

## Imre Vida

Charité - Universitätsmedizin Berlin  
Institute for Integrative Anatomy  
Charitéplatz 1 | D-10117 Berlin  
Phone: +49 (0)30 450-528062  
E-mail: imre.vida@charite.de



### Curriculum vitae

- since 2011 Professor (W3), Neuroanatomy, Charité
- 2007 – 2011 Senior lecturer in Neuroscience, School of Life Sciences, University of Glasgow
- 2001 – 2006 Assistant Professor, Institute of Anatomy and Cell Biology, University of Freiburg
- 1996 – 2001 Postdoctoral research fellow (Advisor: Prof. M. Frotscher), Institute of Anatomy, University of Freiburg
- 1992 – 1996 PhD Studies, Pécs University Medical School, Hungary, and Oxford University, (Advisors: Drs G. Czéh, E. H. Buhl and P. Somogyi)
- 1986 – 1992 Studies in Medicine, Pécs University Medical School, Hungary

### Research fields

My primary scientific interest concerns the structure and function of hippocampal neuronal circuits and focuses on the following main specific themes:

- Anatomical, physiological, and functional diversity of GABAergic neurons
- Role of inhibition and inhibitory neurons in controlling and coordinating neuronal activity
- Connectivity and inhibitory interaction among GABAergic interneurons mediated by ionotropic and metabotropic receptors
- Generation and modulation of network oscillations under physiological and pathological conditions, particularly in epilepsy

### Activities in the scientific community, honors, awards

- 2010 Co-editor, “Hippocampal Microcircuits: A Computational Modelers’ Resource Book”, eds. V. Cutsuridis, S.R. Cobb, B.P. Graham, and I. Vida, Springer Verlag, published in February 2010.
- 2009 Guest editor of the special issue “Cortical microcircuits”, Neural Networks (eds: J.G. Taylor, V. Cutsuridis, B.P. Graham, I. Vida, T. Wennekers)
- since 2008 External member, Bernstein Center for Computational Neuroscience, Freiburg
- 1995 Research scholarship, National Science Research Fund, Hungary, at MRC Anatomical Neuropharmacology Unit, Oxford
- 1992 – 1993 Research scholarship of the Hungarian Academy of Sciences at the Institute of Physiology, Pécs University Medical School, Hungary
- 1998 Grastyán Award, Endre Grastyán Foundation, Pécs, Hungary

## Selected publications

Bartos, M, Alle, H and Vida, I. Role of microcircuit structure and input integration in hippocampal interneuron recruitment and plasticity. *Neuropharmacology*. 2011; 60, 730-9.

Sambandan, S, Sauer, JF, Vida, I and Bartos, M. Associative plasticity at excitatory synapses facilitates recruitment of fast-spiking interneurons in the dentate gyrus. *J Neurosci*. 2010; 30, 11826-37.

Kowalski, J, Geuting, M, Paul, S, Dieni, S, Laurens, J, Zhao, S, Drakew, A, Haas, CA, Frotscher, M and Vida, I. Proper layering is important for precisely timed activation of hippocampal mossy cells. *Cereb Cortex*. 2010; 20, 2043-54.

Dugladze, T, Vida, I, Tort, AB, Gross, A, Otahal, J, Heinemann, U, Kopell, NJ and Gloveli, T. Impaired hippocampal rhythmogenesis in a mouse model of mesial temporal lobe epilepsy. *Proc Natl Acad Sci U S A*. 2007; 104, 17530-5.

Bartos, M, Vida, I and Jonas, P. Synaptic mechanisms of synchronized gamma oscillations in inhibitory interneuron networks. *Nat Rev Neurosci*. 2007; 8, 45-56.

Vida, I, Bartos, M and Jonas, P. Shunting inhibition improves robustness of gamma oscillations in hippocampal interneuron networks by homogenizing firing rates. *Neuron*. 2006; 49, 107-17.

Kulik, A, Vida, I, Lujan, R, Haas, CA, Lopez-Bendito, G, Shigemoto, R and Frotscher, M. Subcellular localization of metabotropic GABA(B) receptor subunits GABA(B1a/b) and GABA(B2) in the rat hippocampus. *J Neurosci*. 2003; 23, 11026-35.

Bartos, M\*, Vida, I\*, Frotscher, M, Meyer, A, Monyer, H, Geiger, JR and Jonas, P. Fast synaptic inhibition promotes synchronized gamma oscillations in hippocampal interneuron networks. *Proc Natl Acad Sci U S A*. 2002; 99, 13222-7. | \* equal contribution

Vida, I and Frotscher, M. A hippocampal interneuron associated with the mossy fiber system. *Proc Natl Acad Sci U S A*. 2000; 97, 1275-80.

Martina, M, Vida, I and Jonas, P. Distal initiation and active propagation of action potentials in interneuron dendrites. *Science*. 2000; 287, 295-300.