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Title:	X doesn't mark the spot: Role of the X chromosome in improved immunity in Drosophila melanogaster
Authors:	<a href="#">Agarwala, Amisha</a>
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Abstract:	We investigated X-linked variation for immune response, and its role in sexually dimorphic immune defenses. Immunity has been shown to be subject to Intralocus Sexual Conflict (laSC), and it is reported that sexually antagonistic variation is likely to be concentrated on the X chromosome. We used laboratory-based populations of Drosophila melanogaster selected for increased survivorship against Pseudomonas entomophila, a gram-negative bacterial pathogen. After 160 generations of selection, X chromosomes were cloned from I (selected) and S (control) populations, and expressed in flies where the other chromosomes came from the ancestral baseline population to create 30 X chromosome lines respectively. To determine the result of selection on the X chromosome in these populations, we subjected male and female flies from these lines to a P. entomophila infection and assayed their survivorship for 96 hours post-infection. We were unable to detect any effect of the X chromosome on the immune response in these populations as there was no difference in survivorship post-infection of flies carrying the X chromosome from the selected or control population.
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