



## **African Contributions to Global Health**

### Video Transcript

#### **The Malaria Research and Training Centre in Mali**

ERIC NÉBIÉ: A warm welcome to Mali. Behind me is the Malaria Research and Training Centre (MRTC) in West Africa. With me we have Professor Abdoulaye Djimdé.

ABDOULAYE DJIMDÉ: My name is Abdoulaye Djimdé. I'm the Director of the Malaria Research and Training Centre, the parasitology branch. The MRTC is the fruit of a collaboration between the government of the United States of America and the government of Mali, which was established as a partnership back in 1992. The founding fathers were, on the Malian side: Professor Yéya Touré, an eminent entomologist, and the late Professor Ogobara Doumbo, an eminent parasitologist, who passed away a few years ago. On the American side, the founding fathers were Dr Louis Miller, Dr Robert Gwadz and Dr Rick Sakai. The centre was built to train and to perform research on all aspects of malaria, including clinical studies. Welcome to visit our centre!

ERIC NÉBIÉ: Thank you, Professor.

ERIC NÉBIÉ: Professor Abdoulaye Djimdé, can you tell us more about the MRTC?

ABDOULAYE DJIMDÉ: Thank you. The MRTC is a truly collaborative centre. On the American side, you have the National Institute of Allergy and Infectious Diseases, the NIAID, within the NIH (National Institutes of Health), and the University of Mali. We have a number of supporters in addition to the US government and the government of Mali. Support from the WHO TDR and support from people like the late Mario Coluzzi, an eminent entomologist. It was really a shared vision between the Malian side and the American side, which was to train and develop capacity here in Mali to study malaria in order to provide evidence that would help in policy decision-making. This is a centre with two pillars: the research pillar and the training pillar. The research pillar started as a Department of Parasitology and slowly malaria became a prominent disease that the centre focused on. We have a better part of 300 scientists working here and we have a number of field sites. Our field sites are in many parts of the country.

SAFIATOU NIARÉ DOUMBO: Chloroquine was used during pregnancy in women to reduce malaria morbidity. Then we started to see some resistance to chloroquine; then we tried to evaluate sulfadoxine-



pyrimethamine (SP) during the pregnancy. We tested two regimens: three tablets taken two times during the pregnancy and three tablets taken three times during the pregnancy. We showed that morbidity of malaria parameters were very reduced for three regimens. That means sulfadoxine is very effective on malaria parasites during the pregnancy. We also evaluated the molecular resistance for SP, and we found that SP is still effective against malaria parasites in Mali. And control programmes should use that before to find another molecule more effective than the SP.

MAHAMADOU ALI THERA: MRTC has conducted clinical trials of malaria vaccines since 2003. And from then, we have done more than 25 clinical trials. Our main contributions are for the development of blood-stage malaria vaccine candidates, when we showed in 2011, for the first time, the clinical efficacy of blood-stage malaria vaccines. The second important contribution is applying the partial efficacy of the famous RTS,S malaria vaccine candidate to areas of seasonal malaria transmission, where combined to malaria seasonal chemoprevention, it led to a significant reduction in the burden of malaria in children aged less than five years. Finally, we contributed also to establishing the proof of efficacy of blood-stage malaria vaccine candidates.

ABDOULAYE DJIMDÉ: Through our various collaborations, we have now a diverse array of collaborators. Through these various collaborations, we have been able to get equipment and research infrastructure that is state of the art.

ERIC NÉBIÉ: Thank you, Professor Abdoulaye Djimdé. The MRTC has contributed to malaria control in various ways: vector control, antimalarial drug resistance, malaria in pregnancy, vaccine and drug development, among other issues. Therefore, MRTC is a good example of African innovation as a role model in global health.