

Curriculum Vitae

Personal details:

Name: Judit Veres
Date and place of birth: 06.05.1986, Budapest
Nationality: Hungarian
Email: veres.judit@koki.hun-ren.hu

Studies:

2005 - 2010:
Eötvös Loránd Scientific University, Faculty of Science- Biology, Structural and Functional Biology, MSc

09.2009 - 01.2010:
Erasmus Scholarship: University of Valencia, Faculty of Biological Sciences

2010 - 2017:
Semmelweis University, János Szentágothai Neuroscience PhD School, Functional Neurosciences, PhD

2020-2021:
University of Szeged, Teacher of Biology, MEd

Languages:

-English (intermediate, Euro exam 2009)
-Spanish (intermediate, ITK exam 2010)
-Italian (intermediate, ITK exam 2003)

Research experience:

2006 - 2010: Undergraduate research assistant
Institute of Experimental Medicine of The Hungarian Academy of Sciences (IEM HAS),
Department of Cellular and Network Neurobiology, Laboratory of Network Neurophysiology
Main project: Mechanisms of gamma oscillation generation in the CA1 hippocampal region.
Supervisor: Dr. Norbert Hájos

09.2009 - 01.2010: Undergraduate research assistant
University of Valencia, Faculty of Biological Sciences, Department of Cellular Biology
Main project: Postsynaptic targets of the GABAergic basal forebrain projection to the basolateral amygdala in mice.
Supervisor: José Miguel Blasco-Ibañez

2010 - 2017: PhD student
IEM HAS, Department of Cellular and Network Neurobiology, Laboratory of Network Neurophysiology

Main project: Anatomical and electrophysiological properties of inhibitory connections in the basolateral amygdala.

Supervisor: Dr. Norbert Hájos

2017: postdoctoral researcher

Research Centre for Natural Sciences, Institute of Cognitive Neuroscience and Psychology,
Neuronal Network and Behavior Research Group

Main project: Thalamic signaling to the amygdala

2018- : postdoctoral researcher

Institute of Experimental Medicine, Department of Cellular and Network Neurobiology,
Laboratory of Network Neurophysiology

Main project: Basal amygdala and prefrontal cortex circuits

2022: Visiting Researcher

Indiana University, Bloomington, Department of Psychological and Brain Sciences.

Main project: Central amygdala interneurons

Skills:

- *in vitro* electrophysiology (extracellular field-, loose patch-, whole cell-, perforated patch-, axon bleb- and extracellular axonal recordings, pair and triplet recordings)
- imaging (multicellular somatic calcium imaging in slice preparations, STORM and confocal microscopy in fixed tissue, basic experience in two photon calcium imaging from boutons in slice preparations)
- optogenetics: virus injection, *in vitro* electrophysiological recordings from infected cells and their targets during ChR2 excitation with laser illumination
- histological techniques (immunofluorescence and immunohistochemistry)
- stereotaxic tracer injection for anatomical experiments
- intracardiac perfusion
- preparation of brain slices for *in vitro* recordings and anatomical experiments
- electrophysiological and anatomical data analysis (softwares: EVAN, Stimulog, Origin, Photoshop, ImageJ, Nikon Imaging Software, Huygens, Neurolucida)

Publications:

- Nagy-Pál P, **Veres JM**, Fekete Z, Karlócai MR, Weisz F, Barabás B, Reéb Z, Hájos N. Structural Organization of Perisomatic Inhibition in the Mouse Medial Prefrontal Cortex J Neurosci. 2023 Oct 18;43(42):6972-6987. doi: 10.1523/JNEUROSCI.0432-23.2023.
- **Veres JM**¹, Fekete Z¹, Müller K, Andrasi T, Rovira-Esteban L, Barabas B, Papp OI, Hájos N. Fear learning and aversive stimuli differentially change excitatory synaptic transmission in perisomatic inhibitory cells of the basal amygdala Front Cell Neurosci. 2023 Sep 5;17:1120338. doi: 10.3389/fncel.2023.1120338.
¹equal contribution

- **Veres JM**¹, Andrasi T¹, Nagy-Pal P, Hájos N
CaMKII α Promoter-Controlled Circuit Manipulations Target Both Pyramidal Cells and Inhibitory Interneurons in Cortical Networks
eNeuro, 2023 Apr 10;10(4):ENEURO.0070-23.2023. doi: 10.1523/ENEURO.0070-23.2023.
¹equal contribution
- Vereczki VK, Müller K, Krizsán É, Máté Z, Fekete Zs, Rovira-Esteban L, **Veres JM**, Erdélyi F, Hájos N
Total Number and Ratio of GABAergic Neuron Types in the Mouse Lateral and Basal Amygdala
J Neurosci, 2021 May 26;41(21):4575-4595.
- Barsy B, Kocsis K, Magyar A, Babiczky Á, Szabó M, **Veres JM**, Hillier D, Ulbert I, Yizhar O, Mátyás F
Associative and plastic thalamic signaling to the lateral amygdala controls fear behavior
Nature Neuroscience, 2020 May; 23(5):625-637
- Andrasi T¹, **Veres JM**¹, Rovira-Esteban L¹, Kozma R, Vikór A, Gregori E, Hájos N
Differential excitatory control of 2 parallel basket cell networks in amygdala microcircuits.
PLOS Biology, 2017, May 24.
¹equal contribution
- **Veres JM**, Nagy GA, Hájos N
Perisomatic GABAergic synapses of basket cells effectively control principal neuron activity in amygdala networks.
eLIFE, 2017, January 6.
- Vereczki VK¹, **Veres JM**¹, Müller K, Nagy GA, Rácz B, Barsy B, Hájos N
Synaptic organization of perisomatic GABAergic inputs onto the principal cells of the mouse basolateral amygdala.
Frontiers in Neuroanatomy, 2016, March 7, Volume 10, Article 20
¹equal contribution
- **Veres JM**, Nagy GA, Vereczki VK, Andrasi T, Hájos N
Strategically positioned inhibitory synapses of axo-axonic cells potently control principal neuron spiking in the basolateral amygdala.
J Neurosci. 2014 Dec 3;34(49):16194-206.
- Zemankovics R, **Veres JM**, Oren I, Hájos N
Feedforward inhibition underlies the propagation of cholinergically induced gamma oscillations from hippocampal CA3 to CA1.
J Neurosci. 2013 Jul 24;33(30):12337-51
- Holderith N, Németh B, Papp OI, **Veres JM**, Nagy GA, Hájos N
Cannabinoids attenuate hippocampal gamma oscillations by suppressing excitatory synaptic input onto CA3 pyramidal neurons and fast spiking basket cells.
Journal of Physiology 2011 Oct 15;589(Pt 20):4921-34.

- Cserép C, Szonyi A, **Veres JM**, Németh B, Szabadits E, de Vente J, Hájos N, Freund TF, Nyiri G
Nitric oxide signaling modulates synaptic transmission during early postnatal development.
Cerebral Cortex 2011 Sep;21(9):2065-74.