

## Review

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### Spindle orientation, asymmetric division and tumour suppression in *Drosophila* stem cells

Cayetano Gonzalez<sup>1</sup> [About the author](#)

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Recent genetic studies in flies have added further support to an increasing body of evidence that suggests that stem cells might be the cell-of-origin of certain tumours. Malfunction of the mechanisms that control the division of stem cells and the developmental fate of the two resulting daughters could be one of the initial events that steers cells into malignant transformation. These studies suggest a role for controlled spindle orientation in suppressing stem-cell overgrowth. In parallel, the machinery that drives asymmetry in stem cells has been further characterized, identifying new components and uncovering the unique, highly sophisticated behaviour of centrosomes in these cells.

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#### Author affiliations

1. Cell Division Group. Institute for Research in Biomedicine (IRB), Barcelona. Parc Científic Barcelona. C/ Josep Samitier 1–5, and Institució Catalana de Recerca i Estudis Avançats (ICREA), Barcelona, Spain.  
Email: [gonzalez@irbbarcelona.org](mailto:gonzalez@irbbarcelona.org)

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