

Ugandan scientist eyes sh124m global prize

By Taddeo Swambale

A young Ugandan scientist stands a chance to walk away with £25,000 (about sh124m) if he wins the 2018 Africa Prize for Engineering Innovation next month.

Brian Gitta, the co-founder of Matibabu, a malaria diagnostic kit, is one of four scientists shortlisted for the prestigious award that recognises engineering innovations that provide new solutions.

To take home the prize, Gitta will have to beat three contenders from Ghana, Nigeria and Zimbabwe after four finalists were selected from a pool of 16 engineers from seven countries in sub-Saharan Africa.

Gitta, a computer science graduate from Makerere University, co-developed Matibabu, a low-cost reusable device that tests for malaria quickly and accurately without drawing blood.

His innovation attracted global attention in 2015 and support from international bodies, including from President Yoweri Museveni who offered \$50,000 (about sh181m) to Gitta's team.

Malaria accounts for 400,000 global deaths every year, 90% of them in sub-Saharan Africa. The infection kills more children under five in the region than HIV/AIDS.

The Africa Prize was launched in 2014 by the Royal Academy of Engineering. It comes with a six-month support programme including funding, training, mentorship and access to the Royal Academy of Engineering's network of high profile, experienced engineers and business development experts.

The prize recognises the most talented African engineers from across sub-Saharan Africa, whose innovations hold the potential to transform society.

On June 13, Gitta and the three finalists will pitch their business ideas to judges in front of a live audience in Nairobi, Kenya. One winner will then be selected. The three runners-up will each take home £10,000 (about sh47.5m).

Each of the finalists will develop skills that last a lifetime and be part of a growing community of talented African engineers working to accelerate socio-economic development through business, organisers said. The engineers will be able to approach funders, clients and investors as well as access knowledge to improve their supply chain and business models, the prize organisers said.

How Matibabu works

Matibabu, which means

'medical centre' in Swahili, uses light sensors to detect the malaria infection, reducing the need for needles and laboratory facilities.

A user simply inserts a finger into a clip and then plugs it into a smartphone. The user will then press the 'start diagnosis' feature that appears on the phone and wait for the diagnosis.

A beam of laser light flashes through the user's finger to detect changes in the shape, colour and concentration of red blood cells. The results are available within one minute and shared with a doctor.

The technology is the first of its kind with the potential to revolutionise diagnosis and treatment for malaria. All current tests for malaria require blood samples, which are invasive, expensive and time-consuming.

Malaria claims 400,000 deaths annually and 90% of them are in sub-Saharan Africa. In Uganda, 16 million suffer from malaria and the infection is responsible for over 6,000 deaths annually.

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Uganda is the ninth highest malaria-burden country in the world. In April, Uganda launched the Mass Action Against Malaria (MAAM) strategy to eradicate malaria, which is preventable.

"Our goal was not just to alleviate momentary pain; eliminating needles and the need for a lab would not only limit the risk of infection, but allow for diagnosis in communities with no medical centres," Gitta explained in a media interview in 2016.

The three other contenders of the Africa Prize for Engineering Innovation have awe-inspiring ideas. Collins Saguru, a Zimbabwean chemical engineer, developed AltMet, a process that reduces the toxicity of vehicle gas emissions while iMeter, a system designed by Nigerian electronics engineer Ifediora Ugochukwu, helps prevent tampering with electricity meters.

Ghanaian mechanical engineer Michael Asante-Afrifa developed Science Set, a mini-science lab that contains specially developed materials needed for science activities and experiments.