



Cover: Safranin O/Fast Green/Hematoxylin-stained section of the proximal humerus from a 21-day old mouse with site-1 protease ablation in the osterix lineage. Image shows the slow development of the secondary ossification center, in which the epiphyseal cartilage is not completely replaced with trabecular bone at this stage. See article by Patra et al. (see bio032094). Cover image is licensed under a Creative Commons Attribution 4.0 International licence.

REVIEW

Symbiosis in the microbial world: from ecology to genome evolution

Raina, J.-B., Eme, L., Pollock, F. J., Spang, A., Archibald, J. M. and Williams, T. A.

bio032524

RESEARCH ARTICLES

Site-1 protease regulates skeletal stem cell population and osteogenic differentiation in mice

Patra, D., DeLassus, E., Mueller, J., Abou-Ezzi, G. and Sandell, L. J.

bio032094

Mechanical properties of silk of the Australian golden orb weavers *Nephila pilipes* and *Nephila plumipes*

Kerr, G. G., Nahrung, H. F., Wiegand, A., Kristoffersen, J., Killen, P., Brown, C. and Macdonald, J.

bio029249

Ecdysone signaling regulates specification of neurons with a male-specific neurite in *Drosophila*

Zhang, B., Sato, K. and Yamamoto, D.

bio029744

Timing and context of dolphin clicks during and after mine simulator detection and marking in the open ocean

Ridgway, S. H., Dibble, D. S. and Kennemer, J. A.

bio031625

The histone deacetylase HDAC1 positively regulates Notch signaling during *Drosophila* wing development

Wang, Z., Lyu, J., Wang, F., Miao, C., Nan, Z., Zhang, J., Xi, Y., Zhou, Q., Yang, X. and Ge, W.

bio029637

Spermine modulates fungal morphogenesis and activates plasma membrane H⁺-ATPase during yeast to hyphae transition

Cogo, A. J. D., Dutra Ferreira, K. R., Okorokov, L. A., Ramos, A. C., Façanha, A. R. and Okorokova-Façanha, A. L.

bio029660

Metabolism of the Pacific oyster, *Crassostrea gigas*, is influenced by salinity and modulates survival to the Ostreid herpesvirus OsHV-1

Fuhrmann, M., Delisle, L., Petton, B., Corporeau, C. and Pernet, F.

bio028134

Sustained exercise-trained juvenile black carp (*Mylopharyngodon piceus*) at a moderate water velocity exhibit improved aerobic swimming performance and increased postprandial metabolic responses

Li, X., Zhang, Y., Li, X., Zheng, H., Peng, J. and Fu, S.

bio032425

Human hepatocyte depletion in the presence of HIV-1 infection in dual reconstituted humanized mice

Dagur, R. S., Wang, W., Cheng, Y., Makarov, E., Ganesan, M., Suemizu, H., Gebhart, C. L., Gorantla, S., Osna, N. and Poluektova, L. Y.

bio029785

How does the snakehead *Channa argus* survive in air? The combined roles of the suprabranchial chamber and physiological regulations during aerial respiration

Duan, T., Shi, C., Zhou, J., Lv, X., Li, Y. and Luo, Y.

bio029223

Plastid translation is essential for lateral root stem cell patterning in *Arabidopsis thaliana*

Nakata, M. T., Sato, M., Wakazaki, M., Sato, N., Kojima, K., Sekine, A., Nakamura, S., Shikanai, T., Toyooka, K., Tsukaya, H. and Horiguchi, G.

bio028175

A transgenic zebrafish model for the *in vivo* study of the blood and choroid plexus brain barriers using *claudin 5*

van Leeuwen, L. M., Evans, R. J., Jim, K. K., Verboom, T., Fang, X., Bojarczuk, A., Malicki, J., Johnston, S. A. and van der Sar, A. M.

bio030494

Gemin4 is an essential gene in mice, and its overexpression in human cells causes relocalization of the SMN complex to the nucleoplasm

Meier, I. D., Walker, M. P. and Matera, A. G.

bio032409