



Cover: Confocal image of a double-transgenic *X. laevis* tadpole expressing EGFP (green) under the control of the *fezf2* promoter (expression in the forebrain) and mCherry (red) under the control of the γ -crystallin promoter (expression in the lens and pronephros). The blue colour was rendered from the bright-field channel. See Research article by Zhang et al. on p. 4794.

REVIEWS

4649 The developmental hourglass model: a predictor of the basic body plan?
Irie, N. and Kuratani, S.

4656 The analysis, roles and regulation of quiescence in hematopoietic stem cells
Nakamura-Ishizu, A., Takizawa, H. and Suda, T.

4667 Transcription factors and effectors that regulate neuronal morphology
Santiago, C. and Bashaw, G. J.

STEM CELLS AND REGENERATION

4681 Transgenic analysis of a *SoxB* gene reveals neural progenitor cells in the cnidarian *Nematostella vectensis*
Richards, G. S. and Rentzsch, F.

4690 Embryonic maturation of epidermal Merkel cells is controlled by a redundant transcription factor network
Perdigoto, C. N., Bardot, E. S., Valdes, V. J., Santoriello, F. J. and Ezhkova, E.

4697 SIRT1 suppresses self-renewal of adult hippocampal neural stem cells
Ma, C., Yao, M., Zhai, Q., Jiao, J., Yuan, X. and Poo, M.

RESEARCH REPORT

4710 Evolutionary changes in TGF α distribution underlie morphological diversity in eggshells from *Drosophila* species
Niepielko, M. G. and Yakoby, N.

RESEARCH ARTICLES

4716 The NAV2 homolog Sickie regulates F-actin-mediated axonal growth in *Drosophila* mushroom body neurons via the non-canonical Rac-Cofilin pathway
Abe, T., Yamazaki, D., Murakami, S., Hiroi, M., Nitta, Y., Maeyama, Y. and Tabata, T.

4729 Oncogenic Ras stimulates Eiger/TNF exocytosis to promote growth
Chabu, C. and Xu, T.

4740 Wnt/ β -catenin signaling integrates patterning and metabolism of the insect growth zone
Oberhofer, G., Grossmann, D., Siemanowski, J. L., Beissbarth, T. and Bucher, G.

4751 Epithelial $\beta 1$ integrin is required for lung branching morphogenesis and alveolarization
Plosa, E. J., Young, L. R., Gulleman, P. M., Polosukhin, V. V., Zaynagetdinov, R., Benjamin, J. T., Im, A. M., van der Meer, R., Gleaves, L. A., Bulus, N., Han, W., Prince, L. S., Blackwell, T. S. and Zent, R.

4763 *Sirh7/Ldoc1* knockout mice exhibit placental P4 overproduction and delayed parturition
Naruse, M., Ono, R., Irie, M., Nakamura, K., Furuse, T., Hino, T., Oda, K., Kashimura, M., Yamada, I., Wakana, S., Yokoyama, M., Ishino, F. and Kaneko-Ishino, T.

4772 REVOLUTA and WRKY53 connect early and late leaf development in *Arabidopsis*
Xie, Y., Huhn, K., Brandt, R., Potschin, M., Bieker, S., Straub, D., Doll, J., Drechsler, T., Zentgraf, U. and Wenkel, S.

4784 The role of T-cadherin in axonal pathway formation in neocortical circuits
Hayano, Y., Zhao, H., Kobayashi, H., Takeuchi, K., Norioka, S. and Yamamoto, N.

4794 *Fezf2* promotes neuronal differentiation through localised activation of Wnt/ β -catenin signalling during forebrain development
Zhang, S., Li, J., Lea, R., Vlemminckx, K. and Amaya, E.

4806 Spatiotemporal oscillations of Notch1, Dll1 and NICD are coordinated across the mouse PSM
Bone, R. A., Bailey, C. S. L., Wiedermann, G., Ferjentsik, Z., Appleton, P. L., Murray, P. J., Maroto, M. and Dale, J. K.

4817 Programmed cell cycle arrest is required for infection of corn plants by the fungus *Ustilago maydis*
Castanheira, S., Mielnichuk, N. and Pérez-Martín, J.

TECHNIQUES AND RESOURCES

4827 Precise and efficient genome editing in zebrafish using the CRISPR/Cas9 system
Irion, U., Krauss, J. and Nüsslein-Volhard, C.

4831 Cell type-specific transcriptome analysis in the early *Arabidopsis thaliana* embryo
Slane, D., Kong, J., Berendzen, K. W., Kilian, J., Henschen, A., Kolb, M., Schmid, M., Harter, K., Mayer, U., De Smet, I., Bayer, M. and Jürgens, G.

4841 Tracking developmentally regulated post-synthetic processing of homogalacturonan and chitin using reciprocal oligosaccharide probes
Mravec, J., Kračun, S. K., Rydahl, M. G., Westereng, B., Miart, F., Clausen, M. H., Fangel, J. U., Daugaard, M., Van Cutsem, P., De Fine Licht, H. H., Höfte, H., Malinovsky, F. G., Domozych, D. S. and Willats, W. G. T.