Evaluation of kalrn transcript levels in zebrafish seizure model

Marcela M. Simões (IC), Patrícia G. Barbalho (PQ), Cláudia V. Maurer-Morelli (PQ).

Abstract
Temporal transcript profile of kalrn gene in zebrafish larvae brain after pentylenetetrazole (PTZ)-induced seizure.

Key words: zebrafish, kalrn, seizure.

Introduction
Kalirin (kalrn) regulates neuronal shape and spine growth playing an important role in plasticity [1]. Besides, it has been implicated in some neurological diseases [2]. Today, there is no study associating the kalrn gene and seizures. We have been using the zebrafish seizure model for genetic investigations because its advantages in genetics studies. The main aim of this study was to investigate the kalrn mRNA levels in the zebrafish pentylenetetrazole (PTZ)-seizure model.

Results and Discussion
Our results showed no statistical difference in the kalrn mRNA levels between seizure group (SG) and control group (CG) after 24 and 48 hours of PTZ-induced seizure (images 1 and 2). The mean ± SEM of kalrn mRNA comparing SG and CG groups were the following: CG24h 0.85±0.14; SG24h 0.92±0.1 (p=0.5) and CG48h 1.00±0.03; SG48h 0.93±0.03 (p=0.1).

Conclusions
By investigating other time points of kalrn mRNA expression we may shed some light into the role of this gene and its relation with the mechanisms underlying plasticity in epilepsy.

Acknowledgement
I would like to greatly thank the patience and help of my supervisor Claudia Morelli, and also Patricia Barbalho and all members of zebrafish lab. Supported by: PIBIC-CNPq and BRAINCEPID/FAPESP, BRAZIL.


DOI: 10.19146/pibic-2015-37590