



**Cover:** Zebrafish embryo (*Danio rerio*) injected with Prostaglandin E2 (PGE2) showing advanced pigmentation at 48 h post fertilization. In their article, Ugwuagbo et al. show that PGE2 promotes early embryonic development, vascular maturation and angiogenesis in zebrafish. Image credit: Sujit Maiti. Image licensed under a Creative Commons Attribution 4.0 International license.

## RESEARCH ARTICLES

Microenvironmental stimuli induce different macrophage polarizations in experimental models of emphysema  
**Kohler, J. B., Cervilha, D. A. d. B., Riani Moreira, A., Santana, F. R., Farias, T. M., Alonso Vale, M. I. C., Martins, M. d. A., Prado, C. M., Tibério, I. C., Ito, J. T. and Lopes, F. D. T. Q. d. S.**

bio040808

Soft substrate maintains proliferative and adipogenic differentiation potential of human mesenchymal stem cells on long-term expansion by delaying senescence  
**Kureel, S. K., Mogha, P., Khadpekar, A., Kumar, V., Joshi, R., Das, S., Bellare, J. and Majumder, A.**

bio039453

Quantitative analysis of the ThrbCRM1-centered gene regulatory network

**Souferi, B. and Emerson, M. M.**

bio039115

TXNIP mediates high glucose-induced mitophagic flux and lysosome enlargement in human retinal pigment epithelial cells  
**Devi, T. S., Yumnamcha, T., Yao, F., Somayajulu, M., Kowluru, R. A. and Singh, L. P.**

bio038521

*penner1/g12* is required for the integrity of the photoreceptor layer in the zebrafish retina

**Kujawski, S., Sonawane, M. and Knust, E.**

bio041830

Actin cytoskeleton remodeling defines a distinct cellular function for adhesion G protein-coupled receptors ADGRL/latrophilins 1, 2 and 3  
**Cruz-Ortega, J. S. and Boucard, A. A.**

bio039826

Characterization and comparative analyses of transcriptomes of cloned and *in vivo* fertilized porcine pre-implantation embryos  
**He, X., Tan, C., Li, Z., Zhao, C., Shi, J., Zhou, R., Wang, X., Jiang, G., Cai, G., Liu, D. and Wu, Z.**

bio039917

The chromodomain helicase CHD4 regulates ERBB2 signaling pathway and autophagy in ERBB2<sup>+</sup> breast cancer cells  
**D'Alesio, C., Bellese, G., Gagliani, M. C., Lechiara, A., Dameri, M., Grasselli, E., Lanfranccone, L., Cortese, K. and Castagnola, P.**

bio038323

Transcriptomic analysis of *Spodoptera frugiperda* Sf9 cells resistant to *Bacillus thuringiensis* Cry1Ca toxin reveals that extracellular Ca<sup>2+</sup>, Mg<sup>2+</sup> and production of cAMP are involved in toxicity  
**Castella, C., Pauron, D., Hilliou, F., Trang, V. T., Zucchini-Pascal, N., Gallet, A. and Barbero, P.**

bio037085

Higher incubation temperatures produce long-lasting upward shifts in cold tolerance, but not heat tolerance, of hatchling geckos  
**Abayarathna, T., Murray, B. R. and Webb, J. K.**

bio042564

Prostaglandin E2 promotes embryonic vascular development and maturation in zebrafish

**Ugwuagbo, K. C., Maiti, S., Omar, A., Hunter, S., Nault, B., Northam, C. and Majumder, M.**

bio039768

Nematicidal actions of the marigold exudate  $\alpha$ -terthienyl: oxidative stress-inducing compound penetrates nematode hypodermis

**Hamaguchi, T., Sato, K., Vicente, C. S. L. and Hasegawa, K.**

bio038646

Dominant-negative inhibition of canonical Notch signaling in trophoblast cells does not disrupt placenta formation

**Shawber, C. J., Brown-Grant, D.-A., Wu, T., Kitajewski, J. K. and Douglas, N. C.**

bio037721

Motion characteristics of human roller skating

**Chen, J., Xu, K., Ma, H. and Ding, X. L.**

bio037713

Distinct gene-selective roles for a network of core promoter factors in *Drosophila* neural stem cell identity

**Neves, A. and Eisenman, R. N.**

bio042168

Effect of intracerebroventricular epinephrine microinjection on blood pressure and urinary sodium handling in gestational protein-restricted male adult rat offspring

**Cardoso, B. V., Custódio, A. H., Boer, P. A. and Gontijo, J. A. R.**

bio038562

## METHODS AND TECHNIQUES

Simultaneous expression of ClopHensor and SLC26A3 reveals the nature of endogenous oxalate transport in CHO cells

**Wasiluk, T., Roueinfar, M., Hiryak, K., Torsiello, M., Miner, A., Lee, J., Venditto, M., Terzaghi, W., Lucent, D. and VanWert, A. L.**

bio041665

## FIRST PERSON

First person – Theja Abayarathna

bio044032

First person – Judith S. Cruz Ortega

bio043778

First person – Kingsley Ugwuagbo and Sujit Maiti

bio043349