



Contribution ID: 45

Type: **Oral Presentation**

Triggering receptor expressed on myeloid cells 1 (TREM-1) and Cerebral Malaria Pathogenesis.

Thursday, 25 March 2021 10:20 (20 minutes)

Malaria continues to be a major health problem despite various interventions to eradicate the disease. Cerebral malaria caused by *Plasmodium falciparum* is responsible for most malaria-associated deaths. Majority of these deaths occur in children under five years mostly from sub-Saharan Africa. Currently, there is no available information to predict who will recover from cerebral malaria, or who will die or who will convert from uncomplicated Malaria (UM) to CM. This knowledge would improve CM survival and reduce CM. The disease results from a combination of vascular and inflammatory immune system dysfunction. Triggering receptor expressed on myeloid cells 1 has been shown to potentiate inflammatory response. We therefore hypothesized that, there could be an association between inflammation and microvascular damage/repair seen in the pathogenesis of cerebral malaria. This study was a cohort study using children from 2- 12 years from five different hospitals within the greater Accra region of Ghana. Techniques used in the experiment include flow cytometry, ELISA and human magnetic luminex assay. Our preliminary study has shown that, there is an increase in soluble TREM-1 production in CM as compared to UM and that CM patients have higher damage in their endothelium (73.4%) than UM patients (25.7%). Findings from this study could be employed in the diagnosis as well as therapeutics of CM.

Primary authors: Dr LARBI, Amma (KNUST(Kwame Nkrumah University of Science and Technology)); Prof. GYAN, Ben (NMIMR); Prof. FREMPONG, Margrete (KNUST)

Presenter: Dr LARBI, Amma (KNUST(Kwame Nkrumah University of Science and Technology))

Session Classification: Cellular biophysics

Track Classification: Cellular biophysics