

Becoming the youngest winner of [Royal Academy of Engineering's Africa Prize](#) at 24, Brian Gitta is also the first Ugandan to be honored with the award, and rightfully so! Gitta made exceptionally strides in the study of malaria with a device that detects early signs of the disease by shining a red beam of light on the patient's finger. Then within a minute, the diagnosis is ready to be shared to a mobile phone.

[Malaria](#) is a mosquito-borne infectious disease caused by a parasite and the leading cause of death in Uganda. Before Gitta's invention, doctors would diagnose using blood tests, however, the results were rarely accurate.

Gitta developed the non-invasive device, which he called [Matibabu](#) (meaning treatment in Swahili), when three blood tests taken by doctors had failed to diagnose his own malaria.

"Matibabu is simply a game-changer," Rebecca Enonchong, Africa Prize for Engineering Innovation judge and Cameroonian technology entrepreneur, said in a statement. "It's a perfect example of how engineering can unlock development—in this case by improving healthcare."

Gitta's invention clips onto a patient's finger and does not require a specialist to operate. The device's red beam can detect changes in the color, shape, and concentration of red blood cells—all of which are affected by malaria if infected.

Unfortunately, before Matibabu can be used widespread, it needs to go through several regulators in order to prove that it is safe for human use.

While the world waits for this miracle device, Gitta and his team are currently writing an academic paper on their findings, and were approached by international researchers offering support. They are also currently performing field trials with Matibabu.



Africa Proof

The Africa Prize provides support, funding, mentoring, and business training to winners. Gitta was awarded around \$33,000 USD in prize money from the Royal Academy of Engineering.

“The recognition will help us open up partnership opportunities—which is what we need most at the moment,” Gitta said in a statement.

Malaria is probably the most impactful parasitic disease affecting humans today. There is not only a flaw in the diagnosing phase of malaria, but also in the treatment phase.

[Antimalarial drug resistance](#) is on this increase, with many antimalarial drugs becoming useless. Two chiral drugs, chloroquine and pyrimethamine were used so widely (even as a regular additive to table salt), that many people had the drugs in their blood all the time, which eventually caused a resistance to these two compounds.

Similar drug resistance has rapidly developed to other, more potent, and sometimes more toxic, drugs such as primaquine and quinacrine, Amodiaquine, Mefloquine, and Halofantrine. Recently, new and important contributions to treating malaria have come from China, with the development of qinghaosu or artemisinin. Other synthetics, such as piperazine, lumefantrine, and pyronaridine are also providing clinicians with a new generation of effective, and in some cases, affordable antimalarial drugs.

An active area of investigation involves possible combination therapies, where two or more of these drugs are administered in tandem. Since many of these old and new compounds are chiral, there is growing interest in determining the therapeutic efficacy of individual enantiomers and the potential development of drugs in optically pure form.

In the war against malaria, Phenomenex's Chirex™ HPLC columns offer superior tools to analyze and purify these new medicines.

Explore this [technical note](#), for simple and direct chiral HPLC methods for the resolution of racemic antimalarial drugs. [Chiral HPLC of Antimalarial Drugs](#)

Learn more about Matibabu and its creator, Brian Gitta here: matibabu.thinkitlimited.com

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Summary



Article Name

Ugandan Inventor, Brian Gitta, Wins Africa Prize for Bloodless Malaria Detector

Description

Young inventor, Brian Gitta, wins Africa Prize for the invention of a device that will make great strides in diagnosing malaria.