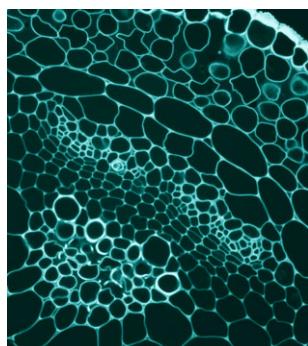
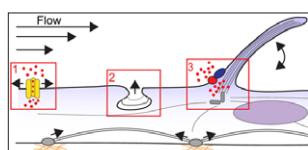


# Development



**Cover:** *Arabidopsis thaliana* stem section showing a collateral vascular bundle. Xylem cells are in the bottom left-hand corner, phloem cells are above the xylem cells. One sieve plate can be seen in the focal plane. **See Research article by Truernit et al. on p. 1306.**



Cells are subjected to various forces during morphogenesis, including those resulting from microscopic fluid flows. Here, Julien Vermot and colleagues review the biomechanical features and the physiological functions of biological fluid flows during development. **See Review on p. 1229.**

## SPOTLIGHT

- 1227 An interview with Angela Nieto  
Amsen, E.

## REVIEW

- 1229 Fluid flows and forces in development: functions, features and biophysical principles  
Freund, J. B., Goetz, J. G., Hill, K. L. and Vermot, J.

## DEVELOPMENT AND STEM CELLS

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Boissart, C., Nissan, X., Giraud-Triboult, K., Peschanski, M. and Benchoua, A.
- 1258 bHLH-O proteins are crucial for *Drosophila* neuroblast self-renewal and mediate Notch-induced overproliferation  
Zacharioudaki, E., Magadi, S. S. and Delidakis, C.

## RESEARCH REPORT

- 1270 The conserved transcription factor Mef2 has multiple roles in adult *Drosophila* musculature formation  
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## RESEARCH ARTICLES

- 1276 Differential regulation of node formation, nodal ciliogenesis and cilia positioning by *Noto* and *Foxj1*  
Alten, L., Schuster-Gossler, K., Beckers, A., Groos, S., Ulmer, B., Hegermann, J., Ochs, M. and Gossler, A.
- 1285 Specialisation within the DWARF14 protein family confers distinct responses to karrikins and strigolactones in *Arabidopsis*  
Waters, M. T., Nelson, D. C., Scaffidi, A., Flematti, G. R., Sun, Y. K., Dixon, K. W. and Smith, S. M.
- 1296 2-O-sulfotransferase regulates Wnt signaling, cell adhesion and cell cycle during zebrafish epiboly  
Cadwalader, E. L., Condic, M. L. and Yost, H. J.
- 1306 OCTOPUS, a polarly localised membrane-associated protein, regulates phloem differentiation entry in *Arabidopsis thaliana*  
Truernit, E., Bauby, H., Belcramp, K., Barthélémy, J. and Palauqui, J.-C.
- 1316 A zebrafish model of lethal congenital contracture syndrome 1 reveals Gle1 function in spinal neural precursor survival and motor axon arborization  
Jao, L.-E., Appel, B. and Wente, S. R.
- 1327 A role for endothelial cells in promoting the maturation of astrocytes through the apelin/APJ system in mice  
Sakimoto, S., Kidoya, H., Naito, H., Kamei, M., Sakaguchi, H., Goda, N., Fukamizu, A., Nishida, K. and Takakura, N.
- 1336 Evolution of self-organisation in Dictyostelia by adaptation of a non-selective phosphodiesterase and a matrix component for regulated cAMP degradation  
Kawabe, Y., Weening, K. E., Marquay-Markiewicz, J. and Schaap, P.

- 1346** Regulation of cranial morphogenesis and cell fate at the neural crest-mesoderm boundary by engrailed 1  
**Deckelbaum, R. A., Holmes, G., Zhao, Z., Tong, C., Basilico, C. and Loomis, C. A.**
- 1359** Vimentin regulates peripheral nerve myelination  
**Triolo, D., Dina, G., Taveggia, C., Vaccari, I., Porrello, E., Rivellini, C., Domi, T., La Marca, R., Cerri, F., Bolino, A., Quattrini, A. and Previtali, S. C.**