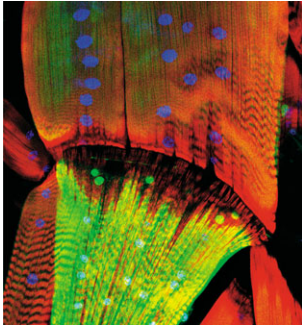
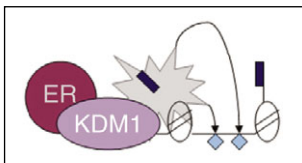


# Development



**Cover:** Genetic mosaics of *Drosophila* larval muscles using the PG157-Gal4 driver (transgene expressing muscles, green; F-actin, red; nuclei, blue). Nuclear ploidy and muscle growth are regulated autonomously by Insulin receptor (InR)/Tor signaling and dMyc activity, and in turn systemically affect body size and proportion. **See Research article by Demontis and Perrimon on p. 983.**



Since the identification of the first histone lysine demethylase five years ago, studies examining the biological function of these enzymes have revealed their importance for a multitude of developmental processes across various species, as reviewed here by Yang Shi and colleagues. **See Review on p. 879.**

## REVIEW

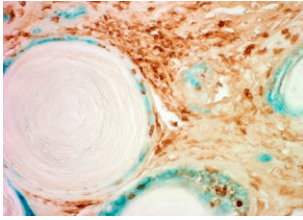
- 879** Developmental roles of the histone lysine demethylases  
Nottke, A., Colaiácovo, M. P. and Shi, Y.

## RESEARCH REPORTS

- 891** Notch signaling in bulge stem cells is not required for selection of hair follicle fate  
Demehri, S. and Kopan, R.
- 897** Primary cilia regulate Shh activity in the control of molar tooth number  
Ohazama, A., Haycraft, C. J., Seppala, M., Blackburn, J., Ghafoor, S., Cobourne, M., Martinelli, D. C., Fan, C.-M., Peterkova, R., Lesot, H., Yoder, B. K. and Sharpe, P. T.
- 905** Smed-Evi/Wntless is required for  $\beta$ -catenin-dependent and -independent processes during planarian regeneration  
Adell, T., Salò, E., Boutros, M. and Bartscherer, K.

## RESEARCH ARTICLES

- 911** An UNC-40 pathway directs postsynaptic membrane extension in *Caenorhabditis elegans*  
Alexander, M., Chan, K. K. M., Byrne, A. B., Selman, G., Lee, T., Ono, J., Wong, E., Puckrin, R., Dixon, S. J. and Roy, P. J.
- 923** An essential role for the RNA-binding protein Smaug during the *Drosophila* maternal-to-zygotic transition  
Benoit, B., He, C. H., Zhang, F., Votruba, S. M., Tadros, W., Westwood, J. T., Smibert, C. A., Lipshitz, H. D. and Theurkauf, W. E.
- 933** DNA binding-dependent and -independent functions of the Hand2 transcription factor during mouse embryogenesis  
Liu, N., Barbosa, A. C., Chapman, S. L., Bezprozvannaya, S., Qi, X., Richardson, J. A., Yanagisawa, H. and Olson, E. N.
- 943** MIG-32 and SPAT-3A are PRC1 homologs that control neuronal migration in *Caenorhabditis elegans*  
Karakuzu, O., Wang, D. P. and Cameron, S.
- 955** The *more and smaller cells* mutants of *Arabidopsis thaliana* identify novel roles for *SQUAMOSA PROMOTER BINDING PROTEIN-LIKE* genes in the control of heteroblasty  
Usami, T., Horiguchi, G., Yano, S. and Tsukaya, H.
- 965** Requirement for Sun1 in the expression of meiotic reproductive genes and piRNA  
Chi, Y.-H., Cheng, L. I., Meyers, T., Ward, J. M., Williams, E., Su, Q., Faucette, L., Wang, J.-Y. and Jeang, K.-T.
- 975** Hindsight modulates Delta expression during *Drosophila* cone cell induction  
Pickup, A. T., Ming, L. and Lipshitz, H. D.
- 983** Integration of Insulin receptor/Foxo signaling and dMyc activity during muscle growth regulates body size in *Drosophila*  
Demontis, F. and Perrimon, N.
- 995** Persistent competition among stem cells and their daughters in the *Drosophila* ovary germline niche  
Rhiner, C., Díaz, B., Portela, M., Poyatos, J. F., Fernández-Ruiz, I., López-Gay, J. M., Gerlitz, O. and Moreno, E.
- 1007** Zebrafish diencephalic A11-related dopaminergic neurons share a conserved transcriptional network with neuroendocrine cell lineages  
Löhr, H., Ryu, S. and Driever, W.



CD45 staining of X-Gal-stained skin from 10-week-old mice that lack all Notch receptors in bulge stem cells, from a study that reports that Notch signalling is not required for the selection of hair follicle fate by bulge stem cells. **See Research report on p. 891.**

- 1019** Molecular dissection of integrin signalling proteins in the control of mammary epithelial development and differentiation  
**Akhtar, N., Marlow, R., Lambert, E., Schatzmann, F., Lowe, E. T., Cheung, J., Katz, E., Li, W., Wu, C., Dedhar, S., Naylor, M. J. and Streuli, C. H.**
- 1029** Foxa2 regulates polarity and epithelialization in the endoderm germ layer of the mouse embryo  
**Burtscher, I. and Lickert, H.**
- 1039** Jasmonic acid control of GLABRA3 links inducible defense and trichome patterning in *Arabidopsis*  
**Yoshida, Y., Sano, R., Wada, T., Takabayashi, J. and Okada, K.**