



A New Malaria Triple Therapy for Africa's Children?

ASAAP leads the way in assessing the viability of a triple therapy antimalarial via a multicenter clinical trial. Triple therapy is expected to significantly slow down the rate at which resistance of malaria parasites to medication develops.

Kumasi, Ghana (June 17, 2019) – Seven reputable institutions across Sub-Saharan Africa, Germany, and France have come together to run the project ASAAP - Clinical evaluation of ArteSunate+Amodiaquine+Atovaquone-Proguanil tri-therapy for malaria treatment in African children. ASAAP is a 48-month-long multicenter clinical trial, coordinated by the Kumasi Center for Collaborative Research in Tropical Medicine (KCCR).

ASAAP's main objective is to test a new combination of three drugs for how well they work for children and how safe and child-friendly they are. It is hoped that ASAAP will lead to the development of one of the first fixed-dose antimalarial tri-therapies aimed at slowing down resistance to malaria medicines, as well as the risk of mosquitoes passing malaria from one person to another. Over the next 4 years, ASAAP will use its network to develop a platform for clinical trials, entomology and molecular biology in Benin, Ghana, Mali, Gabon and Burkina Faso.

Malaria is preventable and curable. Its control currently relies on three major tools: long lasting insecticide treated nets to prevent mosquito bites; rapid and accurate diagnostic tests to identify parasite carriers; and efficacious, safe and well-tolerated antimalarial drugs to prevent the infection and cure the disease. Thanks to these tools and increased international funding over the past two decades, it is estimated that the prevalence of malaria parasite infection and the incidence of clinical disease fell by 50% and 40% respectively in Sub-Saharan Africa between 2000 and 2015. However, the malaria burden has remained stable since 2016. Most malaria cases in 2017 were in the WHO African Region (200 million or 92%). Ten countries in sub-Saharan Africa -- including Burkina Faso, Ghana, and Mali, and India carried almost 80% of the global malaria burden. The WHO Global Technical Strategy for Malaria 2016–2030 has set ambitious goals, including the reduction of malaria incidence and mortality rates globally by at least 90% by 2030. The Strategy calls for continued research and development into new malaria control tools toward its elimination. Currently, the available tools to control malaria are under enormous pressure, due to the resistance of the malaria parasite to medication.



ASAAP can help Africa to avoid the emergence of resistance to multiple previously effective antimalarials as is the case in Southeast Asia, where resistance is widespread, and robust strategies now need to be implemented to secure the progress made in malaria control.

ASAAP's strategy is therefore to develop new antimalarial regimens by combining currently effective antimalarial drugs having different modes of action, such as Artesunate + Amodiaquine (highly efficacious in Africa) with Atovaquone-Proguanil (so far only prescribed for travelers coming from non-endemic regions). The combination of these three antimalarials can reduce the incidence of and delay parasite resistance to the drugs, thereby prolonging their effectiveness. This strategy will maximize the possibility of a transition to next-generation antimalarials without a lapse in gains made in malaria control.

Through the support of EDCTP/EU funding and BMBF, the project is being led and coordinated by Dr. Oumou Maiga-Ascofaré of the BNITM in Germany and the KCCR in Kumasi, Ghana under the authority of the Kwame Nkrumah University of Science and Technology (KNUST), in collaboration with:

- Dr. Jerome Clain and Dr. Michel Cot at MERIT (Paris); and Dr. Anna Cohuet at MIVEGEC (Montpellier) from the Institut de Recherche pour le Développement (IRD) in France
- Prof. Abdoulaye Djimdé from the Université des Sciences, des Techniques et des Technologies de Bamako (USTTB) in Bamako in Mali
- Prof. Achille Massougbdji from the Institut de Recherche Clinique du Bénin (IRCB) in Abomey-Calavi, Benin
- Dr. Ghyslain Mombo Ngoma from the Center de Recherches Médicales de Lambaréné (CERMEL) in Lambaréné, Gabon
- Dr. Serge Yerbanga from the Institut des Sciences et Techniques (INSTech) in Bobo-Dioulasso, Burkina Faso
- Prof. Jürgen May and Prof. Michael Ramharter from the Bernhard-Nocht-Institut für Tropenmedizin (BNITM) in Hamburg, Germany
- Dr. John Amuasi from KCCR and the department of Global Health at the KNUST School of Public Health in Kumasi, Ghana.

