Rose Abrahams



(L-R): Melissa-Rose Abrahams, Jo-Ann Passmore, Françoise Barré-Sinoussi, Carolyn Williamson

(UCT), Omolara Baiyegunhi (HPP, UKZN), Paradize Madlala (UKZN), Aida Sivro (CAPRISA).

Professor Lynn Morris receives the 2016 Harry Oppenheimer Fellowship Award



At the awards ceremony the 2016 Harry Oppenheimer Fellowships awarded by the Oppenheimer Memorial Trust. From left is Nicky Oppenheimer, Professor Lynn Morris, Professor Wieland Gevers (Chair of the selection panel) and Professor Robert Millar (joint awardee of the Fellowship).

Professor Lynn Morris, CAPRISA Research Associate, received the premier 2016 Harry Oppenheimer Fellowship award presented by the Oppenheimer Memorial Trust at a function held on 2nd June in Johannesburg. The Harry Oppenheimer Fellowship Awards encourage excellence in scholarship and acknowledge cutting-edge, internationally significant work applicable to the advancement of knowledge, teaching, research and development in South Africa.

The monetary value of the award of R1.5million will be used to develop a novel antibody-based approach for the prevention of HIV infection in women says Morris. She is listed on the Thompsons Reuters 2015 ISI list of the 3000 most highly cited researchers in the world. Morris is a Research Professor in the Faculty of Health Sciences at the University of Witwatersrand and is the Head of the HIV Virology Laboratory in the Centre for HIV & STIs at the National Institute for Communicable Diseases.

Appointment to the SA National Board of ICSU

CAPRISA congratulates Professor Jerome Singh, CAPRISA's head of Ethics and Law, on his appointment to the International Council of Science (ICSU) National Board of South Africa for a three-year term of office from 1 April 2017 to 31 March 2020. "Considering the importance of

South Africa's scientific international liaison and the role that the ICSU National Board plays in this regard, your participation would be most valuable," said Dr Gansen Pillay Deputy CEO of Research and Innovation Support and advancement at the National Research Foundation.

South Africa is a member of ICSU and participates in many of its scientific unions. Singh has recently been invited to serve as a member of the WHO's International Health Regulations Roster of Experts, as an expert in Health Law, Ethics and Human Rights for a period of four years.



SA AIDS conference – long walk to HIV prevention

The 8th South African AIDS conference themed a Long Walk to HIV Prevention” was held at the Durban ICC from the 13th-15th June. A key message from the conference was that despite the notable decline in the number of AIDS-related deaths in South Africa, since the introduction of antiretroviral therapy, HIV incidence remains unacceptably high, “we have a long road ahead”. Southern Africa continues to be the epicenter for the HIV epidemic, with the highest incidence rates among young women, making epidemic control and the development of innovative prevention tools, crucial.

The range of topics covered during the conference included translating findings from the basic and clinical sciences to public health, community engagement and human rights issues attempting to bridge the gap between research and implementation. For the Basic and Clinical Sciences, Track 1, Dr Dersere Archary was the Chair,

and Drs Melissa-Rose Abrahams and Adrian Puren were co-chairs. The plenary “Putting the Spanner in the Works, the Nuts and Bolts of HIV Prevention,” boasted an impressive panel of the world’s leading scientists: Professors Deenan Pillay (AHRI), Linda-Gail Bekker (Desmond Tutu HIV Institute), Penny Moore (NICD) and Thumbi Ndung’u (HPP).

The talks underscored several important issues: i) phylogenetic linkages to identify HIV hotspots, ii) that “we simply cannot treat our way out of the HIV-epidemic” and more needs to be done for prevention, iii) whether everyone should have access to PrEP given the high HIV prevalence, iv) sequential immunization with tweaked immunogens to induce broadly neutralizing antibodies as a vaccine strategy, vi) prospects for a functional cure, given the current modalities available (ARVs, broadly neutralizing antibodies, identifying latently infected cells, making cells resistant to HIV and



Dr Dersere Archary speaking at the 8th SA AIDS Conference

optimization of HAART) directed toward eradicating illusive viruses hiding in cells. What is clear is that we need to intensify our research efforts towards HIV eradication through science and community engagement.

