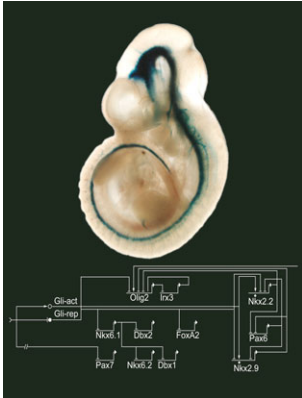
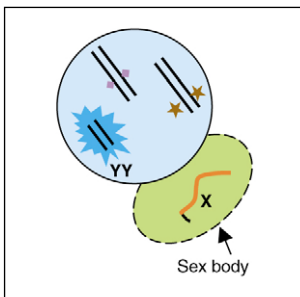


Development



Cover: Transgenic analysis of a Gli1-binding region identified by ChIP-on-chip studies revealed *Nkx2.2* as a direct transcriptional target of the sonic hedgehog pathway (above). A BioTapestry model (beneath) depicting the cis-regulatory inputs specifying *Nkx2.2*⁺ V3 neural progenitors. See research article by Vokes et al. on p. 1977.



In this issue, James Turner reviews the role of meiotic sex chromosome inactivation (MSCI) during mammalian spermatogenesis. MSCI is initiated by DNA repair proteins and maintained by virtue of histone modifications, to silence unsynapsed chromosomes, thus guarding against aneuploidy. As is discussed, MSCI may not be restricted to meiosis. See primer on p. 1823.

MEETING REVIEW

- 1819** Wiring the nervous system: from form to function
Matsuzaki, F. and Sampath, K.

PRIMER

- 1823** Meiotic sex chromosome inactivation
Turner, J. M. A.

RESEARCH ARTICLES

- 1833** Selective requirements for NRP1 ligands during neurovascular patterning
Vieira, J. M., Schwarz, Q. and Ruhrberg, C.
- 1845** Nab controls the activity of the zinc-finger transcription factors Squeeze and Rotund in *Drosophila* development
Terriente Félix, J., Magariños, M. and Díaz-Benjumea, F. J.
- 1853** Akt mediates self-renewal division of mouse spermatogonial stem cells
Lee, J., Kanatsu-Shinohara, M., Inoue, K., Ogonuki, N., Miki, H., Toyokuni, S., Kimura, T., Nakano, T., Ogura, A. and Shinohara, T.
- 1861** Dynamic Decapentaplegic signaling regulates patterning and adhesion in the *Drosophila* pupal retina
Cordero, J. B., Larson, D. E., Craig, C. R., Hays, R. and Cagan, R.
- 1873** *pygopus 2* has a crucial, Wnt pathway-independent function in lens induction
Song, N., Schwab, K. R., Patterson, L. T., Yamaguchi, T., Lin, X., Potter, S. S. and Lang, R. A.
- 1887** A crucial role for *Olig2* in white matter astrocyte development
Cai, J., Chen, Y., Cai, W.-H., Hurlock, E. C., Wu, H., Kernie, S. G., Parada, L. F. and Lu, Q. R.
- 1901** Specification of *Arabidopsis* floral meristem identity by repression of flowering time genes
Liu, C., Zhou, J., Bracha-Drori, K., Yalovsky, S., Ito, T. and Yu, H.
- 1911** Notch signaling regulates neural precursor allocation and binary neuronal fate decisions in zebrafish
Shin, J., Poling, J., Park, H.-C. and Appel, B.
- 1921** Na,K-ATPase $\alpha 2$ and *Ncx4a* regulate zebrafish left-right patterning
Shu, X., Huang, J., Dong, Y., Choi, J., Langenbacher, A. and Chen, J.-N.
- 1931** *Arabidopsis* homologs of components of the SWR1 complex regulate flowering and plant development
Choi, K., Park, C., Lee, J., Oh, M., Noh, B. and Lee, I.
- 1943** Mitotic spindle orientation distinguishes stem cell and terminal modes of neuron production in the early spinal cord
Wilcock, A. C., Swedlow, J. R. and Storey, K. G.
- 1955** A Dynein-dependent shortcut rapidly delivers axis determination transcripts into the *Drosophila* oocyte
Clark, A., Meignin, C. and Davis, I.
- 1967** Tailbud-derived mesenchyme promotes urinary tract segmentation via BMP4 signaling
Brenner-Anantharam, A., Cebrian, C., Guillaume, R., Hurtado, R., Sun, T.-T. and Herzlinger, D.



In *Arabidopsis*, *ap1-1* mutant flowers are transformed into shoot-like structures. This phenotype is rescued (as shown) when the flowering time gene *agl24-1* is also mutated. As Liu et al. discuss, in *Arabidopsis*, the floral meristem identity gene *APETALA1* (*AP1*) specifies floral meristems on apical meristem flanks. **See research article on p. 1901.**

- 1977** Genomic characterization of Gli-activator targets in sonic hedgehog-mediated neural patterning
Vokes, S. A., Ji, H., McCuine, S., Tenzen, T., Giles, S., Zhong, S., Longabaugh, W. J. R., Davidson, E. H., Wong, W. H. and McMahon, A. P.

DEVELOPMENT AND DISEASE

- 1991** Foxp2 and Foxp1 cooperatively regulate lung and esophagus development
Shu, W., Lu, M. M., Zhang, Y., Tucker, P. W., Zhou, D. and Morrisey, E. E.