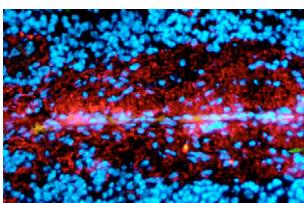


Development



Cover: Cxcr4-mediated chemokine signalling is required for olfactory placode assembly in zebrafish. An *odysseus* (*cxcr4b*) mutant embryo, in which membrane-tethered YFP is expressed under the control of the *omp* promoter in a subpopulation of olfactory neurons, was stained with anti-GFP antibody, showing that some olfactory neurons are mispositioned ventromedially away from the correct position of the olfactory placode. See research article by Miyasaka et al. on p. 2459.



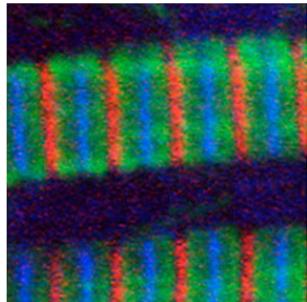
NCAM-expressing (red) olfactory sensory neuron (OSN) projections within the nerve layer of an adenylyl cyclase 3 (Ac3)-deficient mouse olfactory bulb (blue) fail to express neuropilin 1. Ivan Rodriguez and colleagues show that, in mice, Ac3 is required for targeting OSN axons towards the brain. See research article on p. 2481.

RESEARCH ARTICLES

- 2387** *Zfrp8*, the *Drosophila* ortholog of *PDCD2*, functions in lymph gland development and controls cell proliferation
Minakhina, S., Druzhinina, M. and Steward, R.
- 2397** Reduction of BMP4 activity by gremlin 1 enables ureteric bud outgrowth and GDNF/WNT11 feedback signalling during kidney branching morphogenesis
Michos, O., Gonçalves, A., Lopez-Rios, J., Tiecke, E., Naillat, F., Beier, K., Galli, A., Vainio, S. and Zeller, R.
- 2407** The *Drosophila* homolog of the putative phosphatidylserine receptor functions to inhibit apoptosis
Krieser, R. J., Moore, F. E., Dresnek, D., Pellock, B. J., Patel, R., Huang, A., Brachmann, C. and White, K.
- 2415** Evolution of the dorsal-ventral patterning network in the mosquito, *Anopheles gambiae*
Goltsev, Y., Fuse, N., Frasch, M., Zinzen, R. P., Lanzaro, G. and Levine, M.
- 2425** Transitin, a nestin-like intermediate filament protein, mediates cortical localization and the lateral transport of Numb in mitotic avian neuroepithelial cells
Wakamatsu, Y., Nakamura, N., Lee, J.-A., Cole, G. J. and Osumi, N.
- 2435** Physiological Notch signaling promotes gliogenesis in the developing peripheral and central nervous systems
Taylor, M. K., Yeager, K. and Morrison, S. J.
- 2449** Changes in retinoic acid signaling alter otic patterning
Hans, S. and Westerfield, M.
- 2459** Cxcl12/Cxcr4 chemokine signaling is required for placode assembly and sensory axon pathfinding in the zebrafish olfactory system
Miyasaka, N., Knaut, H. and Yoshihara, Y.
- 2469** The RhoGAP RGA-2 and LET-502/ROCK achieve a balance of actomyosin-dependent forces in *C. elegans* epidermis to control morphogenesis
Diogon, M., Wissler, F., Quintin, S., Nagamatsu, Y., Sookhareea, S., Landmann, F., Hutter, H., Vitale, N. and Labouesse, M.
- 2481** Adenylyl cyclase-dependent axonal targeting in the olfactory system
Dal Col, J. A., Matsuo, T., Storm, D. R. and Rodriguez, I.
- 2491** The transcription factors Nkx6.1 and Nkx6.2 possess equivalent activities in promoting beta-cell fate specification in Pdx1⁺ pancreatic progenitor cells
Nelson, S. B., Schaffer, A. E. and Sander, M.
- 2501** The ECM protein nephronectin promotes kidney development via integrin $\alpha 8\beta 1$ -mediated stimulation of *Gdnf* expression
Linton, J. M., Martin, G. R. and Reichardt, L. F.
- 2511** Mef2s are required for thick filament formation in nascent muscle fibres
Himits, Y. and Hughes, S. M.

DEVELOPMENT AND DISEASE

- 2521** Multiple dose-dependent roles for Sox2 in the patterning and differentiation of anterior foregut endoderm
Que, J., Okubo, T., Goldenring, J. R., Nam, K.-T., Kurotani, R., Morrisey, E. E., Taranova, O., Pevny, L. H. and Hogan, B. L. M.



- 2533 Wnt/ β -catenin signaling regulates nephron induction during mouse kidney development**
Park, J.-S., Valerius, M. T. and McMahon, A. P.

M-lines (MyBP-C, blue) and z-lines (α -actinin, red) occur alternately in the sarcomeres (MyHC, green) of this 24-hpf midbody zebrafish somite. In this study, Yaniv Hinitz and Simon Hughes shed new light on the role of the Mef2 proteins in thick filament formation during skeletal muscle development. **See research article on p. 2511.**