



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^{H2B-GFP/+}* mouse embryo expressing the Gata4 transcriptional reporter (green), immunostained for GATA4 (red) and counterstained with Hoechst (blue) to detect nuclei. *Gata4^{H2B-GFP}* 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 α 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