combination therapies (ACT) are a cornerstone of our strategy for controlling and eventually eliminating malaria. However, reduced responsiveness/resistance to artemisinin derivatives and to ACTs, an increasing problem in South-East Asia is a major concern. It is of utmost importance to develop new antimalarial drugs from novel chemical classes that can replace ACTs. KAF156, an imidazolepiperazine, is a leading candidate in the antimalarial drug development pipeline. Combination of KAF156 with a Solid Dispersion Formulation of lumefantrine (LUM-SDF) is expected to be fast acting, fully curative, improve patient adherence and can potentially reduce malaria transmission.

Methods WANECAM II proposes to advance the clinical development of KAF156 through clinical trials in adults and children, with integrated capacity building and infrastructure development activities. The trial programme will be undertaken in the context of networking, team-building, leadership development and community engagement schemes that will involve intra-European, European-African and intra-African collaborative activities. WANECAM II will accelerate the clinical study of children less than 2 years of age which are the key target for new antimalarial treatments.

Results By the end of the project, the results are expected to contribute to the registration of KAF156/LUM-SDF through stringent regulatory health authorities, increase biomedical research capacity in the consortium and effectively promote networking among the respective teams. A new clinical research team in Niger, a grossly underrepresented country in the African research landscape, will be developed and further increase capacity and infrastructure in the consortium.

Conclusion Providing a new antimalarial drug combination that does not contain an artemisinin derivative and is effective against resistant *P. falciparum* strains as well as gametocytes and that is likely to be taken in 3 or fewer single doses will be a major advance in the field. The new combination of KAF156 with LUM-SDF is expected to provide such major advance upon successful conclusion of the WANECAM II project.

OC-8722 THE GENERATION AND TESTING OF A GENETICALLY ATTENUATED MALARIA PARASITE (GAP) VACCINE

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10.1136/bmjgh-2019-EDC.44

Background Immunisation with radiation-attenuated *Plasmodium falciparum* sporozoites (SPZ) (Sanaria PfSPZ Vaccine) can protect >90% of vaccinees against controlled human malaria infection (CHMI) and protects against naturally-transmitted *P. falciparum* in Africa for at least 6 months. Immunisation with sporozoites of genetically attenuated parasites (GAPs), which completely arrest after liver-cell invasion can be potentially safer and more potent than irradiated sporozoite vaccines. As part of a collaboration between two Dutch research groups (LUMC and Radboud University) and the US company, Sanaria, we describe the generation and first-in-man testing of a GAP vaccine,

Methods We screened single and multiple gene deletion parasites in order to identify parasites that can invade hepatocytes but are unable to complete liver-stage development. Informed by rodent studies we created *P. falciparum* double gene-deletion mutant, Δ*b9*Δ*slarp*; sporozoites of this line were infective to human hepatocytes *in vitro* and to humanised mice but they completely arrest after invasion. PfΔ*slarp*Δ*b9* PfSPZ (Sanaria PfSPZ-GA1 Vaccine) was manufactured in compliance with cGMPs and released for human clinical trials in the EU under a conditional release GMO license. This GAP vaccine was used to perform phase I (safety) and phase 2a (efficacy) clinical CHMI trial in the Netherlands.

Results In a dose escalating phase I clinical trial, the vaccine showed an excellent safety profile. All adverse events related to the vaccine were mild (grade 1). Based on this indication of safety, vaccine efficacy was examined by CHMI; 48 subjects were subsequently enrolled into phase 2a study and were immunised with either PfSPZ-GA1 or PfSPZ Vaccine or saline placebo.

Conclusions In conclusion, PfSPZ-GA1 Vaccine is the first injectable genetically attenuated malaria vaccine assessed in humans. The accomplishment to manufacture, obtain regulatory approval and to demonstrate an excellent safety profile for this vaccine is unprecedented and holds a promise for PfSPZ vaccines with increased potency.

OC-8723 CREATING AND ENHANCING TRUSTWORTHY, RESPONSIBLE AND EQUITABLE PARTNERSHIPS IN INTERNATIONAL RESEARCH

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10.1136/bmjgh-2019-EDC.45

Achieving equity in international research remains a crucial concern of the 21st century. Despite initiatives by international organisations on governance frameworks and standards to guide research conduct, such efforts remain disparate and lack focus. In an interdisciplinary collaboration between multi-level ethics bodies, policy-advisors, civil society, funders, industry and academic scholars, the TRUST project combines long-standing, highly respected efforts to establish international governance structures along with networking opportunities between Europe, sub-Saharan Africa and Asia.

The goal of TRUST is to catalyse a collaborative effort to improve adherence to high ethical standards in global research. The strategic outputs of the project encompass a set of ethics tools developed through participatory engagement traversing all continents: (i) a global code of conduct for funders, (ii) a fair research contracting web-tool (iii) and a compliance and ethics follow-up tool.

Since project inception in October 2015, the TRUST consortium has a) created an international network on global research ethics governance to identify generic risks of exporting non-ethical practices; b) established funder and industry platforms; c) identified typical case studies of exporting non-ethical practices and reported on lessons learnt; d) developed a global code of conduct that will be used by the European Commission and like-minded funders to foster ethical research and equitable partnerships; e) designed an online Fair Research Contracting tool to empower vulnerable populations under non-ideal conditions; and f) drafted a compliance and ethics follow-up tool, for conditions of high vulnerability.

TRUST envisages to make a tremendous impact on three major issues: a) enhancing the rights of indigenous people who have borne a disproportionate burden of research whilst