

## **CHARACTERIZATION OF ANTIBODY SPECIFICITIES INDUCED FOLLOWING VACCINATION WITH AN *E. COLI* EXPRESSED MSP1-42 (3D7)**

**Angov E, Turgeon AM, Darko CA, Haynes JD, Robinson SJ, Barbosa A, Ockenhouse CF, Pichyangkul S, Cohen J, Heppner DG, Holder AA and Lyon JA**

*Plasmodium falciparum* MSP1 is a leading erythrocytic-stage malaria parasite vaccine candidate. This 195kDa protein is processed to several fragments, and has been implicated in binding and/or invasion of erythrocytes by merozoites. At the time of erythrocyte invasion, the C-terminal fragment known as MSP1-42 undergoes secondary processing yielding a 33 and a 19kDa fragment (MSP1-19). Various MSP1-specific mAbs react with conformational epitopes within the two EGF-like domains (EGF domain-1 and EGF domain-2) that comprise MSP1-19 or with double domain MSP1-19 and are grouped according to their functional specificities as processing inhibitory (inhibit MSP1-42 secondary processing and parasite growth) and blocking (block inhibitory mAb function). Furthermore, the MSP1-19 double-domain and EGF domain-2 specific fractions of protective human immunoglobulin inhibit malaria parasite growth *in vitro*. We immunized *Rhesus* monkeys with clinical grade MSP1-42 (3D7) adjuvanted with AS02A or alum and rabbits with clinical grade MSP1-42 (3D7) adjuvanted with AS02A, Freund's adjuvants, or Montanide. The fine specificities of antibodies in these sera were evaluated by using ELISA to measure induction of MSP1-42, MSP1-33, MSP1-19, EGF-domain 1 and EGF-domain 2-specific antibody responses. These sera and their IgG fractions were further characterized for inhibition of parasite growth *In vitro* as well as for inhibition of MSP1-42 processing.

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