Assaying the effect of localised wingless expression on cell adhesion in drosophila embryos

Fact Sheet

Project Information

Grant agreement ID: FMBI972292

Project closed

Start date
10 November 1997

End date
9 November 1999

Funded under
Specific research and technological development programme in the field of the training and mobility of researchers, 1994-1998

Total cost
No data

EU contribution
No data

Coordinated by
MRC Laboratory of Molecular Biology
United Kingdom

Objective

Research objectives and content
The Drosophila wingless (wg) gene encodes a secreted molecule involved in cell to cell signalling. wg plays an important role in controlling cell fate decisions at various

stages of development. One of the genes that acts downstream of Wingless is armadillo, the Drosophila homologue of B-catenin, a component of vertebrate adherens junctions. The molecular nature of Armadillo suggests a possible link between the wg pathway and cell adhesion. Indeed, work in mammalian tissue culture cells suggests that Wnt does increase cell adhesion. the aim of this project is to devise an assay to test whether Wingless controls adhesion in intact Drosophila embryos. The key to my approach is to activate wingless expression (and later, other segment polarity genes) in single cells and follow their behavior in live and fixed preparations. I will use two methods for local gene activation; one will induce expression in randomly positioned single cells (the random method) and the other will be done under the microscope with a microbeam (the targeted method).
Training content (objective, benefit and expected impact)
During my PhD, I acquired my current knowledge of Drosophila developmental genetics. My primary goal is to learn new methods of experimental embryology, especially how to interfere with, and observe, live Drosophila embryos. In the long term, I hope that the combined skills acquired during my PhD and my post-doctoral fellowship will enable me to tackle any issue in developmental genetics.
Links with industry / industrial relevance (22)
This project will have no link with industry although it will further our basic understanding of oncogenesis and might therefore contribute to the development of novel therapies.

Fields of science (EuroSciVoc)

natural sciences > biological sciences > **genetics**

natural sciences > biological sciences > cell biology > **cell signaling**

natural sciences > physical sciences > optics > **microscopy**

medical and health sciences > clinical medicine > **embryology**

Programme(s)

FP4-TMR - Specific research and technological development programme in the field of the training and mobility of researchers, 1994-1998

Topic(s)

0302 - Post-doctoral research training grants

TL05 - Cell Biology

Call for proposal

Data not available

Funding Scheme

RGI - Research grants (individual fellowships)

Coordinator

MRC Laboratory of Molecular Biology

EU contribution

No data

Total cost

No data

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Participants (1)

Not available

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EU contribution

No data

Address

Total cost

No data

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