



Cover: Electron microscopy picture of a mitochondrion taken while characterizing the *Drosophila* mutant *Pantagruelian Mitochondrion I* (*PMI*). This snapshot shows inner-membrane alterations that are not truly representative of the *PMI* mutant phenotype (usually characterized by crista elongation and bending) but it does certainly represent a rare example of a smiling mitochondrion. See article by Macchi et al. (pp. 814–824).

Commentary

- 705 **Crystal clear insights into how the dynein motor moves.** Carter, A. P.

Short Report

- 715 **PtdIns(3,4,5)P₃ is constitutively synthesized and required for spindle translocation during meiosis in mouse oocytes.** Zheng, P., Baibakov, B., Wang, X.-h. and Dean, J.

Research Articles

- 722 **Interplay between Rab35 and Arf6 controls cargo recycling to coordinate cell adhesion and migration.** Allaure, P. D., Seyed Sadr, M., Chaineau, M., Seyed Sadr, E., Konefal, S., Fotouhi, M., Maret, D., Ritter, B., Del Maestro, R. F. and McPherson, P. S.

- 732 **Critical role for $\alpha\beta\delta$ integrin in enamel biomineralization.** Mohazab, L., Koivisto, L., Jiang, G., Kytölä, L., Haapasalo, M., Owen, G. R., Wiebe, C., Xie, Y., Heikinheimo, K., Yoshida, T., Smith, C. E., Heino, J., Häkkinen, L., McKee, M. D. and Larjava, H.

- 745 **Akt1 promotes focal adhesion disassembly and cell motility through phosphorylation of FAK in growth factor-stimulated cells.** Higuchi, M., Kihara, R., Okazaki, T., Aoki, I., Suetsugu, S. and Gotoh, Y.

- 756 ***Dictyostelium* ACAP-A is an ArfGAP involved in cytokinesis, cell migration and actin cytoskeleton dynamics.** Dias, M., Blanc, C., Thazar-Poulot, N., Ben Larbi, S., Cosson, P. and Letourneau, F.

- 767 **LST1 promotes the assembly of a molecular machinery responsible for tunneling nanotube formation.** Schiller, C., Diakopoulos, K. N., Rohwedder, I., Kremmer, E., von Toerne, C., Ueffing, M., Weidle, U. H., Ohno, H. and Weiss, E. H.

- 778 **Separate roles of PKA and EPAC in renal function unraveled by the optogenetic control of cAMP levels *in vivo*.** Efetova, M., Petereit, L., Rosiewicz, K., Overend, G., Haußig, F., Hovemann, B. T., Cabrero, P., Dow, J. A. T. and Schwärzel, M.

- 789 **A novel Drp1 inhibitor diminishes aberrant mitochondrial fission and neurotoxicity.** Qi, X., Qvit, N., Su, Y.-C. and Mochly-Rosen, D.

- 803 **Deficiency of the multi-copy mouse Y gene *Sly* causes sperm DNA damage and abnormal chromatin packaging.** Riel, J. M., Yamauchi, Y., Sugawara, A., Li, H. Y. J., Ruthig, V., Stoytcheva, Z., Ellis, P. J. I., Cocquet, J. and Ward, M. A.

- 814 **The *Drosophila* inner-membrane protein PMI controls crista biogenesis and mitochondrial diameter.** Macchi, M., El Fissi, N., Tufi, R., Bentobji, M., Liévens, J.-C., Martins, L. M., Royet, J. and Rival, T.

- 825 **MTR120/KIAA1383, a novel microtubule-associated protein, promotes microtubule stability and ensures cytokinesis.** Fong, K.-w., Leung, J. W.-c., Li, Y., Wang, W., Feng, L., Ma, W., Liu, D., Songyang, Z. and Chen, J.

- 838 **Molecular chaperones protect against JNK- and Nmnat-regulated axon degeneration in *Drosophila*.** Rallis, A., Lu, B. and Ng, J.

- 850 ***ifet-1* is a broad-scale translational repressor required for normal P granule formation in *C. elegans*.** Sengupta, M. S., Low, W. Y., Patterson, J. R., Kim, H.-M., Traven, A., Beilharz, T. H., Colaiácovo, M. P., Schisa, J. A. and Boag, P. R.

- 860 **Par6γ is at the mother centriole and controls centrosomal protein composition through a Par6α-dependent pathway.** Dormoy, V., Tormanen, K. and Süttlerlin, C.