

Curriculum vitae

PERSONAL INFORMATION

Name: Balázs Pósfai
Nationality: Hungarian
Birth place, time: Budapest, 1991. 10. 03.
E-mail: posfai.balazs@tdk.koki.mta.hu
University: Semmelweis University,
Faculty of Medicine, Budapest



EDUCATION

2011- Semmelweis University, Faculty of Medicine, Budapest,
2006-2011 Baár-Madas Calvinistic High School, Budapest
2002-2006 Thomas Mann Gymnasium, Deutsche Schule Budapest, Budapest
1998-2002 Széchenyi István Elementary School, Budakeszi

Languages:

English advanced (C1)
German advanced (C1)

SCIENTIFIC WORK

Research experience

Laboratory: Workgroup of Quantitative Functional Anatomy,
Department of Cellular and Network Neurobiology,
Institute of Experimental Medicine,
Hungarian Academy of Sciences
Scientific topic: Functional anatomy of new subcortical ascending pathways and their
effect on the septohippocampal system
Supervisor: Dr. Gábor Nyiri

Scientific awards, scholarships

- 2016 Stephen W. Kuffler Research Scholarship
- 2015 XX. Scientific Forum of Korányi Frigyes, Budapest, II. Prize
- 2015 National Scientific Students' Associations Conference, Budapest, participation
- 2015 Annual Scientific Students' Associations Conference, Budapest, I. Prize
- 2015 Scholarship of the Hungarian Republic
- 2014 XIX. Scientific Forum of Korányi Frigyes, Budapest, III. Prize
- 2014 Annual Scientific Students' Associations Conference, Budapest, III. Prize
- 2014 Annual Scientific Students' Associations Conference, Budapest, II. Prize
- 2014 Scholarship of the Hungarian Republic
- 2013 XVIII. Scientific Forum of Korányi Frigyes, Budapest, III. Prize
- 2013 National Scientific Students' Associations Conference, Szeged, I. Prize
- 2013 Annual Scientific Students' Associations Conference, Budapest I. Prize

Conference attendance

- 2016 10th FENS Forum of Neuroscience, Copenhagen
(poster presentation)
- 2015 XV. Conference of the Hungarian Neuroscience Society, Budapest
(poster presentation)
- 2014 Hungarian Society for Microscopy, Annual Meeting, Siófok (presentation)
- 2014 From Medicine to Bionics 2nd European Ph.D. Conference, Budapest
(poster presentation)
- 2014 IBRO International Workshop, Debrecen (poster presentation)
- 2014 IBRO International Workshop, Debrecen (poster presentation)
- 2013 Annual Congress of the Hungarian Anatomical Society, Budapest
(poster presentation)
- 2013 XIV. Conference of the Hungarian Neuroscience Society, Budapest
(poster presentation)

Publications

B. Pósfai, C. Cserép, P. Hegedüs, E. Szabadits, DM. Otte, A. Zimmer, M. Watanabe, TF. Freund, G. Nyiri
Synaptic and cellular changes induced by the schizophrenia susceptibility gene G72 are rescued by N-acetylcysteine treatment.
Translational Psychiatry (2016) 6, e807; doi:10.1038/tp.2016.74
IF: 5.538

Research objectives

My interest in natural sciences dates back to elementary school, when I first faced the complexity and the beauty of the surrounding world. In high school I was lucky to have wholehearted and fascinating teachers in biology and chemistry, who helped me to choose the scientific path.

In the last year of high school, I was given the opportunity to join the Workgroup of Quantitative Functional Anatomy lead by Dr. Gábor Nyiri, at one of the leading neuroscience institutes, the Institute of Experimental Medicine lead by Prof. Tamás F. Freund. Since then, the main focus of my investigations is the hippocampal formation that plays an exceptional role in learning and memory processes and is known to be affected in a variety of neuropsychiatric disorders. Being a medical student interested in psychiatric disorders, the first project I was working on concerned a schizophrenia model mouse with specific genetic background. During the experiments, I learned to work alone and to take responsibility for this project. We found specific synaptic and cellular alterations in the dentate gyrus of the transgenic animals, which changes could be prevented by treatment with N-acetylcysteine. Our findings could be of clinical significance regarding the treatment of schizophrenia.

Lately, my interest turned towards the subcortical regulation of the septo-hippocampal system (SHS). Preliminary results in our workgroup revealed two new ascending pathways to the SHS, one of them glutamatergic, the other GABAergic. Our main aim for the upcoming years is to characterize the functional anatomy of these pathways. Using viral gene transfer and specific mouse lines, we can selectively label the cells of interest. During my studies, so far, I had the opportunity to practice and employ several different neuroanatomical techniques, like immunohistochemistry, confocal and super-resolution microscopy, electron microscopy and design-based stereological methods, which skills are required to carry out the desired experiments.

As a result of the fascinating years I spent at the institute, I am strongly determined to pursue a career in neuroscience and continue my work with similar motivation and commitment.