

**Figure S7.** 3D models for Om22982. (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: Om22982\_A yellow, Om22982\_C orange, and Om22982\_E cyan. (f) side and top view of tetramer surface model showing peptide exposure.

