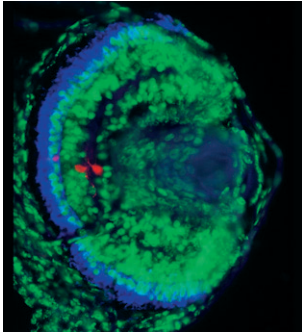
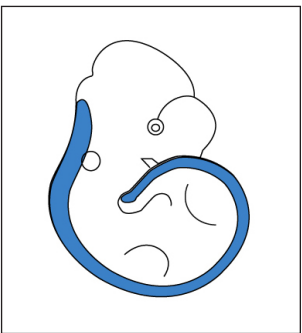


# Development



**Cover:** A stage 41 *Xenopus* retinal section immunolabelled for GFP (red), BrdU (green) and rhodopsin (blue). A single GFP-labelled retinal progenitor cell (RPC) clone, comprising a rod photoreceptor, an amacrine and a retinal ganglion cell (all BrdU<sup>+</sup>), indicates that RPCs can produce any cell type at the onset of retinogenesis and are heterogeneous in their developmental schedule. See **Research article by Wong and Rapaport on p. 1707.**



Axial tissue, a shared feature among vertebrates, might be generated by stem cells. Wilson, Olivera-Martinez and Storey review the evidence for the presence and function of such axial stem cells during chick and mouse body axis extension, and consider their evolutionary conservation across vertebrates. See **Review on p. 1591.**

## JEEM CLASSIC

- 1585** Insights into neural crest migration and differentiation from experimental embryology  
Kuratani, S.

## REVIEW

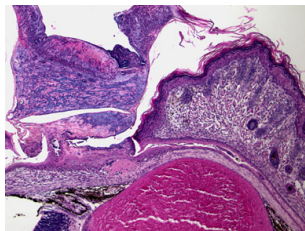
- 1591** Stem cells, signals and vertebrate body axis extension  
Wilson, V., Olivera-Martinez, I. and Storey, K. G.

## RESEARCH REPORT

- 1605** Floral stem cell termination involves the direct regulation of *AGAMOUS* by *PERIANTHIA*  
Das, P., Ito, T., Wellmer, F., Vernoux, T., Dedieu, A., Traas, J. and Meyerowitz, E. M.

## RESEARCH ARTICLES

- 1613** Dual roles of the bZIP transcription factor *PERIANTHIA* in the control of floral architecture and homeotic gene expression  
Maier, A. T., Stehling-Sun, S., Wollmann, H., Demar, M., Hong, R. L., Haubeiß, S., Weigel, D. and Lohmann, J. U.
- 1621** Mutations in zebrafish leucine-rich repeat-containing six-like affect cilia motility and result in pronephric cysts, but have variable effects on left-right patterning  
Serluca, F. C., Xu, B., Okabe, N., Baker, K., Lin, S.-Y., Sullivan-Brown, J., Konieczkowski, D. J., Jaffe, K. M., Bradner, J. M., Fishman, M. C. and Burdine, R. D.
- 1633** Distinct phases of cardiomyocyte differentiation regulate growth of the zebrafish heart  
de Pater, E., Clijsters, L., Marques, S. R., Lin, Y.-F., Garavito-Aguilar, Z. V., Yelon, D. and Bakkers, J.
- 1643** *DORNRÖSCHEN* is a direct target of the auxin response factor *MONOPTEROS* in the *Arabidopsis* embryo  
Cole, M., Chandler, J., Weijers, D., Jacobs, B., Comelli, P. and Werr, W.
- 1653** Neuroepithelial cells require fucosylated glycans to guide the migration of vagus motor neuron progenitors in the developing zebrafish hindbrain  
Ohata, S., Kinoshita, S., Aoki, R., Tanaka, H., Wada, H., Tsuruoka-Kinoshita, S., Tsuboi, T., Watabe, S. and Okamoto, H.
- 1665** A cluster of three long-range enhancers directs regional *Shh* expression in the epithelial linings  
Sagai, T., Amano, T., Tamura, M., Mizushina, Y., Sumiyama, K. and Shiroishi, T.
- 1675** Short- and long-range functions of Goosecoid in zebrafish axis formation are independent of Chordin, Noggin 1 and Follistatin-like 1b  
Dixon Fox, M. and Bruce, A. E. E.
- 1687** Start of the embryonic cell cycle is dually locked in unfertilized starfish eggs  
Hara, M., Mori, M., Wada, T., Tachibana, K. and Kishimoto, T.
- 1697** Sulfation of chondroitin sulfate proteoglycans is necessary for proper Indian hedgehog signaling in the developing growth plate  
Cortes, M., Baria, A. T. and Schwartz, N. B.
- 1707** Defining retinal progenitor cell competence in *Xenopus laevis* by clonal analysis  
Wong, L. L. and Rapaport, D. H.
- 1717** Role of noggin as an upstream signal in the lack of neuronal derivatives found in the avian caudal-most neural crest  
Osório, L., Teillet, M.-A. and Catala, M.



Haematoxylin and Eosin staining of a frontal eye section from a postnatal day 3 *Smad1* and *Smad5* knockout mouse, from a study that reports that FGF-regulated BMP signalling is important for eyelid closure. See **Research article by Huang et al. on p. 1741.**

- 1727** Notch signaling controls liver development by regulating biliary differentiation  
Zong, Y., Panikkar, A., Xu, J., Antoniou, A., Raynaud, P., Lemaigre, F. and Stanger, B. Z.
- 1741** FGF-regulated BMP signaling is required for eyelid closure and to specify conjunctival epithelial cell fate  
Huang, J., Dattilo, L. K., Rajagopal, R., Liu, Y., Kaartinen, V., Mishina, Y., Deng, C.-X., Umans, L., Zwijsen, A., Roberts, A. B. and Beebe, D. C.

#### DEVELOPMENT AND DISEASE

- 1751** Notch signaling promotes airway mucous metaplasia and inhibits alveolar development  
Guseh, J. S., Bores, S. A., Stanger, B. Z., Zhou, Q., Anderson, W. J., Melton, D. A. and Rajagopal, J.
- 1761** sonic hedgehog is required in pulmonary endoderm for atrial septation  
Hoffmann, A. D., Peterson, M. A., Friedland-Little, J. M., Anderson, S. A. and Moskowitz, I. P.