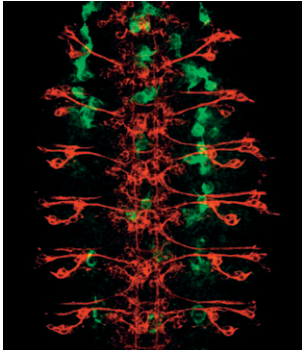
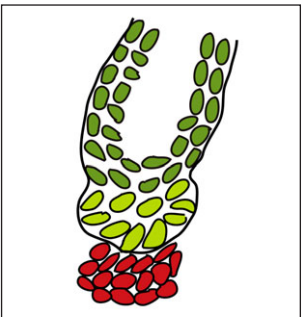


# Development



**Cover:** *Drosophila* embryonic haemocytes (green) migrate between the developing ventral nerve cord (VNC; stained red via the 22c10 antibody) and epidermis. VNC defects that prevent its separation from the epidermis lead to a physical blockade of haemocyte migration, itself required for correct VNC morphogenesis, revealing that these processes are intimately coupled. See **Research article by Evans et al. on p. 1625.**



How do adult stem cells balance their slow cycling with active organ growth? Here Valentina Greco and Shangqin Guo propose that several adult stem cell niches might share a bi-compartmentalized niche organization that enables their biological functions. See **Hypothesis p. 1586.**

## HYPOTHESIS

- 1586** Compartmentalized organization: a common and required feature of stem cell niches?  
**Greco, V. and Guo, S.**

## RESEARCH REPORT

- 1595** Emergence of traveling waves in the zebrafish segmentation clock  
**Ishimatsu, K., Takamatsu, A. and Takeda, H.**

## RESEARCH ARTICLES

- 1601** Opposing Fgf and Bmp activities regulate the specification of olfactory sensory and respiratory epithelial cell fates  
**Maier, E., von Hofsten, J., Nord, H., Fernandes, M., Paek, H., Hébert, J. M. and Gunhaga, L.**
- 1613** Genomic cis-regulatory networks in the early *Ciona intestinalis* embryo  
**Kubo, A., Suzuki, N., Yuan, X., Nakai, K., Satoh, N., Imai, K. S. and Satou, Y.**
- 1625** Interdependence of macrophage migration and ventral nerve cord development in *Drosophila* embryos  
**Evans, I. R., Hu, N., Skaer, H. and Wood, W.**
- 1635** Multispectral four-dimensional imaging reveals that evoked activity modulates peripheral arborization and the selection of plane-polarized targets by sensory neurons  
**Faucherre, A., Baudoin, J.-P., Pujol-Martí, J. and López-Schier, H.**
- 1645** The PAR complex regulates pulsed actomyosin contractions during amnioserosa apical constriction in *Drosophila*  
**David, D. J. V., Tishkina, A. and Harris, T. J. C.**
- 1657** Protein phosphatase 2A cooperates with the autophagy-related kinase UNC-51 to regulate axon guidance in *Caenorhabditis elegans*  
**Ogura, K., Okada, T., Mitani, S., Gengyo-Ando, K., Baillie, D. L., Kohara, Y. and Goshima, Y.**
- 1669** Symmetry breaking and polarization of the *C. elegans* zygote by the polarity protein PAR-2  
**Zonies, S., Motegi, F., Hao, Y. and Seydoux, G.**
- 1679** A novel F-box protein is required for caspase activation during cellular remodeling in *Drosophila*  
**Bader, M., Arama, E. and Steller, H.**
- 1689** Biogenesis of GPI-anchored proteins is essential for surface expression of sodium channels in zebrafish Rohon-Beard neurons to respond to mechanosensory stimulation  
**Nakano, Y., Fujita, M., Ogino, K., Saint-Amant, L., Kinoshita, T., Oda, Y. and Hirata, H.**
- 1699** Mutation of *Eif4g3*, encoding a eukaryotic translation initiation factor, causes male infertility and meiotic arrest of mouse spermatocytes  
**Sun, F., Palmer, K. and Handel, M. A.**
- 1709** Maternal activation of gap genes in the hover fly *Episyrphus*  
**Lemke, S., Busch, S. E., Antonopoulos, D. A., Meyer, F., Domanus, M. H. and Schmidt-Ott, U.**
- 1721** Hedgehog signaling controls mesenchymal growth in the developing mammalian digestive tract  
**Mao, J., Kim, B.-M., Rajurkar, M., Shivdasani, R. A. and McMahon, A. P.**

- 1731 Dysregulation of cell-to-cell connectivity and stomatal patterning by loss-of-function mutation in *Arabidopsis* *CHORUS* (*GLUCAN SYNTHASE-LIKE 8*)  
Guseman, J. M., Lee, J. S., Bogenschutz, N. L., Peterson, K. M., Virata, R. E., Xie, B., Kanaoka, M. M., Hong, Z. and Torii, K. U.
- 1743 Cortical domain correction repositions the polarity boundary to match the cytokinesis furrow in *C. elegans* embryos  
Schenk, C., Bringmann, H., Hyman, A. A. and Cowan, C. R.
- 1755 Sunspot, a link between Wingless signaling and endoreplication in *Drosophila*  
Taniue, K., Nishida, A., Hamada, F., Sugie, A., Oda, T., Ui-Tei, K., Tabata, T. and Akiyama, T.
- 1765 Bazooka is required for polarisation of the *Drosophila* anterior-posterior axis  
Doerflinger, H., Vogt, N., Torres, I. L., Mirouse, V., Koch, I., Nüsslein-Volhard, C. and St Johnston, D.
- ERRATUM**
- 1775 Abnormal hair follicle development and altered cell fate of follicular keratinocytes in transgenic mice expressing  $\Delta Np63\alpha$   
Romano, R.-A., Smalley, K., Liu, S. and Sinha, S.