- By KL Fisher, J Jewanraj & D Archary

HIV/TB Treatment Research Team at 8th SA AIDS Conference

CAPRISA’s HIV/TB treatment team delivered four oral and four poster presentations at the 8th South African AIDS conference, 13th-15th June in Durban. The presentations covered topics ranging from basic and clinical science, social barriers affecting access to care and implementation science. Dr Kogie Naidoo, CAPRISA’s Head HIV and TB Treatment Research Programme chaired the basic science oral session: “Fanning the Flames: HIV & TB Co-interaction”. Four presentations from the CAPRISA 005 TRUTH and CAPRISA 011 IMPRESS

studies were delivered at this session. “This session underscored the extraordinary burden of disease caused by the convergence of the HIV and TB epidemics,” said Dr Naidoo.

The presentations were as follows: *Oral Presentations:* Dr Navisha Dookie: Recurrent tuberculosis disease among HIV co-infected patients: A Case Series from KwaZulu-Natal; Dr Christina Tshabalala: Antigen presenting cell function – a correlate for TB recurrence in the setting of successfully treated HIV-1 infection; Ms Anushka Naidoo: Effects of moxifloxacin PK-PD and drug interactions on its use in the treatment of tuberculosis; and Dr Aida Sivro: Plasma cytokine predictors of TB recurrence in antiretroviral-treated HIV-infected individuals from Durban, South Africa.

Poster Presentations: Dr Razia Hassan-Moosa: Case reviews: Clinical presentation and outcome of CMV Retinitis in HIV infected patients in KwaZulu-Natal, South Africa; Ms Adele Munsami: Understanding Reasons for late Presentation for Antiretroviral Therapy in a Context of Free Public Sector Access to Treatment; Ms Dirhona Ramjith: Trends in HIV positive status disclosure among urban TB-HIV co-infected patients; and Ms Nthabiseng Koloane & Ms Kea Maruping: Implementation of TB-HIV Integration: Evidence from Rural PHC patient file reviews (Pilot Study).



L-R: Christina Tshabalala, Kogie Naidoo, Aida Sivro and Navisha Dookie presented their research at the SA AIDS Conference

The SUTHI study (CAPRISA 013) team meeting



Back row from left: Kelechi Oladimeji, Nonhlanhla Yende-Zuma, Nhlakanipho Memela, Jay Ramota, Mduduzi Mbatha, Siphumelele Mlambo, Nokuthula Zulu, Mesuli Mhlongo; Middle Row from left : Sanisha Rampersad, Nesri Padayatchi, Nthabiseng Koloane, Zanele Linda, Nondwe Zama, Zanele Radebe, Regina Mlobeli, Kea Maruping, Salim Abdool Karim; Front Row: from left: (Standing) Taruna Chetty, Seated: Maureen Tshabalala , Pierre Barker, Andrew Nunn, Santhana Gengiah, Kogie Naidoo

International and local collaborators attended the CAPRISA 013 Study, Scaling up TB HIV Integration (SUTHI), annual progress update meeting held over two days on 27 – 28 June, at the CAPRISA headquarters in Durban. The collaborators included colleagues from the South African Medical Research Council, Institute for Healthcare Improvement (IHI), University College London and teams from the Provincial (KwaZulu-Natal) and District Department of Health. They provided valuable expertise in terms of improving the Quality Improvement strategy, guiding the study's evaluation framework and input into the statistical approach for the study. The highlight of the meet-

ing was the presentations from two Primary Health Care nurses whose clinics are recipients of the Quality Improvement intervention. Collaborators had the opportunity to hear first-hand how the CAPRISA QI intervention is influencing clinic performance in terms of screening for Tuberculosis (TB), HIV testing in TB-infected patients and initiating Isoniazid Preventive Therapy (IPT) in eligible HIV-infected patients. The study is testing the effectiveness of a quality improvement model to integrate TB HIV services in Primary Health Care Clinics in two rural districts of King Cetshwayo and Ugu in KwaZulu-Natal

CAPRISA TB treatment group attends the McGill Global Health Programs

CAPRISA Treatment Research Group and post-doctoral fellows and staff attended the McGill Global Health Programs at the McGill Summer Institute in Infectious Diseases and Global Health in Montreal Canada. The institute held a series of courses over two weeks, from June 12th to June 23rd. Ms Santhana Gengiah, Ms Taruna Chetty, Ms Palesa Xulu and Ms Kelechi Oladimeji attended the Qualitative Methods in Global Infectious Diseases Research course.

