



Figure S5. The Δrep , $\Delta hdfR$, $\Delta rsxB$, $\Delta glpD$ and Δail *Y. pestis* mutants effectively block fleas, even though their ability to produce biofilm in vitro is impaired. The mean \pm SEM values of two experiments are shown. However, data from only one experiment using the Δail mutant are shown because *ail* is known not to be required for flea blockage. The blockage rates in the mutants did not differ significantly from those observed for the WT strain ($p > 0.1$ in a one-way analysis of variance for all comparisons).