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Identifying genes for mosquito midgut glycoproteins

Mosquito midgut (MG) glycoproteins reportedly serve as receptors recognising Plasmodium ookinetes during its passage through the MG. Attempts were made to identify relevant genes using an antiserum raised against lectin binding Anopheles tessellatus MG proteins. This antiserum, when ingested in an infective blood meal, reduced infectivity of the malaria parasites P. vivax and P. falciparum to An. tessellatus mosquitoes. A cDNA library derived from *An. gambiae* abdomen was screened with the antiserum. Eight positive clones (A-H) were identified. The restriction enzyme digestion pattern of the clones demonstrated that clones F and G could be identical, but that the others were unique. The expression of cloned genes analysed by western blotting showed that the β-gal fusion proteins of Mr of 100-110 kDa were expressed in clones A, C, D, F and G, 125-130 kDa in clones B and E and 70 kDa in clone H. Partial DNA sequencing and homology search showed that clone E codes for a cation channel protein homologue of Drosophila and that all others code for mosquito myosin.