



Cover: Cells in the developing chick spinal cord and flanking somites incorporating EdU (green) into newly synthesized DNA, counterstained with DAPI (purple). Changes in cell cycle duration are associated with neural differentiation in the elongating chick body axis. See Research article by Olivera-Martinez et al. on p. 3266.

SPOTLIGHT

- 3103** Out with the old, in with the new: reassessing morpholino knockdowns in light of genome editing technology
Schulte-Merker, S. and Stainier, D. Y. R.

REVIEW

- 3105** Circadian clock-mediated control of stem cell division and differentiation: beyond night and day
Brown, S. A.

STEM CELLS AND REGENERATION

- 3112** Hand2 elevates cardiomyocyte production during zebrafish heart development and regeneration
Schindler, Y. L., Garske, K. M., Wang, J., Firulli, B. A., Firulli, A. B., Poss, K. D. and Yelon, D.

- 3123** The nuclear hormone receptor family member NR5A2 controls aspects of multipotent progenitor cell formation and acinar differentiation during pancreatic organogenesis
Hale, M. A., Swift, G. H., Hoang, C. Q., Deering, T. G., Masui, T., Lee, Y.-K., Xue, J. and MacDonald, R. J.

- 3134** Deadenylase depletion protects inherited mRNAs in primordial germ cells
Swartz, S. Z., Reich, A. M., Oulhen, N., Raz, T., Milos, P. M., Campanale, J. P., Hamdoun, A. and Wessel, G. M.

- 3143** *Tcf3* expression marks both stem and progenitor cells in multiple epithelia
Howard, J. M., Nuguid, J. M., Ngole, D. and Nguyen, H.

RESEARCH REPORTS

- 3153** Vangl-dependent planar cell polarity signalling is not required for neural crest migration in mammals
Pryor, S. E., Massa, V., Savery, D., Andre, P., Yang, Y., Greene, N. D. E. and Copp, A. J.

- 3159** Dual roles for *Id4* in the regulation of estrogen signaling in the mammary gland and ovary
Best, S. A., Hutt, K. J., Fu, N. Y., Vaillant, F., Liew, S. H., Hartley, L., Scott, C. L., Lindeman, G. J. and Visvader, J. E.

RESEARCH ARTICLES

- 3165** Auxin represses stomatal development in dark-grown seedlings via Aux/IAA proteins
Balcerowicz, M., Ranjan, A., Rupprecht, L., Fiene, G. and Hoecker, U.

- 3177** p120-catenin-dependent junctional recruitment of Shroom3 is required for apical constriction during lens pit morphogenesis
Lang, R. A., Herman, K., Reynolds, A. B., Hildebrand, J. D. and Plagman, T. F., Jr

- 3188** Leading and trailing cells cooperate in collective migration of the zebrafish posterior lateral line primordium
Dalle Nogare, D., Somers, K., Rao, S., Matsuda, M., Reichman-Fried, M., Raz, E. and Chitnis, A. B.

- 3197** Crucial requirement of ERK/MAPK signaling in respiratory tract development
Boucherat, O., Nadeau, V., Bérubé-Simard, F.-A., Charron, J. and Jeannotte, L.

- 3212** Kremen1 restricts Dkk activity during posterior lateral line development in zebrafish
McGraw, H. F., Culbertson, M. D. and Nechiporuk, A. V.

- 3222** Kinesin-II recruits Armadillo and Dishevelled for Wingless signaling in *Drosophila*
Vuong, L. T., Mukhopadhyay, B. and Choi, K.-W.

- 3233** ECM stiffness regulates glial migration in *Drosophila* and mammalian glioma models
Kim, S. N., Jeibmann, A., Halama, K., Witte, H. T., Wälte, M., Matzat, T., Schillers, H., Faber, C., Senner, V., Paulus, W. and Klämbt, C.

- 3243** Notch signaling differentially regulates *Atoh7* and *Neurog2* in the distal mouse retina
Maurer, K. A., Riesenber, A. N. and Brown, N. L.

TECHNIQUES AND RESOURCES

- 3255** Visualisation of chicken macrophages using transgenic reporter genes: insights into the development of the avian macrophage lineage
Balic, A., Garcia-Morales, C., Vervelde, L., Gilhooley, H., Sherman, A., Garceau, V., Gutowska, M. W., Burt, D. W., Kaiser, P., Hume, D. A. and Sang, H. M.

- 3266** Major transcriptome re-organisation and abrupt changes in signalling, cell cycle and chromatin regulation at neural differentiation *in vivo*
Olivera-Martinez, I., Schurch, N., Li, R. A., Song, J., Halley, P. A., Das, R. M., Burt, D. W., Barton, G. J. and Storey, K. G.

- 3277** Visualization of the *Drosophila* dKeap1-CncC interaction on chromatin illuminates cooperative, xenobiotic-specific gene activation
Deng, H. and Kerppola, T. K.