



**Cover:** Fluorescence image of a frontal section of the heart from an E18.5 *Mef2c-AHF-Cre; Rosa26-mTmG* mouse embryo. The right ventricle, partial interventricular septum (IVS) and big arteries are in blue and the left ventricle and the majority of the IVS in red. See Research Article by Xia et al. (dev177477).

## INTERVIEW

The people behind the papers – Eduardo Leyva-Díaz and Oliver Hobert  
dev180869

## DEVELOPMENT AT A GLANCE

Retinoic acid signaling pathways  
**Ghyselinck, N. B. and Duester, G.**  
dev167502

## MEETING REVIEW

A SY-Stematic approach towards understanding stem cell biology  
**Pilz, G.-A. and Knobloch, M.**  
dev177220

## REVIEW

Cell competition: the winners and losers of fitness selection  
**Bowling, S., Lawlor, K. and Rodríguez, T. A.**  
dev167486

## HUMAN DEVELOPMENT

Human retinal ganglion cell axon regeneration by recapitulating developmental mechanisms: effects of recruitment of the mTOR pathway  
**Teotia, P., Van Hook, M. J., Fischer, D. and Ahmad, I.**  
dev178012

## STEM CELLS AND REGENERATION

Regionally specified human pluripotent stem cell-derived astrocytes exhibit different molecular signatures and functional properties  
**Bradley, R. A., Shireman, J., McFalls, C., Choi, J., Canfield, S. G., Dong, Y., Liu, K., Lisota, B., Jones, J. R., Petersen, A., Bhattacharyya, A., Palecek, S. P., Shusta, E. V., Kendziorski, C. and Zhang, S.-C.**  
dev170910

Neuropilin 1 mediates epicardial activation and revascularization in the regenerating zebrafish heart  
**Lowe, V., Wisniewski, L., Sayers, J., Evans, I., Frankel, P., Mercader-Huber, N., Zachary, I. C. and Pellet-Many, C.**  
dev174482

The exocyst functions in niche cells to promote germline stem cell differentiation by directly controlling EGFR membrane trafficking  
**Mao, Y., Tu, R., Huang, Y., Mao, D., Yang, Z., Lau, P. K., Wang, J., Ni, J., Guo, Y. and Xie, T.**  
dev174615

## RESEARCH REPORTS

Organization of motor pools depends on the combined function of N-cadherin and type II cadherins  
**Dewitz, C., Duan, X. and Zampieri, N.**  
dev180422

Transcription factor autoregulation is required for acquisition and maintenance of neuronal identity  
**Leyva-Díaz, E. and Hobert, O.**  
dev177378

## RESEARCH ARTICLES

PHF7 is a novel histone H2A E3 ligase prior to histone-to-protamine exchange during spermiogenesis  
**Wang, X., Kang, J.-Y., Wei, L., Yang, X., Sun, H., Yang, S., Lu, L., Yan, M., Bai, M., Chen, Y., Long, J., Li, N., Li, D., Huang, J., Lei, M., Shao, Z., Yuan, W., Zuo, E., Lu, K., Liu, M.-F. and Li, J.**  
dev175547

Type-B response regulators of rice play key roles in growth, development and cytokinin signaling  
**Worthen, J. M., Yamburenko, M. V., Lim, J., Nimchuk, Z. L., Kieber, J. J. and Schaller, G. E.**  
dev174870

Tfp2a is a novel gatekeeper of nephron differentiation during kidney development  
**Chambers, B. E., Gerlach, G. F., Clark, E. G., Chen, K. H., Lesvesque, A. E., Leshchiner, I., Goessling, W. and Wingert, R. A.**  
dev172387

*Drosophila* Mon1 constitutes a novel node in the brain-gonad axis that is essential for female germline maturation  
**Dhiman, N., Shweta, K., Tendulkar, S., Deshpande, G., Ratnaparkhi, G. S. and Ratnaparkhi, A.**  
dev166504

