



**Cover:** The mothfly *Clogmia albipunctata* (photographed by Sean M. Ferguson). This lower dipteran midge, unlike *Drosophila*, forms cuboidal blastoderm cells with centrally located nuclei and does not concentrate pair-rule transcripts on the apical side of the blastoderm. *Clogmia* is an exciting subject for comparative developmental genetic investigations in lower Diptera. See article by Bullock et al. on p. 4251.

## Review article

### Barald, K. F. and Kelley, M. W.

From placode to polarization: new tunes in inner ear development

4119-4130

## Research articles

### Samanta, J. and Kessler, J. A.

Interactions between ID and OLIG proteins mediate the inhibitory effects of BMP4 on oligodendroglial differentiation

4131-4142

### Shain, D. H., Stuart, D. K., Huang, F. Z. and Weisblat, D. A.

Cell interactions that affect axonogenesis in the leech *Theromyzon rude*

4143-4153

### Dean, C., Ito, M., Makarenkova, H. P., Faber, S. C. and Lang, R. A.

Bmp7 regulates branching morphogenesis of the lacrimal gland by promoting mesenchymal proliferation and condensation

4155-4165

### Johnstone, O. and Lasko, P.

Interaction with eIF5B is essential for Vasa function during development

4167-4178

### Kida, Y., Maeda, Y., Shiraishi, T., Suzuki, T. and Ogura, T.

Chick Dach1 interacts with the Smad complex and Sin3a to control AER formation and limb development along the proximodistal axis

4179-4187

### Zarach, J. M., Beaudoin, G. M. J., III, Coulombe, P. A. and Thompson, C. C.

The co-repressor hairless has a role in epithelial cell differentiation in the skin

4189-4200

### Chang, W., Brigande, J. V., Fekete, D. M. and Wu, D. K.

The development of semicircular canals in the inner ear: role of FGFs in sensory cristae

4201-4211

### Esni, F., Ghosh, B., Biankin, A. V., Lin, J. W., Albert, M. A., Yu, X., MacDonald, R. J., Civin, C. I., Real, F. X., Pack, M. A., Ball, D. W. and Leach, S. D.

Notch inhibits Ptf1 function and acinar cell differentiation in developing mouse and zebrafish pancreas

4213-4224

### Reddy, G. V., Heisler, M. G., Ehrhardt, D. W. and Meyerowitz, E. M.

Real-time lineage analysis reveals oriented cell divisions associated with morphogenesis at the shoot apex of *Arabidopsis thaliana*

4225-4237

### Taglialatela, P., Soria, J. M., Caironi, V., Moiana, A. and Bertuzzi, S.

Compromised generation of GABAergic interneurons in the brains of *Vax1*<sup>-/-</sup> mice

4239-4249

### Bullock, S. L., Stauber, M., Prell, A., Hughes, J. R., Ish-Horowicz, D. and Schmidt-Ott, U.

Differential cytoplasmic mRNA localisation adjusts pair-rule transcription factor activity to cytoarchitecture in dipteran evolution

4251-4261

### Claußen, M., Horvay, K. and Pieler, T.

Evidence for overlapping, but not identical, protein machineries operating in vegetal RNA localization along early and late pathways in *Xenopus* oocytes

4263-4273

### Sato, T. and Nakamura, H.

The Fgf8 signal causes cerebellar differentiation by activating the Ras-ERK signalling pathway

4275-4285

### Bani-Yaghoub, M., Kendall, S. E., Moore, D. P., Bellum, S., Cowling, R. A., Nikopoulos, G. N., Kubu, C. J., Vary, C. and Verdi, J. M.

Insulin acts as a myogenic differentiation signal for neural stem cells with multilineage differentiation potential

4287-4298

### Wikenheiser-Brokamp, K. A.

Rb family proteins differentially regulate distinct cell lineages during epithelial development

4299-4310

### Laufs, P., Peaucelle, A., Morin, H. and Traas, J.

MicroRNA regulation of the CUC genes is required for boundary size control in *Arabidopsis* meristems

4311-4322

### Marklund, M., Sjödal, M., Beehler, B. C., Jessell, T. M., Edlund, T. and Gunhaga, L.

Retinoic acid signalling specifies intermediate character in the developing telencephalon

4323-4332

### Mathies, L. D., Schvarzstein, M., Morphy, K. M., Bleiloch, R., Spence, A. M. and Kimble, J.

*TRA-1/GLI* controls development of somatic gonadal precursors in *C. elegans*

4333-4343

### Basu, D., El-Assal, S. E., Le, J., Mallory, E. L. and Szymanski, D. B.

Interchangeable functions of *Arabidopsis* PIROGI and the human WAVE complex subunit SRA1 during leaf epidermal development

4345-4355

### Feng, J., White, B., Tyurina, O. V., Guner, B., Larson, T., Lee, H. Y., Karlstrom, R. O. and Kohtz, J. D.

Synergistic and antagonistic roles of the Sonic hedgehog N- and C-terminal lipids

4357-4370

### Vokes, S. A., Yatskievych, T. A., Heimark, R. L., McMahon, J., McMahon, A. P., Antin, P. B. and Krieg, P. A.

Hedgehog signaling is essential for endothelial tube formation during vasculogenesis

4371-4380

## Research articles: Development and disease

### Wang, S., Yu, X., Zhang, T., Zhang, X., Zhang, Z. and Chen, Y.

Chick *Pcl2* regulates the left-right asymmetry by repressing *Shh* expression in Hensen's node

4381-4391

### Hoffmans, R. and Basler, K.

Identification and *in vivo* role of the Armadillo-Legless interaction

4393-4400