The workshop provided an introduction to Qualitative Research methods and topics included: applying theoretical frameworks, minimizing bias in qualitative research, organizing and analyzing qualitative data and qualitative research ethics. The course included presentations by invited speakers who shared their insights, successes and challenges with implementing qualitative research methods.

Dr Navisha Dookie attended the Advanced TB Diagnostics course which covered an intensive introduction to the methods used for analysis of whole genome sequencing (WGS) data and its application to infectious disease epidemiology. Ms Nikita Naicker attended the Global Health Diagnostics Course which focused on TB and HIV. The workshop encompassed a mix of plenary talks and



Front: Palesa Xulu; Back: (L-R): Navisha Dookie, Santhana Gengiah, Kelechi Oladimeji, Taruna Chetty.



Ms Nikita Naicker

panel discussions. "Five of CAPRISA's talented and motivated doctoral and post-doctoral candidates were awarded scholarships enabling career oriented training and development at the McGill Global Health Programs," said Dr Kogie Naidoo CAPRISA's Head of HIV and TB Treatment. "We hope that the new knowledge and insights gained will help them advance scientific understanding of TB and HIV."



Scientific papers published in 2017

36* Selhorst P, Combrinck C, Ndabambi N, Ismail SD, Abrahams M-R, Lacerda M, **Samsunder N, Garrett N, Abdool Karim Q, Abdool Karim SS, Williamson C**. Replication capacity of viruses from acute infection drives HIV-1 disease progression. *Journal of Virology* 2017; 91(8): e01806-16.

37 Howard AA, Hirsch-Moverman Y, Saito S, Gadisa T, **Daftary A**, Melaku Z. The ENRICH study to evaluate the effectiveness of a combination intervention package to improve isoniazid preventive therapy initiation, adherence and completion among people living with HIV in Ethiopia: Rationale and design of a mixed methods cluster randomized trial. *Contemporary Clinical Trials Communications* 2017; 6: 46-54.

38 Happel AU, Jaumdally SZ, Pidwell T, Cornelius T, Jaspan HB, Froissart R, Barnabas SL, **Passmore Jo-AS**. Probiotics for vaginal health in South Africa: what is on retailers' shelves? *BMC Women's Health* 2017; 17(1):7. DOI: 10.1186/s12905-017-0362-6.

39 **Padayatchi N, Mahomed S, O'Donnell M**, Conradie F, **Naidoo K**. The World Health Organization excludes Mycobacterium tuberculosis from the 2017 priority pathogens list. *South African Medical Journal* 2017; 107(6):466. DOI:10.7196/SAMJ.2017.v107i6.12474.

40 Senzani S, Li D, Bhaskar A, Ealand C, Chang J, Rimal B, Liu C, Joon Kim S, Dhar N, **Kana B**. An Amidase_3 domain-containing N-acetylmuramyl-L-alanine amidase is required for mycobacterial cell division. *Scientific Reports* 2017; 7(1):1140. doi: 10.1038/s41598-017-01184-7.

41 Nonghanphithak D, Reechaipichitkul W, Namwat W, **Naranbhai V**, Faksri K. Chemokines additional to IFN-γ can be used to differentiate among Mycobacterium tuberculosis infection possibilities and provide evidence of an early clearance phenotype. *Tuberculosis* 2017; 105: 28-34.

42 Tomita A, Vandormael AM, Bärnighausen T, **de Oliveira T, Tanser F**. Social Disequilibrium and the Risk of HIV Acquisition: A Multilevel Study in Rural KwaZulu-Natal Province, South Africa. *JAIDS* 2017; 75(2): 164-174.

*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^
1	387	0	217	2	79

for month, ^ since committee initiation

