A simple adult-mouse test for tissue invasiveness in Yersinia enterocolitica strains of low experimental virulence

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The virulence of Yersinia enterocolitica depends on the presence of a 70-kilobase plasmid, called the Vwa plasmid. This situation is particularly favourable for studies of the mechanism of pathogenicity, but these are hindered by the lack of a suitable animal test to monitor the virulence of the human-pathogenic strains isolated outside the USA which belong to serogroups O:3, O:9 and O:5,27. We observed that, after oral administration to the mouse, the Vwa-positive strains of these serogroups produce a discrete systemic infection while the Vwa-negative strains do not. We present here a simple mouse-virulence test based on this observation.
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