Title:	Identification and characterization of novel natural pathogen of Drosophila melanogaster isolated from wild captured Drosophila spp.
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Abstract:	Drosophila melanogaster is an emerging model system for the study of evolutionary ecology of immunity. However, a large number of studies have used non natural pathogens as very few natural pathogens have been isolated and identified. Our aim was to isolate and characterize natural pathogen/s of D. melanogaster. A bacterial pathogen was isolated from wild caught Drosophila spp., identified as a new strain of Staphylococcus succinus subsp. succinus and named PK-1. This strain induced substantial mortality (36–62%) in adults of several laboratory populations of D. melanogaster. PK-1 grew rapidly within the body of the flies post infection and both males and females had roughly same number of colony forming units. Mortality was affected by mode of infection and dosage of the pathogen. However mating status of the host had no effect on mortality post infection. Given that there are very few known natural bacterial pathogens of D. melanogaster and that PK-1 can establish a sustained infection across various outbred and inbred populations of D. melanogaster this new isolate is a potential resource for future studies on immunity.
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