



**Cover:** Confocal sections of cellularising wild-type (top) and MAST kinase mutant (bottom) *Drosophila* embryos showing the syncytium-to-blastoderm transition driven by insertion of compartmentalised membrane between the peripheral nuclei (basal furrow, green; lateral membrane, red; nuclei, blue). Mutations in *Drosophila* MAST kinase compromise Dynein-based transport and delay furrow formation during cellularisation.  
See Research article by Hain et al. on p. 2119.

## DEVELOPMENT AT A GLANCE

- 1983** Adult neurogenesis: mechanisms and functional significance  
**Braun, S. M. G. and Jessberger, S.**

## REVIEWS

- 1987** Apical constriction: themes and variations on a cellular mechanism driving morphogenesis  
**Martin, A. C. and Goldstein, B.**

- 1999** Cell migration: from tissue culture to embryos  
**Reig, G., Pulgar, E. and Concha, M. L.**

## STEM CELLS AND REGENERATION

- 2014** Sara endosomes and the asymmetric division of intestinal stem cells  
**Montagne, C. and Gonzalez-Gaitan, M.**

- 2024** Identification of *Ssm1b*, a novel modifier of DNA methylation, and its expression during mouse embryogenesis  
**Ratnam, S., Engler, P., Bozek, G., Mao, L., Podlutsky, A., Austad, S., Martin, T. and Storb, U.**

- 2035** The development of zebrafish tendon and ligament progenitors  
**Chen, J. W. and Galloway, J. L.**

## RESEARCH ARTICLES

- 2046** The RNA-binding protein ELAV regulates Hox RNA processing, expression and function within the *Drosophila* nervous system  
**Rogulja-Ortmann, A., Picao-Osorio, J., Villava, C., Patraquim, P., Lafuente, E., Aspden, J., Thomsen, S., Technau, G. M. and Alonso, C. R.**

- 2057** Migrating cells mediate long-range WNT signaling  
**Serralbo, O. and Marcelle, C.**

- 2064** The Wnt/JNK signaling target gene *alcam* is required for embryonic kidney development  
**Cizelsky, W., Tata, A., Kühl, M. and Kühl, S. J.**

- 2075** Development of the prethalamus is crucial for thalamocortical projection formation and is regulated by Olig2  
**Ono, K., Clavairolly, A., Nomura, T., Gotoh, H., Uno, A., Armant, O., Takebayashi, H., Zhang, Q., Shimamura, K., Itohara, S., Parras, C. M. and Ikenaka, K.**

- 2085** A dynamic cell adhesion surface regulates tissue architecture in growth plate cartilage

**Romereim, S. M., Conoan, N. H., Chen, B. and Dudley, A. T.**

- 2096** The RNA-binding protein Mex3b regulates the spatial organization of the Rap1 pathway  
**Le Borgne, M., Chartier, N., Buchet-Poyau, K., Destaing, O., Faurobert, E., Thibert, C., Rouault, J.-P., Courchet, J., Nègre, D., Bouvard, D., Albiges-Rizo, C., Rousseaux, S., Khochbin, S., Segretain, D., Crépieux, P., Guillou, F., Durand, P., Perrard, M.-H. and Billaud, M.**

- 2108** Co-activation of microRNAs by Zelda is essential for early *Drosophila* development  
**Fu, S., Nien, C.-Y., Liang, H.-L. and Rushlow, C.**

- 2119** The *Drosophila* MAST kinase Drop out is required to initiate membrane compartmentalisation during cellularisation and regulates dynein-based transport  
**Hain, D., Langlands, A., Sonnenberg, H. C., Bailey, C., Bullock, S. L. and Müller, H.-A. J.**

- 2131** Role of En2 in the tectal laminar formation of chick embryos  
**Omi, M., Harada, H., Watanabe, Y., Funahashi, J.-i. and Nakamura, H.**

- 2139** Sertoli cells control peritubular myoid cell fate and support adult Leydig cell development in the prepubertal testis  
**Rebourcet, D., O'Shaughnessy, P. J., Pitetti, J.-L., Monteiro, A., O'Hara, L., Milne, L., Tsai, Y. T., Cruickshanks, L., Riethmacher, D., Guillou, F., Mitchell, R. T., van 't Hof, R., Freeman, T. C., Nef, S. and Smith, L. B.**

- 2150** Scaling morphogen gradients during tissue growth by a cell division rule  
**Averbukh, I., Ben-Zvi, D., Mishra, S. and Barkai, N.**

- 2157** Lipocalin 2 binds to membrane phosphatidylethanolamine to induce lipid raft movement in a PKA-dependent manner and modulates sperm maturation  
**Watanabe, H., Takeo, T., Tojo, H., Sakoh, K., Berger, T., Nakagata, N., Mak, T. W. and Kondoh, G.**

## TECHNIQUES AND RESOURCES

- 2165** Highly efficient targeted mutagenesis in axolotl using Cas9 RNA-guided nuclease  
**Flowers, G. P., Timberlake, A. T., Mclean, K. C., Monaghan, J. R. and Crews, C. M.**