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Title:	No Evidence for Density-Dependent Prophylaxis in Response to Adult Crowding in <i>Drosophila melanogaster</i>
Authors:	<a href="#">Das, Paresh Nath</a>
Keywords:	Density-Dependent Prophylaxis <i>Drosophila melanogaster</i> pathogen transmission prophylaxis hypothesis.
Issue Date:	May-2020
Publisher:	IISER Mohali
Abstract:	Increasing densities also increases chances of pathogen transmission, which has been hypothesized to prompt organisms to mount a prophylactic immune response when living in dense conditions (density-dependent prophylaxis). Alternatively with increase in density the per capita resource availability falls and this is expected to manifest in form of deteriorating physiological state of individuals, including a compromised immune system. I tested for these hypotheses by crowding adult fruit flies ( <i>Drosophila melanogaster</i> ) at different densities, and then measuring their immune function against infection with bacterial pathogens and starvation resistance. My results indicate that with increase in density, immune function remains unchanged or is compromised, depending on the pathogen. This negates the density dependent prophylaxis hypothesis. I did not observe reduction in starvation resistance because of crowding, so these results are unlikely to be caused by differential availability of resources.
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