Title:	Secret of their immunity: Role of hemocytes in evolved immunity in Drosophila melanogaster
Authors:	Vaibhvi (/jspui/browse?type=author&value=Vaibhvi)
Keywords:	Drosophila melanogaster difference in hemocyte analysis of hemocyte
Issue Date:	23-Aug-2018
Publisher:	IISERM
Abstract:	Immune responses can be majorly classified as innate and adaptive. Invertebrates lack a proper adaptive immune response but have an elaborate innate immune system. Innate immunity can be further of two types - cellular and humoral. The humoral innate immune response is mediated through antimicrobial peptides specific for a class of pathogens, reactive oxygen species etc. while the cellular innate immune system comprises of the three types of hemocytes: plasmatocytes, crystal cells and lamellocytes. I aim to inspect the differences in the hemocyte density in Drosophila melanogaster laboratory populations selected for a better immune response against systemic infection by gram negative bacteria Pseudomonas entomophila. In Drosophila melanogaster, hematopoiesis occurs in four stages: embryonic, larval, lymph gland and adult stage. The adult hemocytes are a mixture of all these four origin. I compared the hemocyte density in the wandering stage of the third instar larvae of selected and control populations in four separately maintained replicates. Results obtained indicate no differences in the number of hemocytes between the selected and control populations in three replicates while in one, the hemocyte density is higher in the control population. This could point towards the possibility that either the selected populations employ some pathway other than cellular immunity to increase their immune response or the hemocyte density increases in the adult stage when the selection pressure is applied. A protocol for adult hemocytes extraction was also standardized.
URI:	http://hdl.handle.net/123456789/937 (http://hdl.handle.net/123456789/937)
Appears in Collections:	MS-13 (/jspui/handle/123456789/914)

MS13043.pdf (/jspui/bitstream/123456789/937/4/MS13043.pdf)	1.11 MB	Adobe PDF	View/Open (/jspui/bitstream/123456789/937/4/M

Show full item record (/jspui/handle/123456789/937?mode=full)

(/jspui/handle/123456789/937/statistics)