



**Cover:** Mouse carrying the Y130C mutation in the *Mek1* gene provides a new model for cardio-facio-cutaneous syndrome (CFC), presenting cranial, neurological and cardiac phenotypes similar to those observed in CFC individuals. Consistent with other RASopathy-linked mutations, analysis of GFAP-labeled astrocytes in hippocampal CA1 revealed a significant increase in the density of GFAP<sup>+</sup> cells, suggesting astrogliosis occurring in a range of neuropathological states. See article by Aoidi et al. (dmm031278). Cover image is licensed under a Creative Commons Attribution 4.0 International license.

## REVIEW

Metastasis in context: modeling the tumor microenvironment with cancer-on-a-chip approaches

**Sleeboom, J. J. F., Eslami Amirabadi, H., Nair, P., Sahlgren, C. M. and den Toonder, J. M. J.**

dmm033100

## RESEARCH ARTICLES

Neutrophil-specific knockout demonstrates a role for mitochondria in regulating neutrophil motility in zebrafish

**Zhou, W., Cao, L., Jeffries, J., Zhu, X., Staiger, C. J. and Deng, Q.**

dmm033027

Feeding difficulties, a key feature of the *Drosophila* NDUFS4 mitochondrial disease model

**Foriel, S., Beyrath, J., Eidhof, I., Rodenburg, R. J., Schenck, A. and Smeitink, J. A. M.**

dmm032482

Lymphoblastoid cell lines as a model to understand amyotrophic lateral sclerosis disease mechanisms

**Pansarasa, O., Bordoni, M., Drufuca, L., Diamanti, L., Sproviero, D., Trotti, R., Bernuzzi, S., La Salvia, S., Gagliardi, S., Ceroni, M. and Cereda, C.**

dmm031625

The role of the microRNA-146a/complement factor H/interleukin-1 $\beta$ -mediated inflammatory loop circuit in the perpetuate inflammation of chronic temporal lobe epilepsy

**Li, T.-R., Jia, Y.-J., Ma, C., Qiu, W.-Y., Wang, Q., Shao, X.-Q. and Lv, R.-J.**

dmm031708

Vangl2 disruption alters the biomechanics of late spinal neurulation leading to spina bifida in mouse embryos

**Galea, G. L., Nychyk, O., Mole, M. A., Moulding, D., Savery, D., Nikolopoulou, E., Henderson, D. J., Greene, N. D. E. and Copp, A. J.**

dmm032219

Identification of protective postexposure mycobacterial vaccine antigens using an immunosuppression-based reactivation model in the zebrafish

**Myllmäki, H., Niskanen, M., Luukinen, H., Parikka, M. and Rämetsä, M.**

dmm033175

*Mek1*<sup>Y130C</sup> mice recapitulate aspects of human cardio-facio-cutaneous syndrome

**Aoidi, R., Houde, N., Landry-Truchon, K., Holter, M., Jacquet, K., Charron, L., Krishnaswami, S. R., Yu, B. D., Rauen, K. A., Bisson, N., Newbern, J. and Charron, J.**

dmm031278

Altered expression of the Cdk5 activator-like protein, Cdk5 $\alpha$ , causes neurodegeneration, in part by accelerating the rate of aging

**Spurrier, J., Shukla, A. K., McLinden, K., Johnson, K. and Giniger, E.**

dmm031161

Vitamin D deficiency in the *Apc*<sup>Pirc/+</sup> rat does not exacerbate colonic tumorigenesis, while low dietary calcium might be protective

**Irving, A. A., Duchow, E. G., Plum, L. A. and DeLuca, H. F.**

dmm032300

Identification of early indicators of altered metabolism in normal development using a rodent model system

**Prabakaran, A. D., Karakkat, J. V., Vijayan, R., Chalissery, J., Ibrahim, M. F., Kaimala, S., Adeghate, E. A., Al-Marzouqi, A. H., Ansari, S. A., Mensah-Brown, E. and Emerald, B. S.**

dmm031815

## RESOURCE ARTICLE

Disease Ontology: improving and unifying disease annotations across species

**Bello, S. M., Shimoyama, M., Mitraka, E., Laulederkind, S. J. F., Smith, C. L., Eppig, J. T. and Schriml, L. M.**

dmm032839