



Cover: Metamorphosis of the colonial ascidian *Botrylloides violaceus* imaged by wide-field microscopy. This image is a series of stills taken from a three-hour movie, during which the ampullae extend out over the substrate; eventually, this individual will bud off additional colonies. The movie, taken by Matthew Clark at the 2012 Woods Hole MBL Embryology course, was chosen by readers of the Node (<http://thenode.biologists.com>).

SPOTLIGHT

- 4463 An interview with Benoit Bruneau
Vicente, C.

MEETING REVIEW

- 4465 Left-right asymmetry: lessons from Cancún
Burdine, R. D. and Caspary, T.

PRIMER

- 4471 The cell biology of mammalian fertilization
Okabe, M.

STEM CELLS AND REGENERATION

- 4480 The imprinted polycomb group gene *Sfmbt2* is required for trophoblast maintenance and placenta development
Miri, K., Latham, K., Panning, B., Zhong, Z., Andersen, A. and Varmuza, S.
- 4490 A dynamic population of stromal cells contributes to the follicle stem cell niche in the *Drosophila* ovary
Sahai-Hernandez, P. and Nystul, T. G.

- 4499 A Pitx transcription factor controls the establishment and maintenance of the serotonergic lineage in planarians
März, M., Seebeck, F. and Bartscherer, K.

- 4510 A self-renewing division of zebrafish Müller glial cells generates neuronal progenitors that require N-cadherin to regenerate retinal neurons
Nagashima, M., Barthel, L. K. and Raymond, P. A.

- 4522 Fetal adrenal capsular cells serve as progenitor cells for steroidogenic and stromal adrenocortical cell lineages in *M. musculus*.
Wood, M. A., Acharya, A., Finco, I., Swonger, J. M., Elston, M. J., Tallquist, M. D. and Hammer, G. D.

- 4533 Location of transient ectodermal progenitor potential in mouse development
Li, L., Liu, C., Biechele, S., Zhu, Q., Song, L., Lanner, F., Jing, N. and Rossant, J.

RESEARCH ARTICLES

- 4544 Theoretical and experimental evidence indicates that there is no detectable auxin gradient in the angiosperm female gametophyte
Lituiev, D. S., Krohn, N. G., Müller, B., Jackson, D., Hellriegel, B., Dresselhaus, T. and Grossniklaus, U.

- 4554 Cxcl12/Cxcr4 signaling controls the migration and process orientation of A9-A10 dopaminergic neurons
Yang, S., Edman, L. C., Sánchez-Alcañiz, J. A., Fritz, N., Bonilla, S., Hecht, J., Uhlen, P., Pleasure, S. J., Villaescusa, J. C., Marín, O. and Arenas, E.

- 4565 Generation of the podocyte and tubular components of an amniote kidney: timing of specification and a role for Wnt signaling
Grinstein, M., Yelin, R., Herzlinger, D. and Schultheiss, T. M.

- 4574 *Hox11* genes are required for regional patterning and integration of muscle, tendon and bone
Swinehart, I. T., Schlientz, A. J., Quintanilla, C. A., Mortlock, D. P. and Wellik, D. M.

- 4583 Release from meiotic arrest in ascidian eggs requires the activity of two phosphatases but not CaMKII
Levasseur, M., Dumollard, R., Chambon, J.-P., Hebras, C., Sinclair, M., Whitaker, M. and McDougall, A.

- 4594 Emilin3 is required for notochord sheath integrity and interacts with Scube2 to regulate notochord-derived Hedgehog signals
Corallo, D., Schiavino, A., Trapani, V., Moro, E., Argenton, F. and Bonaldo, P.

- 4602 Knockdown of *col22a1* gene in zebrafish induces a muscular dystrophy by disruption of the myotendinous junction
Charvet, B., Guiraud, A., Malbouyres, M., Zwolanek, D., Guillou, E., Bretaud, S., Monnot, C., Schulze, J., Bader, H. L., Allard, B., Koch, M. and Ruggiero, F.

- 4614 Regulation of maternal Wnt mRNA translation in *C. elegans* embryos
Oldenbroek, M., Robertson, S. M., Guven-Ozkan, T., Spike, C., Greenstein, D. and Lin, R.

TECHNIQUES AND RESOURCES

- 4624 Visualizing developmentally programmed endoreplication in mammals using ubiquitin oscillators
Sakae-Sawano, A., Hoshida, T., Yo, M., Takahashi, R., Ohtawa, K., Arai, T., Takahashi, E., Noda, S., Miyoshi, H. and Miyawaki, A.

- 4633 Conserved molecular signatures of neurogenesis in the hippocampal subgranular zone of rodents and primates
Miller, J. A., Nathanson, J., Franjic, D., Shim, S., Dalley, R. A., Shapouri, S., Smith, K. A., Sunkin, S. M., Bernard, A., Bennett, J. L., Lee, C.-K., Hawrylycz, M. J., Jones, A. R., Amaral, D. G., Sestan, N., Gage, F. H. and Lein, E. S.

CORRIGENDUM

- 4645 The WIF domain of the human and *Drosophila* Wif-1 secreted factors confers specificity for Wnt or Hedgehog
Sánchez-Hernández, D., Sierra, J., Ortigão-Farias J. R. and Guerrero, I.