

Makerere research links high malaria spread to HIV

By David Lumu and Vivian Agaba

Makerere University research has linked high malaria infections to HIV, raising another line of HIV co-infection that researchers say the Government policy implementation agencies ought to consider in the fight against HIV.

According to Dr Mark Kaddu Mukasa, who yesterday received a PhD in humoral immune responses and immunological memory against plasmodium falciparum malaria vaccine antigens, the transmission of the malaria vector from HIV-positive people is four times more likely to spread compared to that from those who are HIV-negative.

"Overall, immunity against malaria infection increased among the participants, though HIV co-infected participants carried more malaria gametocytes," Kaddu Mukasa states in his thesis.

"The findings benefit the development of malaria vaccines and support policy at the health ministry to reinforce malaria prevention guidelines, especially among the HIV co-infected persons," he added.

Kaddu Mukasa yesterday told *New Vision* that for people who have HIV and get malaria, his research shows



Dr Mark Kaddu Mukasa

that the plasmodium also multiplies more times in HIV-positive people.

Earlier research on co-infection was majorly tailored on HIV and its relation with tuberculosis.

However, Kaddu Mukasa, who conducted his research in Iganga district in eastern Uganda, has linked HIV and malaria co-infections.

Malaria still remains the leading cause of death in children below the age of five, a major health problem among people across the sub-Saharan region.

In Uganda, malaria accounts for over 27% of deaths, according to health ministry reports.

According to the World

Health Organisation (WHO), malaria and HIV cause more than two million deaths every year in the world. In several reports, WHO experts, have also stated that antimalarial treatment failure may be more common in HIV-infected adults with low CD4-cell counts compared to those not infected with HIV.

In 2017, WHO recommended additional research which is needed to investigate the impact of malaria on the natural history of HIV, potential therapeutic implications, interactions at a cellular and molecular level and drug interactions between antiretroviral and antimalarial medicines. Kaddu Mukasa's research seems to be answering WHO's call, especially given the fact that Uganda has the world's highest malaria incidence, with a rate of 478 cases per 1,000 people per year, according to Ministry of Health reports.

Yesterday, graduates in science colleges of veterinary medicine, animal resources, biosafety, health sciences, computing and information sciences and business and management sciences received degrees.

During the week-long graduation, which started on Tuesday, a total of 14,085 will receive different degree awards.



Graduands of the college of health science celebrate and take photos after receiving degrees in various disciplines on the second day of the 68th graduation ceremony at Makerere University yesterday. Photo by Juliet Kasirye

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Out of these, 71 will receive PhDs, 980 master's degrees, 96 postgraduate diplomas, 133 undergraduate diplomas and 12,691 bachelor's degrees. Of these, 50.6% are female and 49.4% are male.

Speaking at the graduation ceremony, Prof. Ezra Suruma, the chancellor of Makerere University, said cutting edge research in infectious and non-communicable diseases will help the country address

health-related challenges that citizens are grappling with.

Suruma also congratulated researchers in the College of Veterinary Medicine, Animal Resources and Biosecurity for developing an anti-tick, East Coast fever, sleeping sickness and brucellosis vaccines.

"I commend that college (Veterinary) for conducting research, which directly impacts the livelihoods of our people," he said.

Air pollution devices

The Makerere University vice-chancellor, Prof. Barnabas Nawangwe, also revealed yesterday that researchers at the College of Computing and Information Sciences (CoCIS) led by Dr Eng. Bainomugisha are to begin developing low cost air monitoring devices to measure air quality in the country.

The researchers are partnering with the University of Sheffield in England to develop the devices.

"The team in partnership with Kampala Capital City Authority (KCCA), has innovatively deployed a network of air quality monitoring on bodabodas, streetlights and buildings in selected areas of Kampala city to produce a detailed and near-real-time air pollution map," he said.