

■ AWARDS

Duo recognised for medical breakthrough in HIV/Aids

STAFF WRITER

TWO SOUTH African infectious diseases epidemiologists have been named laureates at the prestigious Canada Gairdner Awards for their outstanding achievements in global health research.

From the Centre for the Aids Programme of Research in South Africa (Caprisa) and the University of KwaZulu-Natal, professors Salim and Quarraisha Abdool Karim recently received the 2020 John Dirks Canada Gairdner Global Health award.

“During these challenging times, we believe it is important to celebrate scientists and innovators from around the world and commend them for their tireless efforts to conduct research that impacts human health,” organisers said.

The Abdool Karims are advising the Health Ministry on Covid-19 by serving on the government’s ministerial advisory committees. Caprisa’s director Salim is the overarching chairperson.

Quarraisha is Caprisa’s associate scientific director.

They were recognised for their discovery that antiretrovirals prevent sexual transmission of HIV, which laid the foundations for pre-exposure prophylaxis (PrEP), the HIV prevention strategy that is contributing to the reduction of HIV infection in Africa and across the world.

“UNAids estimates that 37 million people were living with HIV and 1.8 million people acquired HIV in 2017. In Africa, which has over two-thirds of all people with HIV, adolescent girls and young women have the highest rates of new HIV infections.

“ABC (Abstinence, Be faithful, and use Condoms) prevention messages have had little impact – due to gender power imbalances, young women are often unable to successfully negotiate condom use, insist on mutual monogamy, or convince their male partners to have an HIV test,” organisers said.

In responding to this crisis, the pair started investigating new HIV prevention technologies for women about 30 years ago.

After two unsuccessful decades, their perseverance paid off when they provided proof-of-concept that antiretrovirals prevent sexually acquired HIV infection in women.

Their groundbreaking Caprisa 004 trial showed that tenofovir gel prevents HIV infection and genital herpes.

The finding was ranked in the “Top 10 Scientific Breakthroughs of 2010” by the journal Science. It was heralded by UNAids and the World Health Organisation (WHO) as one of the most significant scientific breakthroughs in Aids and provided the first evidence for what is today known as HIV pre-exposure prophylaxis (PrEP).

The Abdool Karims have also elucidated the evolving nature of the HIV epidemic in Africa, characterising the key social, behavioural and biological risk factors responsible for the disproportionately high HIV burden in young women.

Their identification of the “Cycle of HIV Transmission”, where teenage girls acquire HIV from men about 10 years older on average, has shaped UNAids policies on HIV prevention in Africa.

“Caprisa 004 and several clinical trials of oral tenofovir led to the WHO recommending a daily tenofovir-containing pill for PrEP as a standard HIV prevention tool for all those at high risk a few years later.

“Several African countries are among the 68 countries across all continents that are currently making PrEP available for HIV prevention. The research undertaken in Africa by this South African couple has played a key role in shaping the local and global response to the HIV epidemic,” organisers said.