*The **Kumasi Center for Collaborative Research in Tropical Medicine (KCCR)** is an international platform for biomedical research. KCCR's modus operandi is based on the close collaboration between KNUST School of Medical Sciences in Ghana, the Ministry of Health and the Bernhard-Nocht Institute for Tropical Medicine (BNITM) in Germany. The main objective of the center is to develop a series of world standard research programs through the acquisition of research grants to carry out biomedical research in communicable diseases such as neglected tropical diseases, antimicrobial resistance, tuberculosis, malaria, and emerging and re-emerging infectious diseases; but also in non-communicable diseases. KCCR houses one of the few level 3 laboratories established in West Africa. The Center is based on the campus of the Kwame Nkrumah University of Science and Technology (KNUST) in Kumasi, Ghana.*



The **Institut de Recherche pour le Développement (IRD)** is the National Research Institute for Sustainable Development in France, an internationally recognized multidisciplinary organization working primarily in partnership with inter-tropical countries. Two units of IRD are participating in this consortium: (i) MERIT (IRD-Paris) has expertise in basic research on antimalarial drugs, particularly atovaquone-proguanil for more than 10 years. MERIT also has a long experience in capacity building and implementation of clinical research studies in malaria in pregnant women and newborns in West Africa; and (ii) MIVEGEC (IRD-Montpellier) focuses on finding mechanisms altering pathogen transmission, especially at the vector level.

The **Université des Sciences, des Techniques et des Technologies de Bamako (USTTB)** is the University of Science and Technology in Bamako, Mali. USTTB fosters the Malaria Research and Training Centre (MRTC). The MRTC co-hosts a doctoral training program on Medical Parasitology and Entomology in West Africa; and more recently, the DELGEME consortium leading a capacity-building program in Bioinformatics toward Malaria Elimination in Africa. MRTC also fosters the EDCTP funded projects WANECAM I and II that has expertise in capacity building in clinical trials across West Africa.

The **Recherche Clinique du Bénin (IRCB)** is a clinical research institute in Cotonou, Benin which has well-equipped laboratories and well-trained personnel for molecular and cell biology, and for immunology research. IRCB has implemented several clinical trials on intermittent preventive therapies in pregnant women and cohort-based studies with pregnant women and children.

The **Centre de Recherches Médicales de Lambaréné (CERMEL)** is a medical research center in Lambaréné, Gabon. CERMEL is one of the leading research centers in Central Africa well known for its expertise in large-scale intervention projects. CERMEL has already conducted several clinical trials (phase I, II and III) mainly in the field of antimalarials that are now marketed across Africa and has also participated in research towards malaria vaccine development.

The **Institut des Sciences et Techniques (INSTech)** is a research institute for health science in Bobo Dioulasso, Burkina Faso. INSTech (in collaboration with the Institut de Recherche en Sciences de la Santé) has co-hosted the EUFP7 funded project TransMalariaBlock, which established the expertise on malaria transmission blocking assays by vaccines, drugs and immune mosquitoes. This project has provided a platform for training on entomology and precisely on membrane feeding assays to several African partners.

The **Bernhard Nocht Institute for Tropical Medicine (BNITM)** is Germany's largest institution for research, services and training in the field of tropical diseases and emerging infections. The current scientific focus is on malaria, hemorrhagic fever viruses, tissue nematodes and diagnostics development. To study highly pathogenic viruses and infected insects, the institute has laboratories with the highest level of biosafety (BSL 4) and a BSL3 insectary. The BNITM comprises the National Reference Center for Tropical Pathogens and the WHO-Collaborating Center for Arbovirus and Haemorrhagic Fever.

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If you would like more information on this press release or would like to be connected to members of the project team and/or the Principal Investigator, you may reach Golda Addo (ASAAP Project Manager) by email at asaap@kccr.de



EDCTP



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