

Title: Mechanisms responsible for the retinal ganglion cell loss in zebrafish *stim2* knockout.

Supervisor: Professor Jacek Kuźnicki

Institute: International Institute of Molecular and Cell Biology in Warsaw

Laboratory: Laboratory of Neurodegeneration

www: <https://shorturl.at/lqmyp>

Project description:

Dysregulation of calcium homeostasis plays an important role in neurodegenerative processes including glaucoma however the mechanisms of cell loss is not known. In this study we will continue investigation how Stim2 deficiency in zebrafish triggers activation of microglia, and how this affects retinal ganglion cells (RGCs). We will use zebrafish lines with different fluorescent cells, cross them with *stim2* KO and analyze retina.

Aim:

The PhD thesis project aims to establish mechanism of retinal ganglion cells loss (RGCs) in zebrafish models.

Requirements:

- Master's degree in biology, biotechnology, biochemistry or related field
- Experience in maintaining, genotyping and working with *Danio rerio*
- Experience in cryosection and immunostaining of zebrafish
- Hands-on experience in molecular biology, cell biology, fluorescent and confocal microscopy
- Written and spoken fluency in English
- Willingness to learn and take new challenges, ability to work independently, analytical thinking
- Excellent interpersonal skills and a collaborative attitude

Number of positions available: 1

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