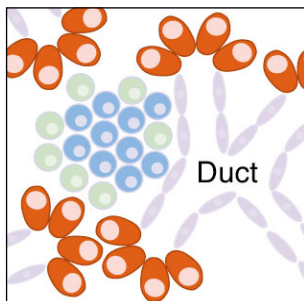


# Development



**Cover:** In situ hybridization of the vegetal region of an 8-cell stage *Xenopus laevis* embryo using a probe for *Wnt11* mRNA, showing that *Wnt11* mRNA is localized in dorsal vegetal blastomeres. Depletion of *Wnt11*, or of its receptor LRP6, leads to loss of axis formation. (In situ by Stephanie Lang.) **See research article by Kofron et al. on p. 503.**



The development of insulin-producing pancreatic beta ( $\beta$ )-cells is the culmination of a complex developmental program. As reviewed by Charles Murtaugh in this issue, recent advances in our understanding of the extrinsic and intrinsic mechanisms that control this program should aid ongoing efforts to regenerate this important cell type in humans. **See review article on p. 427.**

## REVIEWS

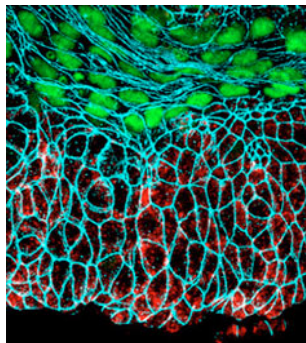
- 427** Pancreas and beta-cell development: from the actual to the possible  
Murtaugh, L. C.
- 439** Getting axons onto the right path: the role of transcription factors in axon guidance  
Butler, S. J. and Tear, G.

## RESEARCH REPORT

- 449** Potency of testicular somatic environment to support spermatogenesis in XX/Sry transgenic male mice  
Ishii, M., Tachiwana, T., Hoshino, A., Tsunekawa, N., Hiramatsu, R., Matoba, S., Kanai-Azuma, M., Kawakami, H., Kurohmaru, M. and Kanai, Y.

## RESEARCH ARTICLES

- 455** Regulation of redox metabolism in the mouse oocyte and embryo  
Dumollard, R., Ward, Z., Carroll, J. and Duchon, M. R.
- 467** Rbf1-independent termination of E2f1-target gene expression during early *Drosophila* embryogenesis  
Shibutani, S., Swanhart, L. M. and Duronio, R. J.
- 479** Distinct Wnt signaling pathways have opposing roles in appendage regeneration  
Stoick-Cooper, C., Weidinger, G., Riehle, K. J., Hubbert, C., Major, M. B., Fausto, N. and Moon, R. T.
- 491** Antagonistic roles of full-length N-cadherin and its soluble BMP cleavage product in neural crest delamination  
Shoval, I., Ludwig, A. and Kalchauer, C.
- 503** Wnt11/ $\beta$ -catenin signaling in both oocytes and early embryos acts through LRP6-mediated regulation of axin  
Kofron, M., Birsoy, B., Houston, D., Tao, Q., Wylie, C. and Heasman, J.
- 515** Nkx2.2-repressor activity is sufficient to specify  $\alpha$ -cells and a small number of  $\beta$ -cells in the pancreatic islet  
Doyle, M. J., Loomis, Z. L. and Sussel, L.
- 525** Molecular analysis of coordinated bladder and urogenital organ formation by Hedgehog signaling  
Haraguchi, R., Motoyama, J., Sasaki, H., Satoh, Y., Miyagawa, S., Nakagata, N., Moon, A. and Yamada, G.
- 535** Mapping the consequence of Notch1 proteolysis in vivo with NIP-CRE  
Vooijs, M., Ong, C.-T., Hadland, B., Huppert, S., Liu, Z., Korving, J., van den Born, M., Stappenbeck, T., Wu, Y., Clevers, H. and Kopan, R.
- 545** Controlled overexpression of Pax6 in vivo negatively auto-regulates the Pax6 locus, causing cell-autonomous defects of late cortical progenitor proliferation with little effect on cortical arealization  
Manuel, M., Georgala, P. A., Carr, C. B., Chanas, S., Kleinjan, D. A., Martynoga, B., Mason, J. O., Molinek, M., Pinson, J., Pratt, T., Quinn, J. C., Simpson, T. I., Tyas, D. A., van Heyningen, V., West, J. D. and Price, D. J.
- 557** The mouse seminal vesicle shape mutation is allelic with *Fgfr2*  
Kuslak, S. L., Thielen, J. L. and Marker, P. C.
- 567** Abelson kinase (Abl) and RhoGEF2 regulate actin organization during cell constriction in *Drosophila*  
Fox, D. T. and Peifer, M.



Epidermal and aminoserosa cells of a stage 10 *Drosophila stg<sup>7B</sup>/stg<sup>7B</sup>* embryo stained for Dap (green), phospho-tyrosine (cyan) and the E2f1 target gene *RnrS* (red). In this study, Shibutani et al. report that initial *RnrS* downregulation during cell cycles 15 and 16 surprisingly does not require Rbf1 or p27<sup>Dap</sup>. **See research article on p. 467.**

- 579** Mammalian Polycomb Scmh1 mediates exclusion of Polycomb complexes from the XY body in the pachytene spermatocytes  
**Takada, Y., Isono, K.-i., Shinga, J., Turner, J. M. A., Kitamura, H., Ohara, O., Watanabe, G., Singh, P. B., Kamijo, T., Jenuwein, T., Burgoyne, P. S. and Koseki, H.**
- 591** The glycosyltransferase Fringe promotes Delta-Notch signaling between neurons and glia, and is required for subtype-specific glial gene expression  
**Thomas, G. B. and van Meyel, D. J.**
- 601** Hexamerin-based regulation of juvenile hormone-dependent gene expression underlies phenotypic plasticity in a social insect  
**Zhou, X., Tarver, M. R. and Scharf, M. E.**
- 611** Specification of epibranchial placodes in zebrafish  
**Nechiporuk, A., Linbo, T., Poss, K. D. and Raible, D. W.**
- 625** Neurogenic role of Gcm transcription factors is conserved in chicken spinal cord  
**Soustelle, L., Trousse, F., Jacques, C., Ceron, J., Cochard, P., Soula, C. and Giangrande, A.**