PIP degron-stabilized Dacapo/p21<sup>Cip1</sup> and mutations in *ago* act in an anti- versus pro-proliferative manner, yet both trigger an increase in Cyclin E levels  
**Stadler, C. B., Arefin, B., Ekman, H. and Thor, S.**  
dev175927

HAND2-mediated epithelial maintenance and integrity in cardiac outflow tract morphogenesis  
**Xia, M., Luo, W., Jin, H. and Yang, Z.**  
dev177477

The lncRNA *Hand2os1/Uph* locus orchestrates heart development through regulation of precise expression of *Hand2*  
**Han, X., Zhang, J., Liu, Y., Fan, X., Ai, S., Luo, Y., Li, X., Jin, H., Luo, S., Zheng, H., Yue, Y., Chang, Z., Yang, Z., Tang, F., He, A. and Shen, X.**  
dev176198

Actin dynamics and the Bmp pathway drive apical extrusion of proepicardial cells  
**Andrés-Delgado, L., Ernst, A., Galardi-Castilla, M., Bazaga, D., Peralta, M., Münch, J., González-Rosa, J. M., Marques, I., Tessadori, F., de la Pompa, J. L., Vermot, J. and Mercader, N.**  
dev174961

Destruction complex dynamics: Wnt/ $\beta$ -catenin signaling alters Axin-GSK3 $\beta$  interactions *in vivo*  
**Lybrand, D. B., Naiman, M., Laumann, J. M., Boardman, M., Petshow, S., Hansen, K., Scott, G. and Wehrli, M.**  
dev164145

*Strip* and *Cka* negatively regulate JNK signalling during *Drosophila* spermatogenesis  
**La Marca, J. E., Diepstraten, S. T., Hodge, A. L., Wang, H., Hart, A. H., Richardson, H. E. and Somers, W. G.**  
dev174292

Evidence of a developmental origin for  $\beta$ -cell heterogeneity using a dual lineage-tracing technology  
**Chen, C., Shiota, C., Agostinelli, G., Ridley, D., Jiang, Y., Ma, J., Prasad, K., Xiao, X. and Gittes, G. K.**  
dev164913

*yap1b*, a divergent Yap/Taz family member, cooperates with *yap1* in survival and morphogenesis via common transcriptional targets  
**Vázquez-Marín, J., Gutiérrez-Triana, J. A., Almedo-Castillo, M., Buono, L., Gómez-Skarmeta, J. L., Mateo, J. L., Wittbrodt, J. and Martínez-Morales, J. R.**  
dev173286

Specification of basal region identity after asymmetric zygotic division requires mitogen-activated protein kinase 6 in rice  
**Ishimoto, K., Sohonahra, S., Kishi-Kaboshi, M., Itoh, J.-i, Hibara, K.-i, Sato, Y., Watanabe, T., Abe, K., Miyao, A.,**

**Nosaka-Takahashi, M., Suzuki, T., Ta, N. K., Shimizu-Sato, S., Suzuki, T., Toyoda, A., Takahashi, H., Nakazono, M., Nagato, Y., Hirochika, H. and Sato, Y.**  
dev176305

SOX2 is required for inner ear growth and cochlear nonsensory formation before sensory development  
**Steevens, A. R., Glatzer, J. C., Kellogg, C. C., Low, W. C., Santi, P. A. and Kiernan, A. E.**  
dev170522

## CORRECTIONS

Correction: Single cell analysis of the developing mouse kidney provides deeper insight into marker gene expression and ligand-receptor crosstalk (doi:10.1242/dev.178673)

**Combes, A. N., Phipson, B., Lawlor, K. T., Dorison, A., Patrick, R., Zappia, L., Harvey, R. P., Oshlack, A. and Little, M. H.**  
dev182162

Correction: Single cell analysis of adult mouse skeletal muscle stem cells in homeostatic and regenerative conditions (doi: 10.1242/dev.174177)

**Dell'Orso, S., Juan, A. H., Ko, K.-D., Naz, F., Perovanovic, J., Gutierrez-Cruz, G., Feng, X. and Sartorelli, V.**  
dev181743