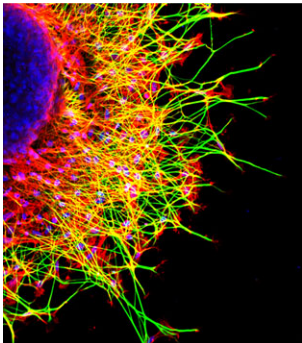
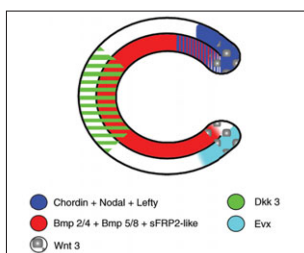


# Development



**Cover:** Confocal image showing sensory axons extending from a cultured dorsal root ganglion. Neurofilament M antibody labels axon shafts (green); phalloidin labels F-actin concentrated in growth cones and the leading edges of cells (red); and DAPI labels nuclei (blue). The response of sensory axons to guidance information is regulated by type III neuregulin 1. **See article by Hancock et al. on p. 4887.**



As part of the Evolutionary Crossroads in Developmental Biology series, Bertrand and Escrava introduce amphioxus and discuss how studies of this model have informed us about the evolution of vertebrate traits. **See Primer on p. 4819.**

## SPOTLIGHT

- 4815** An interview with Ottoline Leyser  
**Amsen, E.**

## PRIMER

- 4819** Evolutionary crossroads in developmental biology: amphioxus  
**Bertrand, S. and Escrava, H.**

## DEVELOPMENT AND STEM CELLS

- 4831** Regeneration of the adult zebrafish brain from neurogenic radial glia-type progenitors  
**Kroehne, V., Freudenreich, D., Hans, S., Kaslin, J. and Brand, M.**
- 4843** Lhx2 differentially regulates Sox9, Tcf4 and Lgr5 in hair follicle stem cells to promote epidermal regeneration after injury  
**Mardaryev, A. N., Meier, N., Poterlowicz, K., Sharov, A. A., Sharova, T. Y., Ahmed, M. I., Rapisarda, V., Lewis, C., Fessing, M. Y., Ruenger, T. M., Bhawan, J., Werner, S., Paus, R. and Botchkarev, V. A.**
- 4853** Reprogramming capacity of Nanog is functionally conserved in vertebrates and resides in a unique homeodomain  
**Theunissen, T. W., Costa, Y., Radziskeuskaya, A., van Oosten, A. L., Lavial, F., Pain, B., Castro, L. F. C. and Silva, J. C. R.**

## RESEARCH ARTICLES

- 4867** A computational statistics approach for estimating the spatial range of morphogen gradients  
**Kanodia, J. S., Kim, Y., Tomer, R., Khan, Z., Chung, K., Storey, J. D., Lu, H., Keller, P. J. and Shvartsman, S. Y.**
- 4875** Rspo1/Wnt signaling promotes angiogenesis via Vegfc/Vegfr3  
**Gore, A. V., Swift, M. R., Cha, Y. R., Lo, B., McKinney, M. C., Li, W., Castranova, D., Davis, A., Mukouyama, YS. and Weinstein, B. M.**
- 4887** Type III neuregulin 1 regulates pathfinding of sensory axons in the developing spinal cord and periphery  
**Hancock, M. L., Nowakowski, D. W., Role, L. W., Talmage, D. A. and Flanagan, J. G.**
- 4899** The cytoskeletal regulator Genghis khan is required for columnar target specificity in the *Drosophila* visual system  
**Gontang, A. C., Hwa, J. J., Mast, J. D., Schwabe, T. and Clandinin, T. R.**
- 4911** Complex functions of *Mef2* splice variants in the differentiation of endoderm and of a neuronal cell type in a sea anemone  
**Genikhovich, G. and Technau, U.**
- 4921** Protein kinase A acts at the basal body of the primary cilium to prevent Gli2 activation and ventralization of the mouse neural tube  
**Tuson, M., He, M. and Anderson, K. V.**
- 4931** HESX1- and TCF3-mediated repression of Wnt/ $\beta$ -catenin targets is required for normal development of the anterior forebrain  
**Andoniadou, C. L., Signore, M., Young, R. M., Gaston-Massuet, C., Wilson, S. W., Fuchs, E. and Martinez-Barbera, J. P.**
- 4943** miR-124 function during *Ciona intestinalis* neuronal development includes extensive interaction with the Notch signaling pathway  
**Chen, J. S., San Pedro, M. and Zeller, R. W.**

- 4955** Erect Wing facilitates context-dependent Wnt/Wingless signaling by recruiting the cell-specific Armadillo-TCF adaptor Earthbound to chromatin  
**Xin, N., Benchabane, H., Tian, A., Nguyen, K., Klofas, L. and Ahmed, Y.**
- 4969** Targeted mutation of the *talpid3* gene in zebrafish reveals its conserved requirement for ciliogenesis and Hedgehog signalling across the vertebrates  
**Ben, J., Elworthy, S., Ng, A. S. M., van Eeden, F. and Ingham, P. W.**
- 4979** Dpy19l1, a multi-transmembrane protein, regulates the radial migration of glutamatergic neurons in the developing cerebral cortex  
**Watanabe, K., Takebayashi, H., Bepari, A. K., Esumi, S., Yanagawa, Y. and Tamamaki, N.**
- 4991** Paracrine Pax6 activity regulates oligodendrocyte precursor cell migration in the chick embryonic neural tube  
**Di Lullo, E., Haton, C., Le Poupon, C., Volovitch, M., Joliot, A., Thomas, J.-L. and Prochiantz, A.**
- 5003** Apical migration of nuclei during G2 is a prerequisite for all nuclear motion in zebrafish neuroepithelia  
**Leung, L., Klopper, A. V., Grill, S. W., Harris, W. A. and Norden, C.**
- 5015** Notch/Delta signalling is not required for segment generation in the basally branching insect *Gryllus bimaculatus*  
**Kainz, F., Ewen-Campen, B., Akam, M. and Extavour, C. G.**
- 5027** The spatiotemporal development of adipose tissue  
**Han, J., Lee, J.-E., Jin, J., Lim, J. S., Oh, N., Kim, K., Chang, S.-I., Shibuya, M., Kim, H. and Koh, G. Y.**
- 5039** Nuclear trapping by GL3 controls intercellular transport and redistribution of TTG1 protein in *Arabidopsis*  
**Balkunde, R., Bouyer, D. and Hülskamp, M.**