



Cover: Juvenile crab collected in a plankton tow. This image, taken by Chiara Sinigaglia at the 2015 Woods Hole MBL Embryology Course, was chosen by readers of the Node (<http://thenode.biologists.com>).

### SPOTLIGHTS

**2541** The status of the human embryo in various religions  
**Neaves, W.**

**2544** Interspecies chimeras for human stem cell research  
**Masaki, H. and Nakauchi, H.**

### REVIEW

**2548** A framework for understanding the roles of miRNAs in animal development  
**Alberti, C. and Cochella, L.**

### STEM CELLS AND REGENERATION

**2560** BMP signaling orchestrates a transcriptional network to control the fate of mesenchymal stem cells in mice  
**Feng, J., Jing, J., Li, J., Zhao, H., Punj, V., Zhang, T., Xu, J. and Chai, Y.**

**2570** Synergism between *canoe* and *scribble* mutations causes tumor-like overgrowth via Ras activation in neural stem cells and epithelia  
**Rives-Quinto, N., Franco, M., de Torres-Jurado, A. and Carmena, A.**

**2584** Yorkie and Hedgehog independently restrict BMP production in escort cells to permit germline differentiation in the *Drosophila* ovary  
**Huang, J., Reilein, A. and Kalderon, D.**

### RESEARCH ARTICLES

**2595** Three-dimensional structural analysis reveals a Cdk5-mediated kinase cascade regulating hepatic biliary network branching in zebrafish  
**Dimri, M., Bilogan, C., Pierce, L. X., Naegele, G., Vasanji, A., Gibson, I., McClendon, A., Tae, K. and Sakaguchi, T. F.**

**2606** *Setd1b*, encoding a histone 3 lysine 4 methyltransferase, is a maternal effect gene required for the oogenic gene expression program  
**Brici, D., Zhang, Q., Reinhardt, S., Dahl, A., Hartmann, H., Schmidt, K., Goveas, N., Huang, J., Gahurova, L., Kelsey, G., Anastassiadis, K., Stewart, A. F. and Kranz, A.**

**2618** Sin3a regulates epithelial progenitor cell fate during lung development  
**Yao, C., Carraro, G., Konda, B., Guan, X., Mizuno, T., Chiba, N., Kostelny, M., Kurkciyan, A., David, G., McQualter, J. L. and Stripp, B. R.**

**2629** SoxF factors induce Notch1 expression via direct transcriptional regulation during early arterial development  
**Chiang, I. K.-N., Fritzsche, M., Pichol-Thievend, C., Neal, A., Holmes, K., Lagendijk, A., Overman, J., D'Angelo, D., Omini, A., Hermkens, D., Lesieur, E., Liu, K., Ratnayaka, I., Corada, M., Bou-Gharios, G., Carroll, J., Dejana, E., Schulte-Merker, S., Hogan, B., Beltrame, M., De Val, S. and Francois, M.**

**2640** Antagonistic regulation of the second mitotic wave by Eyes absent-Sine oculis and Combgap coordinates proliferation and specification in the *Drosophila* retina  
**Davis, T. L. and Rebay, I.**

**2652** Convergence of signaling pathways underlying habenular formation and axonal outgrowth in zebrafish  
**Roberson, S. and Halpern, M. E.**

**2663** Architectural protein Pita cooperates with dCTCF in organization of functional boundaries in Bithorax complex  
**Kyrchanova, O., Zolotarev, N., Mogila, V., Maksimenko, O., Schedl, P. and Georgiev, P.**

**2673** COP9 signalosome subunits protect Capicua from MAPK-dependent and -independent mechanisms of degradation  
**Suisse, A., He, D., Legent, K. and Treisman, J. E.**

**2683** SPEF2 functions in microtubule-mediated transport in elongating spermatids to ensure proper male germ cell differentiation  
**Lehti, M. S., Zhang, F.-P., Kotaja, N. and Sironen, A.**

### TECHNIQUES AND RESOURCES

**2694** A toolkit for GFP-mediated tissue-specific protein degradation in *C. elegans*  
**Wang, S., Tang, N. H., Lara-Gonzalez, P., Zhao, Z., Cheerambathur, D. K., Prevo, B., Chisholm, A. D., Desai, A. and Oegema, K.**