

D-24 Antigenic cross-reactivity between glycoproteins of the midgut epithelium and the peritrophic matrix of *Anopheles tessellatus*

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The peritrophic matrix (PM) is a lamellar structure that separates the ingested blood from the midgut (MG) epithelium, and is formed from secretions of the MG epithelial cells. The formation of the PM begins soon after a bloodmeal and it is essentially completed within 24 h in *Anopheles tessellatus*. Many glycoproteins of the *An. tessellatus* MG show the presence of N-linked core oligosaccharides.

Here, we demonstrate that several of these glycoproteins are also present in the PM. MG from non-blood fed females and PM were isolated by dissection of the midgut of bloodfed *An. tessellatus*, and proteins separated by gel electrophoresis. Separated proteins were transferred to nitrocellulose and probed with rabbit antibodies (ELISA-titre 10^4) raised to wheat germ agglutinin binding proteins (WGABP) isolated from MG of sugarfed *An. tessellatus*. These antisera recognised MG proteins of M_r in the range of 29 - 150 kDa. Rabbit antibodies to WGABP also reacted with distinct PM proteins in Western blots. Proteins of approximately M_r 60, 50, 45, 35, 31 and 25 kDa were reproducibly recognised by the antisera from WGABP - immune rabbits. The results show that the PM contains several proteins that cross-react antigenically with glycoproteins present in the midgut cells prior to a bloodmeal. Whether cross-reactivity is due to shared oligosaccharide or peptide epitopes has not been established. Not all the PM antigens detected had the same M_r as the more prominent MG glycoproteins.

It is therefore likely that PM glycoproteins or their precursors are present, at least in small amounts, in the MG cells of *An. tessellatus* before a bloodmeal.