1   **Movie S1. Overlay of AmOmpA and ApOmpA molecular models.** Overlay of the predicted

2   tertiary structures for ApOmpA and AmOmpA. PHYRE^2 models of the mature sequence lacking

3   signal peptide for each OmpA protein were generated. PyMol was used to create a movie of the

4   two models coming together to form a superimposed image. ApOmpA is shown in grey with its

5   binding domain (residues 59 to 74) in orange and functionally essential residues G61 and K64 in

6   red. ApOmpA G61 and K64 correspond to AmOmpA G55 and K58. AmOmpA is shown in blue

7   with the putative binding domain (residues 53 to 68) indicated in green and G55 and K58 in red.

8   The two cartoon models overlay and rotate. Note that the alpha helices formed by the essential

9   binding domain of ApOmpA and the putative AmOmpA binding domain overlap. The movie

10   then transitions to overlaid space filling models that successively rotate and separate back to the

11   individual AmOmpA and ApOmpA models.