

Malaria vaccine tests making slow, sure progress in Tanzania

By **BILHAM KIMATI**

THE fact that malaria continues to claim millions of lives worldwide, shared expertise among scientists becomes the best option for the interest of mankind.

According to the World Health Organisation (WHO) report (2012), nearly 90 per cent of the 660,000 malaria deaths reported last year occurred in Africa and that the disease kills one African child every minute.

In recognition of the magnitude of the pandemic, researchers in tropical diseases are focusing developing malaria vaccine trials in Africa, with trails already in progress in Tanzania.

United States company Sanaria Inc in collaboration with Ifakara Health Institute (IHI) have started phase one of the clinical trials of the PfSPZ vaccine effective early May this year.

The test started with the immunisation of three adult volunteers at the Ifakara Health Institute's Research and Training Centre in Bagamoyo, Coast region.

This vaccine was earlier shown to be safe, well tolerated, easy to administer and highly protective in US adults who were experimentally infected with the malaria parasite *Plasmodium falciparum*. Giving details on the recorded progress for the vaccine trial in Dar es Salaam recently, the Chief Executive Director of IHI, Dr Salim Abdullah said the ongoing malaria vaccine trial was heading for the great advances for the benefit of not only Tanzanians but the continent at large and perhaps beyond Africa.

"The current trial involves 73 healthy volunteers between 18 and 35 years of age and is designed to test whether Africans injected with the vaccine will be similarly protected. *Plasmodium falciparum* is the parasite that causes the most deadly form of malaria, with the greatest disease burden borne by Africans," Abdullah explained. However, Dr Abdullah, who also doubles the Principal Investigator does not play down the complexity of the ground work for the trial saying that it became necessary to recruit volunteers from learning institutions who could easily understand the significance of the vaccine trial for the welfare of humankind.

Certified effectiveness of this



Chief Executive Director of IHI, Dr Salim Abdullah (centre) flanked by Sanaria's founder and Chief Scientific Officer, Prof Stephen L. Hoffman (to his right) and Prof Marcel Tanner who is the Director of the Swiss Tropical and Public Health Institute and an Investigator in the trial. The trio were addressing journalists in Dar es Salaam recently. (Photo by Frank Kimaro)

malaria vaccine (PfSPZ) will benefit not only Tanzania but the whole continent and other parts of the world where the parasite continues to pose serious health challenges.

"If this trial is successful it will be a great advance in realising a whole parasite vaccine. It opens up the possibility of accelerating malaria control and elimination work in many countries in Africa. My colleagues and I are very excited about working with Sanaria," Abdullah explained.

Sanaria's founder and Chief Scientific Officer, Prof Stephen L. Hoffman, MD said despite the fact that a similar malaria vaccine trial yielded positive results in the United States of America, yet it became necessary to conduct the test in Africa.

"We are still in the early stages of testing; we believe this vaccine can and will be used to eliminate malaria. Within three to five years a safe, reliable whole-parasite vaccine could be a commercial reality, providing benefits to a huge population and sparing millions of lives," Hoffman says.

Funding for the trial is primarily from the Rudolf Geigy Foundation through the Swiss Tropical and Public Health Institute, the IHI of Tanzania and Sanaria. Prof Marcel Tanner who is the Director of the Swiss Tropical and Public Health Institute and an Investigator in the trial says; "The world is watching and waiting for a vaccine that can be used for elimination of malaria," he observes.

However, the scientists insist that commercial production and full application of malaria vaccine would not imply replacement of other malaria preventive measures such as use of mosquito nets.

"Household sprays, use of treated mosquito nets and destruction of mosquito breeding centres will apply even after the malaria vaccine has become fully adopted. The deaths of children is unacceptable and expectant mothers should continue attending clinic for regular medical check up," Tanner insists. Although war against malaria is as popular compared to the one against HIV/AIDS, Tanner added, both social and economic effects related to

malaria are quite devastating as sick people could not take part in productive activities. The Director General of the Tanzania Commission for Science and Technology (COSTECH) and Chair of the IHI Board of trustees, Dr Hassan Mshinda says malaria is certainly a challenge in Tanzania and the rest of Africa.

"I am very proud to see that our scientists are actively participating in developing solutions for problems facing our communities," Mshinda remarks. Malaria Day is observed annually and African countries are reminded to increase efforts to combat the pandemic. Currently only one fifth of the countries in the region are on track to meet the 2015 target of 75 per cent reduction in malaria burden.

WHO says the global community has agreed on the theme: "Invest in the future: Defeat malaria" which will run through to 2015. This theme reflects the need for firm accelerated action to defeat malaria as countries move towards the deadline set for the Millennium Development Goals.