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Title:	Dpp dependent Hematopoietic stem cells give rise to Hh dependent blood progenitors in larval lymph gland of Drosophila
Authors:	Dey, Nidhi Sharma (/jspui/browse?type=author&value=Dey%2C+Nidhi+Sharma) Ramesh, Parvathy (/jspui/browse?type=author&value=Ramesh%2C+Parvathy) Chugh, Mayank (/jspui/browse?type=author&value=Chugh%2C+Mayank) Mandal, S. (/jspui/browse?type=author&value=Mandal%2C+S.) Mandal, L. (/jspui/browse?type=author&value=Mandal%2C+L.)
Keywords:	Resemblance Drosophila Hematopoiesis
Issue Date:	2016
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Abstract:	Drosophila hematopoiesis bears striking resemblance with that of vertebrates, both in the context of distinct phases and the signaling molecules. Even though, there has been no evidence of Hematopoietic stem cells (HSCs) in Drosophila, the larval lymph gland with its Hedgehog dependent progenitors served as an invertebrate model of progenitor biology. Employing lineage-tracing analyses, we have now identified Notch expressing HSCs in the first instar larval lymph gland. Our studies clearly establish the hierarchical relationship between Notch expressing HSCs and the previously described Domeless expressing progenitors. These HSCs require Decapentaplegic (Dpp) signal from the hematopoietic niche for their maintenance in an identical manner to vertebrate aorta-gonadal-mesonephros (AGM) HSCs. Thus, this study not only extends the conservation across these divergent taxa, but also provides a new model that can be exploited to gain better insight into the AGM related Hematopoietic stem cells (HSCs).
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