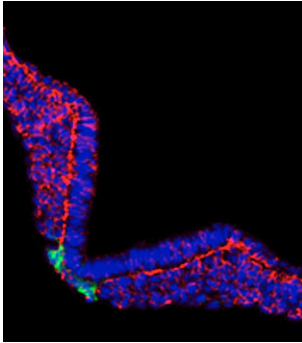
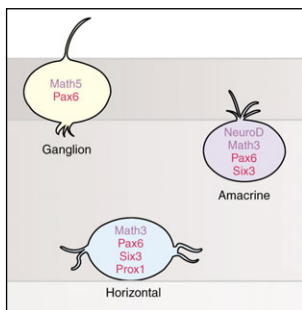


Development



Cover: Transverse section of an E8.2 transgenic mouse embryo expressing GFP-tagged Nodal (green) under the control of a node-specific enhancer. Sulfated glycosaminoglycans (red), which are specifically localized to the basement membrane-like structure between the node and lateral plate mesoderm (LPM), are required for Nodal signal transmission from the node to the left side of the LPM. See **research article by Oki et al. on p. 3893.**



In this issue, François Guillemot reviews recent insights into how combinations of the homeodomain and basic helix-loop-helix classes of transcription factors establish the molecular codes that determine both where and when different kinds of neurons and glial cells are generated in the developing vertebrate CNS. See **review on p. 3771.**

REVIEW

- 3771** Spatial and temporal specification of neural fates by transcription factor codes
Guillemot, F.

RESEARCH REPORTS

- 3781** Asymmetric localisation of Miranda and its cargo proteins during neuroblast division requires the anaphase-promoting complex/cyclosome
Slack, C., Overton, P. M., Tuxworth, R. I. and Chia, W.
- 3789** Mutations in the BMP pathway in mice support the existence of two molecular classes of holoprosencephaly
Fernandes, M., Gutin, G., Alcorn, H., McConnell, S. K. and Hébert, J. M.

RESEARCH ARTICLES

- 3795** Slit and Robo control the development of dendrites in *Drosophila* CNS
Furrer, M.-P., Vasenkova, I., Kamiyama, D., Rosado, Y. and Chiba, A.
- 3805** *Spalt4* mediates invagination and otic placode gene expression in cranial ectoderm
Barembaum, M. and Bronner-Fraser, M.
- 3815** *PU.1 (Sfpi1)*, a pleiotropic regulator expressed from the first embryonic stages with a crucial function in germinal progenitors
Olive, V., Wagner, N., Chan, S., Kastner, P., Vannetti, C., Cuzin, F. and Rassoulzadegan, M.
- 3827** Transcription factor TEAD4 specifies the trophoctoderm lineage at the beginning of mammalian development
Yagi, R., Kohn, M. J., Karavanova, I., Kaneko, K. J., Vullhorst, D., DePamphilis, M. L. and Buonanno, A.
- 3837** Cortical granule exocytosis in *C. elegans* is regulated by cell cycle components including separase
Bembenek, J. N., Richie, C. T., Squirrell, J. M., Campbell, J. M., Eliceiri, K. W., Poteryaev, D., Spang, A., Golden, A. and White, J. G.
- 3849** The gene *MACCHI-BOU 4/ENHANCER OF PINOID* encodes a NPH3-like protein and reveals similarities between organogenesis and phototropism at the molecular level
Furutani, M., Kajiwara, T., Kato, T., Treml, B. S., Stockum, C., Torres-Ruiz, R. A. and Tasaka, M.
- 3861** Neural induction requires continued suppression of both Smad1 and Smad2 signals during gastrulation
Chang, C. and Harland, R. M.
- 3873** TRICHOMELESS1 regulates trichome patterning by suppressing *GLABRA1* in *Arabidopsis*
Wang, S., Kwak, S.-H., Zeng, Q., Ellis, B. E., Chen, X.-Y., Schiefelbein, J. and Chen, J.-G.
- 3883** Divergent roles of ApoER2 and Vldlr in the migration of cortical neurons
Hack, I., Hellwig, S., Junghans, D., Brunne, B., Bock, H. H., Zhao, S. and Frotscher, M.
- 3893** Sulfated glycosaminoglycans are necessary for Nodal signal transmission from the node to the left lateral plate in the mouse embryo
Oki, S., Hashimoto, R., Okui, Y., Shen, M. M., Mekada, E., Otani, H., Saijoh, Y. and Hamada, H.
- 3905** The *C. elegans* CBF β homologue BRO-1 interacts with the Runx factor, RNT-1, to promote stem cell proliferation and self-renewal
Kagoshima, H., Nimmo, R., Saad, N., Tanaka, J., Miwa, Y., Mitani, S., Kohara, Y. and Woollard, A.



Longitudinal section of a bending-cotyledon stage *Arabidopsis pin1 pid* mutant embryo showing *MAB4/ENP* expression. In this study, Furutani et al. report that *MAB4/ENP* encodes a novel protein that functions as a regulator of polar auxin transport during organogenesis in concert with PID. **See research article on p. 3849.**

- 3917** HIF1 α regulation of *Sox9* is necessary to maintain differentiation of hypoxic prechondrogenic cells during early skeletogenesis
Amarilio, R., Viukov, S. V., Sharir, A., Eshkar-Oren, I., Johnson, R. S. and Zelzer, E.

DEVELOPMENT AND DISEASE

- 3929** Wnt5a is required for proper mammary gland development and TGF- β -mediated inhibition of ductal growth
Roarty, K. and Serra, R.
- 3941** Broad, ectopic expression of the sperm protein PLCZ1 induces parthenogenesis and ovarian tumours in mice
Yoshida, N., Amanai, M., Fukui, T., Kajikawa, E., Brahmajosyula, M., Iwahori, A., Nakano, Y., Shoji, S., Diebold, J., Hessel, H., Huss, R. and Perry, A. C. F.