



**Cover:** The GATA zinc-finger transcription factor GATA4 is important for endoderm and cardiac development. Simon et al. (bio036517) generated a novel nuclear localized fluorescent reporter to study Gata4 expression in the mouse. Shown here is a projection of a confocal z-stack of an embryonic day 6.5 (E6.5) *Gata4<sup>H2B-GFP/+</sup>* mouse embryo expressing the Gata4 transcriptional reporter (green), immunostained for GATA4 (red) and counterstained with Hoechst (blue) to detect nuclei. *Gata4<sup>H2B-GFP</sup>* is expressed in the outer layer of the embryo; the visceral endoderm. Image licensed under a Creative Commons Attribution 4.0 International license.

## RESEARCH ARTICLES

Endodermal pouch-expressed *dmt2b* is important for pharyngeal cartilage formation

**Li, L., Mao, A., Wang, P., Ning, G., Cao, Y. and Wang, Q.**  
bio035444

Human asparagine synthetase associates with the mitotic spindle

**Noree, C., Monfort, E. and Shotelersuk, V.**

bio038307

Potassium fertilization arrests malate accumulation and alters soluble sugar metabolism in apple fruit

**Zhang, W., Zhang, X., Wang, Y., Zhang, N., Guo, Y., Ren, X. and Zhao, Z.**

bio024745

Characterization of interaction and ubiquitination of phosphoenolpyruvate carboxykinase by E3 ligase UBR5

**Shen, Q., Qiu, Z., Wu, W., Zheng, J. and Jia, Z.**

bio037366

Dynamic microtubules drive fibroblast spreading

**Tvorogova, A., Saidova, A., Smirnova, T. and Vorobjev, I.**

bio038968

Effect of temperature change on synaptic transmission at crayfish neuromuscular junctions

**Zhu, Y., de Castro, L. and Cooper, R. L.**

bio037820

Low cholesterol is not always good: low cholesterol levels are associated with decreased serotonin and increased aggression in fish

**Aguiar, A. and Giaquinto, P. C.**

bio030981

Monitoring and evaluation of the immune status of female Kunming mice maintained in different biosafety level laboratories

**Guo, L., He, Y., Li, H., Chen, Y., Zhu, F., Yang, M., Yang, C., Dai, Q., Shi, H. and Liu, L.**

bio035006

A *Gata4* nuclear GFP transcriptional reporter to study endoderm and cardiac development in the mouse

**Simon, C. S., Zhang, L., Wu, T., Cai, W., Saiz, N., Nowotschin, S., Cai, C.-L. and Hadjantonakis, A.-K.**

bio036517

The role of personality variation, plasticity and social facilitation in cockroach aggregation

**Planas-Sitjà, I. and Deneubourg, J.-L.**

bio036582

Neural activation following offensive aggression in Japanese quail

**Voigt, C., Hirschenhauser, K. and Leitner, S.**

bio038026

Seasonal variations in cellular and humoral immunity in male striped hamsters (*Cricetulus barabensis*)

**Xu, D.-L., Hu, X.-K. and Tian, Y.**

bio038489

Promoter-enhancer looping and shadow enhancers of the mouse  $\alpha$ A-crystallin locus

**McGreal-Estrada, R. S., Wolf, L. V. and Cvekl, A.**

bio036897

IRS-1 increases TAZ expression and promotes osteogenic differentiation in rat bone marrow mesenchymal stem cells

**Wang, N., Xue, P., Li, Z. and Li, Y.**

bio036194

Live imaging of cortical granule exocytosis reveals that *in vitro* matured mouse oocytes are not fully competent to secrete their content

**Cappa, A. I., de Paola, M., Wetten, P., De Blas, G. A. and Michaut, M. A.**

bio031872

Auditory perception exhibits sexual dimorphism and left telencephalic dominance in *Xenopus laevis*

**Fan, Y., Yue, X., Xue, F., Cui, J., Brauth, S. E., Tang, Y. and Fang, G.**

bio035956

Short-term cortisol exposure alters cardiac hypertrophic and non-hypertrophic signalling in a time-dependent manner in rainbow trout

**Nørstrud, K. S., Vindas, M. A., Nilsson, G. E. and Johansen, I. B.**

bio037853

Daily changes in the electric behavior of weakly electric fish naturally persist in constant darkness and are socially synchronized

**Migliaro, A., Moreno, V., Marchal, P. and Silva, A.**

bio036319

Characterization and *in ovo* vascularization of a 3D-printed hydroxyapatite scaffold with different extracellular matrix coatings under perfusion culture

**Burgio, F., Rimmer, N., Pieles, U., Buschmann, J. and Beaufils-Hugot, M.**

bio034488

## METHODS AND TECHNIQUES

An *in vivo* translation-reporter system for the study of protein synthesis in zebrafish embryos

**Garcez Palha, I., Anselme, I., Schneider-Maunoury, S. and Giudicelli, F.**

bio039362

Model-based serial blood sampling protocol for minimal mortality and better recovery in small to medium sized tilapia

**Sihoka, C. and Wagenaar, I.**

bio037978

**FIRST PERSON**

First person – De-Li Xu  
bio039685

First person – Claire Simon  
bio040105

First person – Andrea Cappa  
bio039644

**CORRECTION**

Correction: DARPins recognizing mTFP1 as novel reagents  
for *in vitro* and *in vivo* protein manipulations  
(doi:10.1242/bio.036749)

**Vigano, M. A., Bieli, D., Schaefer, J. V., Jakob, R. P.,  
Matsuda, S., Maier, T., Plückthun, A. and Affolter, M.**  
bio040832