



**Cover:** Confocal microscopy projection image of a mosaic *Drosophila* larval wing primordium, in which cells (green) have lost a tumor suppressor, *Lgl*, and simultaneously gained the transcription factor *Ey*, a homolog of the human *PAX6* gene. Normally, *Ey* acts as a cell fate regulator and induces eye development. When ectopically expressed, it can induce eye formation in select development domains. This image reveals that gain of *Ey* can drive cancerous transformation in somatic clones displaying loss of *Lgl*, but only when they originate in the presumptive hinge region of the wing primordium; these transformed clones are marked by altered cytoarchitecture (actin, blue) and loss of a septate junction marker (*Fas III*, red). On page 1581, Gupta et al. report such selective developmental domain-specific tumor cooperation by various cell fate selectors, providing clues about their implications in human cancers. Image provided by Anjali Bajpai and licensed under a Creative Commons Attribution 4.0 International licence.

## RESEARCH ARTICLES

- 1581** Selector genes display tumor cooperation and inhibition in *Drosophila* epithelium in a developmental context-dependent manner  
**Gupta, R. P., Bajpai, A. and Sinha, P.**
- 1592** MCAM contributes to the establishment of cell autonomous polarity in myogenic and chondrogenic differentiation  
**Moreno-Fortuny, A., Bragg, L., Cossu, G. and Roostalu, U.**
- 1602** Characterization and analysis of *CCR* and *CAD* gene families at the whole-genome level for lignin synthesis of stone cells in pear (*Pyrus bretschneideri*) fruit  
**Cheng, X., Li, M., Li, D., Zhang, J., Jin, Q., Sheng, L., Cai, Y. and Lin, Y.**
- 1614** Release of condensin from mitotic chromosomes requires the Ran-GTP gradient in the reorganized nucleus  
**Aoki, K. and Niki, H.**
- 1629** An evolutionarily conserved phosphatidate phosphatase maintains lipid droplet number and endoplasmic reticulum morphology but not nuclear morphology  
**Pillai, A. N., Shukla, S. and Rahaman, A.**
- 1644** Autophagy promotes degradation of internalized collagen and regulates distribution of focal adhesions to suppress cell adhesion  
**Kawano, S., Torisu, T., Esaki, M., Torisu, K., Matsuno, Y. and Kitazono, T.**
- 1654** Cloning, molecular evolution and functional characterization of ZmbHLH16, the maize ortholog of OsTIP2 (OsbHLH142)  
**Liu, Y., Li, J., Wei, G., Sun, Y., Lu, Y., Lan, H., Li, C., Zhang, S. and Cao, M.**
- 1664** Amyloid  $\beta$ 42 peptide is toxic to non-neural cells in *Drosophila* yielding a characteristic metabolite profile and the effect can be suppressed by PI3K  
**Arnés, M., Casas-Tintó, S., Malmendal, A. and Ferrús, A.**
- 1672** Phosphatase-regulated recruitment of the spindle- and kinetochore-associated (Ska) complex to kinetochores  
**Sivakumar, S. and Gorbisky, G. J.**
- 1680** *Chlamydomonas* IFT25 is dispensable for flagellar assembly but required to export the BBSome from flagella  
**Dong, B., Wu, S., Wang, J., Liu, Y.-X., Peng, Z., Meng, D.-M., Huang, K., Wu, M. and Fan, Z.-C.**
- 1692** Light regimes differentially affect baseline transcript abundance of stress-axis and (neuro)development-related genes in zebrafish (*Danio rerio*, Hamilton 1822) AB and TL larvae  
**van den Bos, R., Zethof, J., Flik, G. and Gorissen, M.**
- 1698** Tropical *Drosophila ananassae* of wet-dry seasons show cross resistance to heat, drought and starvation  
**Lambhod, C., Pathak, A., Munjal, A. K. and Parkash, R.**
- 1707** Cullin-3 and its adaptor protein ANKFY1 determine the surface level of integrin  $\beta$ 1 in endothelial cells  
**Maekawa, M., Tanigawa, K., Sakaue, T., Hiyoshi, H., Kubota, E., Joh, T., Watanabe, Y., Taguchi, T. and Higashiyama, S.**
- 1720** Distribution of H3K27me3, H3K9me3, and H3K4me3 along autophagy-related genes highly expressed in starved zebrafish myotubes  
**Biga, P. R., Latimer, M. N., Froehlich, J. M., Gabillard, J.-C. and Seiliez, I.**
- 1726** The constant threat from a non-native predator increases tail muscle and fast-start swimming performance in *Xenopus* tadpoles  
**Mori, T., Yanagisawa, Y., Kitani, Y., Yamamoto, G., Goto-Inoue, N., Kimura, T., Kashiwagi, K. and Kashiwagi, A.**
- 1734** F-actin reorganization by V-ATPase inhibition in prostate cancer  
**Licon-Munoz, Y., Michel, V., Fordyce, C. A. and Parra, K. J.**

## METHODS & TECHNIQUES

- 1745** Rapid isolation and expansion of skin-derived precursor cells from human primary fibroblast cultures  
**Budel, L. and Djabali, K.**
- 1756** Re-evaluating the functional landscape of the cardiovascular system during development  
**Takada, N., Omae, M., Sagawa, F., Chi, N. C., Endo, S., Kozawa, S. and Sato, T. N.**