

ANTIGEN ASSOCIATES WITH SCHUFFNER'S DOTS
 RECOGNISED BY AN ANTI-*PLASMODIUM VIVAX* MONOCLONAL ANTIBODY

Preethi V. Udagama*, Carter Atkinson+, J.S.M. Peiris++, Peter H. David**
 G.M.G. Kapilananda*, Kamini N. Mendis*, Y.G. Ariyaratne++ & Masamichi Aikawa+
 *Dept. of Parasitology, Faculty of Medicine, Colombo 8.
 +Inst. of Pathology, Case Western Reserve University, U.S.A
 ++Dept. of Microbiology, Faculty of Medicine, Peradeniya.
 **Unite d' Immunoparasitologies, Inst. Pasteur, Paris, France.

Vivax-type malaria parasites induce stippling, a morphological alteration of the infected host erythrocyte visible by light microscopy as multiple fine brick-red dots on Romanovsky stained preparations¹. These morphological changes referred to as Schuffner's dots have been associated with caveola-vesicle complexes found along the erythrocyte plasmalemma by electron microscopy^{3,4}. Using a monoclonal antibody we have now identified and characterised a *Plasmodium vivax* antigen which is associated with Schuffner's dots in the infected human erythrocytes. This monoclonal antibody reacted with air dried *P.vivax* infected erythrocytes producing an immunofluorescence staining pattern evocative of Schuffner's dots⁴. On Western blots this anti-Schuffner's dots monoclonal antibody recognised 4 polypeptides of Mr 54, 64, 72 and 86 kDa of *P.vivax* origin. Immunogold labelling of *P.vivax* infected human erythrocytes using this monoclonal antibody confirmed the location of this antigen within vesicles of the caveola-vesicle complexes.

References

1. Schuffner, WAP, (1899), Dtsch Arch Clin Med, 64, 428
2. Aikawa, M. Miller, FH, and Rabbage, J. (1975), Am J Path, 79, 285
3. Sterling, CR, Seed, TM, Aikawa, M. and Rabbage, J. (1975) J Parasitol, 61, 177
4. Udagama, PV, David, PH, Peiris, JSM, Ariyaratne, YG., Perera, KIRL, and Mendis, KN (1987) Infect Immun (in press)

11th Dec. 1987 (Friday) 03.15 p.m. - 03.30 p.m.