

**Figure S11.** 3D models for OmAQP91. (a) and (b) Side and top view, respectively, of the monomer cartoon showing the position of the two NPA motifs (red spheres) and the aromatic arginine (ar/R) constriction (orange spheres); (c) and (d) side and top view of the tetramer cartoon; (e) monomer mesh and surface model showing the exposure of the 3 antigenic peptides on the extracellular surface of the molecule: OmAQP91\_A yellow, OmAQP91\_C orange, and OmAQP91\_E cyan. (f) side and top view of tetramer surface model showing peptide exposure.

