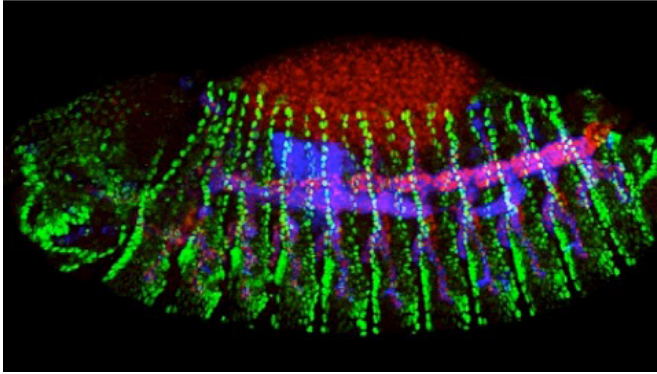


A study using *Drosophila* flies reveals new regulatory mechanisms of cell migration

21 March 2014



Tracheas of the fruit fly *Drosophila melanogaster* (in blue and red) are a good model to study cell migration.
Credit: E Butí, Institute for Research in Biomedicine

"The results are really interesting for biomedicine," explains the researcher, "as the Hedgehog pathway is overexpressed in some of the most invasive tumours, such as the most common kind of skin cancer."

The team explains that this is a step forward for research into [cell migration](#) mechanisms and that future applications will emerge as further investigation and studies are conducted.

More information: Hedgehog is a positive regulator of FGF signalling during embryonic cell migration, Elisenda Butí, Duarte Mesquita and Sofia J. Araújo, *Plos One* (2014) 10.1371/journal.pone.0092682

Cell migration is highly coordinated and occurs in processes such as embryonic development, wound healing, the formation of new blood vessels, and tumour cell invasion. For the successful control of cell movement, this process has to be determined and maintained with great precision. In this study, the scientists used tracheal cells of the fruit fly *Drosophila melanogaster* to unravel the signalling mechanism involved in the regulation of cell movements.

The research describes a new molecular component that controls the expression of a molecule named Fibroblast Growth Factor (FGF) in *Drosophila* embryos. The importance of FGF in cell migration was already known but little information was available on its genetic regulation. In the study, Araújo and her team have discovered that a protein called Hedgehog, known to be involved in morphogenesis, regulates FGF expression.

"This is the first time that a direct connection has been demonstrated between the Hedgehog pathway and an increase in FGF during cell migration," says Araújo.

Provided by Institute for Research in Biomedicine (IRB Barcelona)

APA citation: A study using Drosophila flies reveals new regulatory mechanisms of cell migration (2014, March 21) retrieved 11 October 2022 from <https://medicalxpress.com/news/2014-03-drosophila-flies-reveals-regulatory-mechanisms.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.