# INEZ BOSNYÁK



## **YEAR OF BIRTH**

1999

## FORMER SZENT-GYÖRGYI PUPIL

yes

## **RESEARCH UNIT**

University of Pécs

## SZENT-GYÖRGYI MENTOR

Dóra Reglődi

## JUNIOR MENTOR

Alexandra Atlaszné Váczy

## SPECIALIZATION

ophthalmology, neuroendocrinology, neuroscience

## **SECONDARY SCHOOL**

Nagy Lajos Grammar School of the Cistercian Order

## NAME OF TEACHER

Éva Mostbacher, Éva Csikyné Radnai, Zsolt Nyisztor

## LANGUAGES

English/intermadiate German/intermadiate National Academy of Scientist Education, Ph.D. 1st year

University of Pécs Doctoral School of Theoretical Medicine Ph.D. 1<sup>st</sup> year

# **IMPORTANCE, AIMS AND POSSIBLE OUTCOME OF RESEARCH**

The retina has very high oxygen consumption, so lack of oxygen supply can cause visual impairment. Hypoxia plays a key role in the pathogenesis of the most common vision-threatening diseases. Appropriate, side-effect free therapeutic options are not available to treat these conditions.

Hypoxic animal model is created by common carotid artery occlusion. Then we perform optical coherence tomography, electroretinography and molecular measurements.

Our aim is to find the most sensitive cell types and to understand the pathogenesis of ischemic retinopathy in time-dependent manner. Afterwards we would like to investigate the role of endogenous pituitary adenylate cyclase activating polypeptide (PACAP), which is a retinoprotective neuropeptide.

In summary, our aim is to understand the pathogenesis of ischemic retinopathy and to find new potential therapeutic targets.

# AMBITIONS AND CAREER GOALS

Our research group aims to understand the pathogenesis of various common retinal diseases and to find new potential therapeutic targets. In addition, we would like to investigate the role and protective effects of PACAP in these diseases. During my university years, I would like to master as many techniques as possible and improve professionally to become the best researcher/physician I can be.

# **HONORS AND PRIZES**

- 2023 University of Pécs, Student's Research Conference, 1<sup>st</sup> place, 2<sup>nd</sup> place and Special Award
- 2022 I. Romhányi György conference 1st place

# PUBLICATIONS

Koppan, M., Nagy, Zs., **Bosnyak, I.**, Reglodi, D. (2022) Female reproductive functions of the neuropeptide PACAP. **Front Endocrinol 13:** 982551.

Kiss, P., Farkas, J., Kovacs, K., Gaal, V., Biro Zs., Szabo, A., Atlasz, T., **Bosnyak I.**, Toth, G., Tamas, A., Reglodi, D. (2022) Effects of pituitary adenylate cyclase activating polypeptide (PACAP) in corneal epithelial regeneration and signal transduction in rats. **Int J Pept Res Ther 28**: 92.

Patko, E., Szabo, E., Toth, D., Tornocky, T., **Bosnyak, I.**, Vaczy, A., Atlasz, T., Reglodi, D. (2022) Distribution of PACAP and PAC1 receptor in the human eye. **J Mol Neurosci 72:** 2176–2187.