



Cover: *Ex vivo* activation of an unfertilised mature *Drosophila melanogaster* egg initiates a propagating increase in intracellular calcium. This calcium "wave" starts at the posterior of the egg and moves towards the anterior. Longitudinal-section views at ten second intervals after activation are displayed as Calcium Green-1/Texas Red Dextran ratio images. Increasing Calcium concentration is shown from blue-green-red-white. In this issue, York-Andersen et al. describe how a calcium wave co-ordinates key developmental events in *Drosophila* egg activation. Photo credit: Richard M. Parton and Clare L. Bromley. See the article by York-Andersen et al. (doi:10.1242/bio.201411296).

RESEARCH ARTICLES

- 411** ILDR1 deficiency causes degeneration of cochlear outer hair cells and disrupts the structure of the organ of Corti: a mouse model for human DFNB42
Sang, Q., Li, W., Xu, Y., Qu, R., Xu, Z., Feng, R., Jin, L., He, L., Li, H. and Wang, L.
- 420** Bridging the gap between postembryonic cell lineages and identified embryonic neuroblasts in the ventral nerve cord of *Drosophila melanogaster*
Birkholz, O., Rickert, C., Nowak, J., Coban, I. C. and Technau, G. M.
- 441** Can crayfish take the heat? *Procambarus clarkii* show nociceptive behaviour to high temperature stimuli, but not low temperature or chemical stimuli
Puri, S. and Faulkes, Z.
- 450** *In vivo* mapping of the functional regions of the DEAD-box helicase Vasa
Dehghani, M. and Lasko, P.
- 466** Differences in the fatty-acid composition of rodent spermatozoa are associated to levels of sperm competition
delBarco-Trillo, J., Mateo, R. and Roldan, E. R. S.
- 474** The small G protein Arl5 contributes to endosome-to-Golgi traffic by aiding the recruitment of the GARP complex to the Golgi
Rosa-Ferreira, C., Christis, C., Torres, I. L. and Munro, S.
- 484** MASTL promotes cyclin B1 destruction by enforcing Cdc20-independent binding of cyclin B1 to the APC/C
Voets, E. and Wolthuis, R.
- 498** Overexpression of KDM4 lysine demethylases disrupts the integrity of the DNA mismatch repair pathway
Awwad, S. W. and Ayoub, N.
- 507** Aberrant over-expression of TRPM7 ion channels in pancreatic cancer: required for cancer cell invasion and implicated in tumor growth and metastasis
Yee, N. S., Kazi, A. A., Li, Q., Yang, Z., Berg, A. and Yee, R. K.
- 516** The Rho GTPase Cdc42 regulates hair cell planar polarity and cellular patterning in the developing cochlea
Kirjavainen, A., Laos, M., Anttonen, T. and Pirvola, U.
- 528** Bazooka/PAR3 is dispensable for polarity in *Drosophila* follicular epithelial cells
Shahab, J., Tiwari, M. D., Honemann-Capito, M., Krahn, M. P. and Wodarz, A.
- 547** The effect of water temperature on routine swimming behaviour of new born guppies (*Poecilia reticulata*)
Kent, M. and Ojanguren, A. F.
- 553** A single and rapid calcium wave at egg activation in *Drosophila*
York-Andersen, A. H., Parton, R. M., Bi, C. J., Bromley, C. L., Davis, I. and Weil, T. T.
- 562** RHAMM deficiency disrupts folliculogenesis resulting in female hypofertility
Li, H., Moll, J., Winkler, A., Frappart, L., Brunet, S., Hamann, J., Kroll, T., Verlhac, M.-H., Heuer, H., Herrlich, P. and Ploubidou, A.
- 573** Efficient retina formation requires suppression of both Activin and BMP signaling pathways in pluripotent cells
Wong, K. A., Trembley, M., Abd Wahab, S. and Viczian, A. S.