



**Cover:** Deletion of *Snrpb* in mouse neural crest cells models craniofacial defects found in cerebrocostomandibular syndrome. Sagittal view of an E17.5 mouse wild-type embryo. Normal development of craniofacial bones (red) and cartilage (blue) are seen. Alam et al. (dmm049544) show that in mutant embryos with mutation of *Snrpb* in the neural crest cells, craniofacial bones are reduced, the jaw is malformed, and the hyoid and tracheal cartilage are missing. Cover image is licensed under a Creative Commons Attribution 4.0 International license.

## EDITORIAL

Genetic variance in human disease – modelling the future of genomic medicine

**Lek, M., Hmeljak, J. and Hooper, K. M.**

dmm049700

## A MODEL FOR LIFE

Decoding the genetics of rare disease: an interview with Monkol Lek

**Lek, M.**

dmm049694

## PERSPECTIVE

*ALDH2* variance in disease and populations

**Chen, C.-H., Kraemer, B. R. and Mochly-Rosen, D.**

dmm049601

## REVIEWS

Interpreting protein variant effects with computational predictors and deep mutational scanning

**Livesey, B. J. and Marsh, J. A.**

dmm049510

Humanized yeast to model human biology, disease and evolution

**Kachroo, A. H., Vandeloo, M., Greco, B. M. and Abdullah, M.**

dmm049309

Deep phenotyping for precision medicine in Parkinson's disease

**Schalkamp, A.-K., Rahman, N., Monzón-Sandoval, J. and Sandor, C.**

dmm049376

## RESEARCH ARTICLES

Hsp40 overexpression in pacemaker neurons delays circadian dysfunction in a *Drosophila* model of Huntington's disease

**Prakash, P., Pradhan, A. K. and Sheeba, V.**

dmm049447

Limitations of mouse models for sickle cell disease conferred by their human globin transgene configurations

**Woodard, K. J., Doerfler, P. A., Mayberry, K. D., Sharma, A.,**

**Levine, R., Yen, J., Valentine, V., Palmer, L. E., Valentine, M.**

**and Weiss, M. J.**

dmm049463

Monitoring of inflammation using novel biosensor mouse model reveals tissue- and sex-specific responses to Western diet

**Talley, S., Bonomo, R., Gavini, C., Hatahet, J., Gornick, E.,**

**Cook, T., Chun, B. J., Kekenes-Huskey, P., Aubert, G.,**

**Campbell, E. and Mansuy-Aubert, V.**

dmm049313

Identification of two cancer stem cell-like populations in triple-negative breast cancer xenografts

**Nakayama, J., Matsunaga, H., Arikawa, K., Yoda, T.,**

**Hosokawa, M., Takeyama, H., Yamamoto, Y. and Semba, K.**

dmm049538

*Snrpb* is required in murine neural crest cells for proper splicing and craniofacial morphogenesis

**Alam, S. S., Kumar, S., Beauchamp, M.-C.,**

**Bareke, E., Boucher, A., Nzirorera, N., Dong, Y.,**

**Padilla, R., Zhang, S. J., Majewski, J. and**

**Jerome-Majewska, L. A.**

dmm049544

Loss of *slc39a14* causes simultaneous manganese hypersensitivity and deficiency in zebrafish

**Tuschl, K., White, R. J., Trivedi, C., Valdivia, L. E., Niklaus, S.,**

**Bianco, I. H., Dadswell, C., González-Méndez, R., Sealy, I. M.,**

**Neuhauss, S. C. F., Houart, C., Rihel, J., Wilson, S. W. and**

**Busch-Nentwich, E. M.**

dmm044594

An enriched environment re-establishes metabolic homeostasis by reducing obesity-induced inflammation

**Díaz de León-Guerrero, S., Salazar-León, J., Meza-Sosa, K. F.,**

**Valle-García, D., Aguilar-León, D., Pedraza-Alva, G. and**

**Pérez-Martínez, L.**

dmm048936

The role of Lrp6-mediated Wnt/ $\beta$ -catenin signaling in the development and intervention of spinal neural tube defects in mice

**Zhao, T., McMahon, M., Reynolds, K., Saha, S. K., Stokes, A.**

**and Zhou, C. J.**

dmm049517

Modulation of autoimmune diabetes by N-ethyl-N-nitrosourea-induced mutations in non-obese diabetic mice

**Chatenoud, L., Marquet, C., Valette, F., Scott, L., Quan, J.,**

**Bu, C. H., Hildebrand, S., Moresco, E. M. Y., Bach, J.-F. and**

**Beutler, B.**

dmm049484

AMP-activated protein kinase promotes breast cancer stemness and drug resistance

**Andugulapati, S. B., Sundararaman, A., Lahiry, M. and**

**Rangarajan, A.**

dmm049203

The *GBA1* D409V mutation exacerbates synuclein pathology to differing extents in two alpha-synuclein models

**Polinski, N. K., Martinez, T. N., Ramboz, S., Sasner, M.,**

**Herberth, M., Switzer, R., Ahmad, S. O., Pelligrino, L. J.,**

**Clark, S. W., Marcus, J. N., Smith, S. M., Dave, K. D. and**

**Frasier, M. A.**

dmm049192

*Ppp4r3a* deficiency leads to depression-like behaviors in mice by modulating the synthesis of synaptic proteins

**Gao, F., Liu, A., Qi, X., Wang, M., Chen, X., Wei, S., Gao, S.,**

**Sun, Y., Sun, P., Li, X., Sun, W., Li, J. and Liu, Q.**

dmm049374

**FIRST PERSON**

First person – Pavitra Prakash  
dmm049678

First person – Kaitly Woodard  
dmm049644

First person – Sabrina Alam  
dmm049668

First person – Karin Tuschl  
dmm049641

First person – Sol Díaz de León-Guerrero  
dmm049442