



**Cover:** Individual single nuclear transcriptomes derived from a t-distributed stochastic neighbour embedding plot, with clusters of different cell subpopulations depicted in different colours, representing the cellular diversity present within the regenerative murine heart. See research article by Li et al. (dev168609).

## SPOTLIGHT

An interview with James Sharpe

**Grewal, S.**

dev170472

## REVIEW

The regulation of cilium assembly and disassembly in development and disease

**Wang, L. and Dynlacht, B. D.**

dev151407

## HUMAN DEVELOPMENT

Termination of cell-type specification gene programs by the miR-183 cluster determines the population sizes of low-threshold mechanosensitive neurons

**Peng, C., Furlan, A., Zhang, M.-D., Su, J., Lübke, M., Lönnerberg, P., Abdo, H., Sontheimer, J., Sundström, E. and Ernfors, P.**

dev165613

## STEM CELLS AND REGENERATION

*Pitx2* maintains mitochondrial function during regeneration to prevent myocardial fat deposition

**Li, L., Tao, G., Hill, M. C., Zhang, M., Morikawa, Y. and Martin, J. F.**

dev168609

A newly discovered neural stem cell population is generated by the optic lobe neuroepithelium during embryogenesis in *Drosophila melanogaster*

**Hakes, A. E., Otsuki, L. and Brand, A. H.**

dev166207

Geometrical confinement controls the asymmetric patterning of brachyury in cultures of pluripotent cells

**Blin, G., Wisniewski, D., Picart, C., They, M., Puceat, M. and Lowell, S.**

dev166025

Divergent early mesoderm specification underlies distinct head and trunk muscle programmes in vertebrates

**Nandkishore, N., Vyas, B., Javali, A., Ghosh, S. and Sambasivan, R.**

dev160945

GILZ-dependent modulation of mTORC1 regulates spermatogonial maintenance

**La, H. M., Chan, A.-L., Legrand, J. M. D., Rossello, F. J., Gangemi, C. G., Papa, A., Cheng, Q., Morand, E. F. and Hobbs, R. M.**

dev165324

## RESEARCH ARTICLES

Role of SmcHD1 in establishment of epigenetic states required for the maintenance of the X-inactivated state in mice

**Sakakibara, Y., Nagao, K., Blewitt, M., Sasaki, H., Obuse, C. and Sado, T.**

dev166462

ROCK-nmMyoII, Notch and *Neurog3* gene-dosage link epithelial morphogenesis with cell fate in the pancreatic endocrine-progenitor niche

**Bankaitis, E. D., Bechard, M. E., Gu, G., Magnuson, M. A. and Wright, C. V. E.**

dev162115

RPM-1 and DLK-1 regulate pioneer axon outgrowth by controlling Wnt signaling

**Park, E. C. and Rongo, C.**

dev164897

Disrupting Hedgehog Cardin–Weintraub sequence and positioning changes cellular differentiation and compartmentalization *in vivo*

**Kastl, P., Manikowski, D., Steffes, G., Schürmann, S., Bandari, S., Klämbt, C. and Grobe, K.**

dev167221

*Enpp1* inhibits ectopic joint calcification and maintains articular chondrocytes by repressing hedgehog signaling

**Jin, Y., Cong, Q., Gvozdenovic-Jeremic, J., Hu, J., Zhang, Y., Terkeltaub, R. and Yang, Y.**

dev164830

ANGUSTIFOLIA contributes to the regulation of three-dimensional morphogenesis in the liverwort *Marchantia polymorpha*

**Furuya, T., Hattori, K., Kimori, Y., Ishida, S., Nishihama, R., Kohchi, T. and Tsukaya, H.**

dev161398

RAR $\gamma$  is required for mesodermal gene expression prior to gastrulation in *Xenopus*

**Janesick, A., Tang, W., Shioda, T. and Blumberg, B.**

dev147769

Planar cell polarity: the *prickle* gene acts independently on both the Ds/Ft and the Stan/Fz systems

**Casal, J., Ibáñez-Jiménez, B. and Lawrence, P. A.**

dev168112

## TECHNIQUES AND RESOURCES

A dual genetic tracing system identifies diverse and dynamic origins of cardiac valve mesenchyme

**Liu, K., Yu, W., Tang, M., Tang, J., Liu, X., Liu, Q., Li, Y., He, L., Zhang, L., Evans, S. M., Tian, X., Lui, K. O. and Zhou, B.**

dev167775