

Antibodies to *Anopheles* midgut reduce vector competence for *Plasmodium vivax* malaria

K. ALAGARATNAM SRIKRISHNARAJ, RANJAN RAMASAMY*
and MANTHRI S. RAMASAMY Vector Biology and *Malaria Laboratories,
Institute of Fundamental Studies, Kandy, Sri Lanka

Abstract. *Anopheles tessellatus* mosquitoes ingested *Plasmodium vivax* gametocytes in human erythrocytes suspended in rabbit sera with and without anti-mosquito midgut antibodies. When the mosquito bloodmeal contained anti-midgut antibodies, fewer oocysts of *P.vivax* developed on the mosquito midgut and the proportion of mosquitoes becoming infected was significantly reduced. Complement inactivated serum also reduced the infection rate and load. A second bloodmeal containing anti-midgut antibodies, given 48 or 72 h later, did not enhance the transmission-blocking effect. IgG purified from anti-midgut sera was shown to mediate the transmission-blocking effect.