



**Cover:** False-coloured whole-mount immunofluorescence on a mouse kidney organ explant stained for WT1 (magenta) and E-cadherin (green). Branching ureteric tips are surrounded by nephron progenitor cells on the peripheral face and nascent nephrons are developing on the central face. WT1 acts to maintain nephron progenitor cells throughout kidney development, in part by activating *Gas1* transcription. See **Research article** by **Kann et al.** on p. 1254.

## HYPOTHESIS

- 1203** Positional information and reaction-diffusion: two big ideas in developmental biology combine  
**Green, J. B. A. and Sharpe, J.**

## REVIEW

- 1212** Cellular and molecular insights into Hox protein action  
**Rezsohazy, R., Saurin, A. J., Maurel-Zaffran, C. and Graba, Y.**

## STEM CELLS AND REGENERATION

- 1228** p53 enables metabolic fitness and self-renewal of nephron progenitor cells  
**Li, Y., Liu, J., Li, W., Brown, A., Baddoo, M., Li, M., Carroll, T., Oxburgh, L., Feng, Y. and Saifudeen, Z.**
- 1242** Pericytes in the myovascular niche promote post-natal myofiber growth and satellite cell quiescence  
**Kostallari, E., Baba-Amer, Y., Alonso-Martin, S., Ngoh, P., Relaix, F., Lafuste, P. and Gherardi, R. K.**
- 1254** WT1 targets *Gas1* to maintain nephron progenitor cells by modulating FGF signals  
**Kann, M., Bae, E., Lenz, M. O., Li, L., Trannguyen, B., Schumacher, V. A., Taglienti, M. E., Bordeianou, L., Hartwig, S., Rinschen, M. M., Schermer, B., Benzing, T., Fan, C.-M. and Kreidberg, J. A.**
- 1267** Duration of culture and sonic hedgehog signaling differentially specify PV versus SST cortical interneuron fates from embryonic stem cells  
**Tyson, J. A., Goldberg, E. M., Maroof, A. M., Xu, Q., Petros, T. J. and Anderson, S. A.**

## RESEARCH REPORTS

- 1279** Cellular analysis of cleavage-stage chick embryos reveals hidden conservation in vertebrate early development  
**Nagai, H., Sezaki, M., Kakiguchi, K., Nakaya, Y., Lee, H. C., Ladher, R., Sasanami, T., Han, J. Y., Yonemura, S. and Sheng, G.**
- 1287** Disruption of *Th2a* and *Th2b* genes causes defects in spermatogenesis  
**Shinagawa, T., Huynh, L. M., Takagi, T., Tsukamoto, D., Tomaru, C., Kwak, H.-G., Dohmae, N., Noguchi, J. and Ishii, S.**
- 1293** Retinoic acid signaling regulates development of the dorsal forebrain midline and the choroid plexus in the chick  
**Gupta, S. and Sen, J.**
- 1299** Accumulation of the *Drosophila* Torso-like protein at the blastoderm plasma membrane suggests that it translocates from the eggshell  
**Mineo, A., Furriols, M. and Casanova, J.**

## RESEARCH ARTICLES

- 1305** Morphogenesis of the mouse neural plate depends on distinct roles of cofilin 1 in apical and basal epithelial domains  
**Grego-Bessa, J., Hildebrand, J. and Anderson, K. V.**
- 1315** Genome-wide characterisation of Foxa1 binding sites reveals several mechanisms for regulating neuronal differentiation in midbrain dopamine cells  
**Metzakopian, E., Bouhali, K., Alvarez-Saavedra, M., Whitsett, J. A., Picketts, D. J. and Ang, S.-L.**
- 1325** Lgd regulates the activity of the BMP/Dpp signalling pathway during *Drosophila* oogenesis  
**Morawa, K. S., Schneider, M. and Klein, T.**
- 1336** Axonal wrapping in the *Drosophila* PNS is controlled by glia-derived neuregulin homolog Vein  
**Matzat, T., Sieglitz, F., Kottmeier, R., Babatz, F., Engelen, D. and Klämbt, C.**
- 1346** Activity-dependent FMRP requirements in development of the neural circuitry of learning and memory  
**Doll, C. A. and Broadie, K.**
- 1357** Augmented BMP signaling in the neural crest inhibits nasal cartilage morphogenesis by inducing p53-mediated apoptosis  
**Hayano, S., Komatsu, Y., Pan, H. and Mishina, Y.**

## TECHNIQUES AND RESOURCES

- 1368** Dynamic visualization of transcription and RNA subcellular localization in zebrafish  
**Campbell, P. D., Chao, J. A., Singer, R. H. and Marlow, F. L.**
- 1375** Activin A directs striatal projection neuron differentiation of human pluripotent stem cells  
**Arber, C., Precious, S. V., Cambray, S., Risner-Janiczek, J. R., Kelly, C., Noakes, Z., Fjodorova, M., Heuer, A., Ungless, M. A., Rodríguez, T. A., Rosser, A. E., Dunnett, S. B. and Li, M.**

## CORRECTION

- 1387** The melanocyte lineage in development and disease  
**Mort, R. L., Jackson, I. J. and Patton, E. E.**

## RETRACTION

- 1388** Metastasis-associated protein 1 deregulation causes inappropriate mammary gland development and tumorigenesis  
**Bagheri-Yarmand, R., Talukder, A. H., Wang, R.-A., Vadlamudi, R. K. and Kumar, R.**