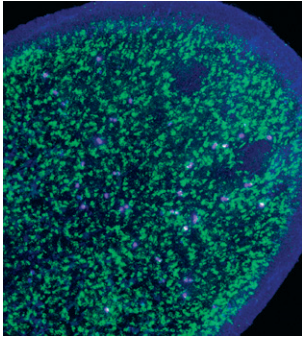
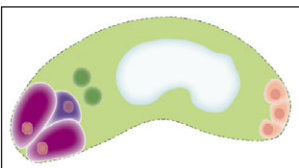


Development



Cover: The planarian p53 homolog is predominantly expressed in the immediate postmitotic progeny of stem cells (green) and little, if at all, in dividing stem cells (magenta). Functional studies demonstrate that the roles of p53 in regulating stem cell proliferation and self-renewal are not specific vertebrate innovations, but have much more evolutionarily ancestral origins. **See Development and Stem Cells Research article by Pearson and Sánchez Alvarado on p. 213.**



A key innovation in the evolution of flowering plants is their reduced female gametophyte, comprising only seven cells. Sundaresan and Alandete-Saez review recent advances in our understanding of the patterning, evolution and maternal effects of this enigmatic structure. **See Review on p. 179.**

REVIEW

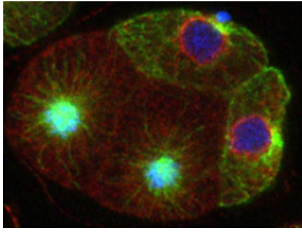
- 179** Pattern formation in miniature: the female gametophyte of flowering plants
Sundaresan, V. and Alandete-Saez, M.

DEVELOPMENT AND STEM CELLS

- 191** *Drosophila* Hey is a target of Notch in asymmetric divisions during embryonic and larval neurogenesis
Monastirioti, M., Giagtzoglou, N., Koumbanakis, K. A., Zacharioudaki, E., Deligiannaki, M., Wech, I., Almeida, M., Preiss, A., Bray, S. and Delidakis, C.
- 203** Rfx6 is an Ngn3-dependent winged helix transcription factor required for pancreatic islet cell development
Soyer, J., Flasse, L., Raffelsberger, W., Beucher, A., Orvain, C., Peers, B., Ravassard, P., Vermot, J., Voz, M. L., Mellitzer, G. and Gradwohl, G.
- 213** A planarian p53 homolog regulates proliferation and self-renewal in adult stem cell lineages
Pearson, B. J. and Sánchez Alvarado, A.

RESEARCH ARTICLES

- 223** Nodal and BMP2/4 pattern the mesoderm and endoderm during development of the sea urchin embryo
Duboc, V., Lapraz, F., Saudemont, A., Bessodes, N., Mekpoh, F., Hailot, E., Quirin, M. and Lepage, T.
- 237** Regulation of cortical contractility and spindle positioning by the protein phosphatase 6 PPH-6 in one-cell stage *C. elegans* embryos
Afshar, K., Werner, M. E., Tse, Y. C., Glotzer, M. and Gönczy, P.
- 249** Tgif1 and Tgif2 regulate Nodal signaling and are required for gastrulation
Powers, S. E., Taniguchi, K., Yen, W., Melhuish, T. A., Shen, J., Walsh, C. A., Sutherland, A. E. and Wotton, D.
- 261** VEGF is required for dendritogenesis of newly born olfactory bulb interneurons
Licht, T., Eavri, R., Goshen, I., Shlomai, Y., Mizrahi, A. and Keshet, E.
- 273** The transcriptional co-factor Chip acts with LIM-homeodomain proteins to set the boundary of the eye field in *Drosophila*
Roignant, J.-Y., Legent, K., Janody, F. and Treisman, J. E.
- 283** Non-cell-autonomous retinoid signaling is crucial for renal development
Rosselot, C., Spraggon, L., Chia, I., Batourina, E., Riccio, P., Lu, B., Niederreither, K., Dolle, P., Duester, G., Chambon, P., Costantini, F., Gilbert, T., Molotkov, A. and Mendelsohn, C.
- 293** Role of Fgf8 signalling in the specification of rostral Cajal-Retzius cells
Zimmer, C., Lee, J., Griveau, A., Arber, S., Pierani, A., Garel, S. and Guillemot, F.
- 303** FGF signaling directs a center-to-pole expansion of tubulogenesis in mouse testis differentiation
Hiramatsu, R., Harikae, K., Tsunekawa, N., Kurohmaru, M., Matsuo, I. and Kanai, Y.
- 313** GFAP δ in radial glia and subventricular zone progenitors in the developing human cortex
Middeldorp, J., Boer, K., Sluijs, J. A., De Filippis, L., Encha-Razavi, F., Vescovi, A. L., Swaab, D. F., Aronica, E. and Hol, E. M.



RNA interference-mediated knockdown of the PPH-6 protein phosphatase-associated subunit SAPS-1 in a 4-cell stage *C. elegans* embryo stained for SAPS-1 (red), α -tubulin (green) and DNA (blue), from a study that reports a crucial role for PPH-6/SAPS-1 in modulating cortical contractility and spindle positioning. **See Research article by Afshar et al. on p. 237.**

- 323 Midline crossing by gustatory receptor neuron axons is regulated by *fruitless*, *doublesex* and the Roundabout receptors
Mellert, D. J., Knapp, J.-M., Manoli, D. S., Meissner, G. W. and Baker, B. S.
- 333 DiSUMO-like DSUL is required for nuclei positioning, cell specification and viability during female gametophyte maturation in maize
Srilunchang, K., Krohn, N. G. and Dresselhaus, T.
- 347 vHNF1 functions in distinct regulatory circuits to control ureteric bud branching and early nephrogenesis
Lokmane, L., Heliot, C., Garcia-Villalba, P., Fabre, M. and Cereghini, S.
- 359 Erratum