

- 380 MALARIA ENDEMIC SERA IDENTIFY B CELL EPITOPES WITHIN NON REPEAT REGIONS OF THE CIRCUMSPOROZOITE PROTEIN OF *PLASMODIUM FALCIPARUM*. Calvo Calle JM*, Cochrane A, Clavijo PJ, Collins W, Herrington DA, Boudin C, Stuber D, Tam JP, Nussenzweig RS, and Nardin E. New York University School of Medicine, New York, NY; Centers for Disease Control, Atlanta, GA; Center for Vaccine Development, University of Maryland, Baltimore, MD; Department of Parasitology, University of Grenoble, Grenoble, France; F. Hoffman-La Roche, Basel, Switzerland; and The Rockefeller University, New York, NY.

The fine specificities of antibodies reacting with the circumsporozoite (CS) protein of *P. falciparum* were investigated using sera of volunteers immunized with irradiated *P. falciparum* sporozoites or individuals living in a malaria endemic area (Burkina Faso, West Africa). The sera were assayed by ELISA using either recombinant proteins, or a series of multiple antigen peptide (MAPs) constructs, which contained nonrepeat sequences from the N- and C- terminal regions of the *P. falciparum* CS protein. Antibodies in sera of the sporozoite immunized volunteers reacted predominantly with the repeat region of the CS protein which contains the immunodominant B cell epitope. In contrast, endemic sera contained antibodies which reacted with both the repeat epitope and with epitopes contained in the N- and C-terminal regions of the *P. falciparum* CS protein. The sera of children living in endemic areas, which did not have detectable anti-repeat antibodies, as well as the sera of the individuals given a *P. falciparum* blood induced infection as treatment for neurosyphilis, also contained antibodies which reacted with these non-repeat regions. The epitopes recognized by some of the endemic sera were defined by reaction with MAPs containing C- terminal sequences of *P. falciparum* CS protein.

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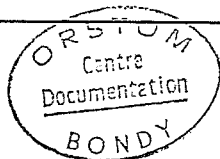
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