



**Cover:** Capillary aneurysm in the CNS due to pericyte loss caused by endothelium-specific ablation of PDGFB. Expression of *Tie1-Cre* in the endothelium results in recombination of both *Pdgfb* and a stop sequence, thereby allowing expression of *lacZ* in *Pdgfb* null cells. Section is stained for  $\beta$ -gal (blue) and counterstained with Erythrosin (red). See article by Bjarnegård et al. on p. 1847.

## Review

**He, X., Semenov, M., Tamai, K. and Zeng, X.**  
LDL receptor-related proteins 5 and 6 in Wnt/ $\beta$ -catenin signaling: Arrows point the way  1663-1677

## Research articles

**Quan, X.-J., Denayer, T., Yan, J., Jafar-Nejad, H., Philippi, A., Lichtarge, O., Vleminckx, K. and Hassan, B. A.**  
Evolution of neural precursor selection: functional divergence of proneural proteins 1679-1689

**Perezgasga, L., Jiang, J., Bolival, B., Jr, Hiller, M., Benson, E., Fuller, M. T. and White-Cooper, H.**  
Regulation of transcription of meiotic cell cycle and terminal differentiation genes by the testis-specific Zn-finger protein *matotopelli*  1691-1702

**Leise, W. F., III and Mueller, P. R.**  
Inhibition of the cell cycle is required for convergent extension of the paraxial mesoderm during *Xenopus* neurulation 1703-1715

**Dunn, N. R., Vincent, S. D., Oxburgh, L., Robertson, E. J. and Bikoff, E. K.**  
Combinatorial activities of Smad2 and Smad3 regulate mesoderm formation and patterning in the mouse embryo 1717-1728

**Bucher, G. and Klingler, M.**  
Divergent segmentation mechanism in the short germ insect *Tribolium* revealed by *giant* expression and function 1729-1740


**Hashimoto, H., Rebagliati, M., Ahmad, N., Muraoka, O., Kurokawa, T., Hibi, M. and Suzuki, T.**  
The Cerberus/Dan-family protein Charon is a negative regulator of Nodal signaling during left-right patterning in zebrafish 1741-1753

**Saint-Germain, N., Lee, Y.-H., Zhang, Y., Sargent, T. D. and Saint-Jeannet, J.-P.**  
Specification of the otic placode depends on Sox9 function in *Xenopus* 1755-1763

**Gerisch, B. and Antebi, A.**  
Hormonal signals produced by DAF-9/cytochrome P450 regulate *C. elegans* dauer diapause in response to environmental cues 1765-1776

**Mak, H. Y. and Ruvkun, G.**  
Intercellular signaling of reproductive development by the *C. elegans* DAF-9 cytochrome P450 1777-1786

**Celso, C. L., Prowse, D. M. and Watt, F. M.**  
Transient activation of  $\beta$ -catenin signalling in adult mouse epidermis is sufficient to induce new hair follicles but continuous activation is required to maintain hair follicle tumours 1787-1799

**Raft, S., Nowotschin, S., Liao, J. and Morrow, B. E.**  
Suppression of neural fate and control of inner ear morphogenesis by *Tbx1*  1801-1812

**Lyu, J. and Joo, C.-K.**  
Wnt signaling enhances FGF2-triggered lens fiber cell differentiation 1813-1824

**Yuhki, M., Yamada, M., Kawano, M., Iwasato, T., Itohara, S., Yoshida, H., Ogawa, M. and Mishina, Y.**  
BMP1A signaling is necessary for hair follicle cycling and hair shaft differentiation in mice 1825-1833

**Urban, S., Brown, G. and Freeman, M.**  
EGF receptor signalling protects smooth-cuticle cells from apoptosis during *Drosophila* ventral epidermis development 1835-1845

## Research articles: Development and disease

**Bjarnegård, M., Enge, M., Norlin, J., Gustafsdottir, S., Fredriksson, S., Abramsson, A., Takemoto, M., Gustafsson, E., Fässler, R. and Betsholtz, C.**  
Endothelium-specific ablation of PDGFB leads to pericyte loss and glomerular, cardiac and placental abnormalities 1847-1857

**Mok, H., Jelinek, J., Pai, S., Cattanch, B. M., Prchal, J. T., Youssoufian, H. and Schumacher, A.**  
Disruption of ferroportin 1 regulation causes dynamic alterations in iron homeostasis and erythropoiesis in polycythaemia mice 1859-1868

**Umeda, K., Heike, T., Yoshimoto, M., Shiota, M., Suemori, H., Luo, H. Y., Chui, D. H. K., Torii, R., Shibuya, M., Nakatsuji, N. and Nakahata, T.**  
Development of primitive and definitive hematopoiesis from non-human primate embryonic stem cells in vitro 1869-1879