

Peter Jonas CV

Personal Data

Date of Birth: May 10, 1961
Place of Birth: Darmstadt, Germany
Nationality: German

Education

1986 State exam and approbation, Human Medicine, University of Giessen, Germany
1987 MD in Physiology, University of Giessen, Germany (summa cum laude)
1992 Habilitation in Physiology, University of Heidelberg, Germany

Career History

1990 – 1994 Research Assistant at the Max Planck Institute for Medical Research, Department of Cell Physiology, Prof. Dr. Bert Sakmann, Heidelberg, Germany
1994 – 1995 Associate Professor, Technical University of Munich, at the Physiological Institute (department of Prof. Dr. Josef Dudel), Germany
1995 – 2010 Full Professor and Head of Department, University of Freiburg, at the Physiological Institute, Germany
1998, 2003 Sabbaticals at the Vollum Institute, OHSU, Portland, Oregon (laboratory of Prof. Dr. Gary Westbrook), USA
Since 2011 Full Professor and Founder of a Neuroscience Research Cluster, Institute of Science and Technology (IST) Austria, Klosterneuburg, Austria

Awards (5 most important)

1998, Max Planck Research Award for international cooperation; 2006, Gottfried Wilhelm Leibniz Award of the German Research Council; 2007, Tsungming Tu Award of the National Science Council of Taiwan; 2009, Adolf-Fick-Award of the Physicomeditical Society, Würzburg, Germany; 2011, ERC Advanced Grant

Invitations to present at conferences (5 most important)

2011, David Smith Lecture, Oxford, UK; 2011, Adrian Lecture, Cambridge, UK; 2013, Gordon Research Conference "Inhibition in the CNS", Les Diablerets, Switzerland; 2013, Gordon Research Conference "Excitatory Synapses and Brain Function", Les Diablerets, Switzerland, 2013, 10th biannual conference of the Chinese Neuroscience Society, Plenary Lecture, Beijing, China

Peer review activities, editorships, and/or memberships in academic organizations (5 most important)

1996–2003, Member of the Editorial Board of “The Journal of Physiology (London)”; 2002, Elected member of the National Academy of Sciences Leopoldina; 2001–2006, Member of the Editorial Board of “The Journal of Neuroscience”; 2007–present, Board of Reviewing Editors of the interdisciplinary journal “Science”; 2008, Elected member of the Academy of Sciences, Heidelberg

Peer-reviewed and funded research projects (5 most important as responsible PI)

1998–2001, Principal Investigator “Inhibitory synaptic signaling in interneuron networks”, Human Frontiers Science Program Organization Grant, USD 250,000; 2008–2011, Mechanisms of GABA release from synaptic terminals of inhibitory hippocampal interneurons, DFG, SFB780, 2008–2011, € 729,600; 2008–2012, Glutamatergic synaptic transmission and plasticity in hippocampal microcircuits, DFG, TR3, € 555,700; 2012–2016, Mechanisms of transmitter release at GABAergic synapses, FWF, 2012–2016, € 490,959 2011–2016, ERC Advanced Grant: Nanophysiology of fast-spiking, parvalbumin-expressing GABAergic interneurons, EU, € 2,500,000

Key international cooperation partners (last 5 years)

Nils Brose, Max Planck Institute of Experimental Medicine, Göttingen, Germany; Michael Frotscher, Center for Molecular Neurobiology Hamburg, Germany; Beat Schwaller, Universität Fribourg, Switzerland; Thomas C. Südhof, Stanford University, CA, USA; Gary Westbrook, Vollum Institute, Portland, OR, USA; Sam Young, Max Planck Florida, Jupiter, FL, USA

10 most important scientific publications

Jonas P, Racca C, Sakmann B, Seeburg PH, Monyer H. Differences in Ca²⁺ permeability of AMPA-type glutamate receptor channels in neocortical neurons caused by differential GluR-B subunit expression. *Neuron*. 1994 Jun;12(6):1281-9 (550 citations).

Geiger JRP, Melcher T, Koh DS, Sakmann B, Seeburg PH, **Jonas P**, Monyer H. Relative abundance of subunit mRNAs determines gating and Ca²⁺ permeability of AMPA receptors in principal neurons and interneurons in rat CNS. *Neuron*. 1995 Jul;15(1):193-204 (957 citations).

Jonas P, Bischofberger J, Sandkühler J. Corelease of two fast neurotransmitters at a central synapse. *Science*. 1998 Jul 17;281(5375):419-24 (632 citations).

Schmidt-Hieber C, **Jonas P**, Bischofberger J. Enhanced synaptic plasticity in newly generated granule cells of the adult hippocampus. *Nature*. 2004 May 13;429(6988):184-7 (769 citations).

- Hefft S, **Jonas P**. Asynchronous GABA release generates long-lasting inhibition at a hippocampal interneuron–principal neuron synapse. *Nat Neurosci*. 2005 Oct;8(10):1319-28 (313 citations).
- Bartos M, Vida I, **Jonas P**. Synaptic mechanisms of synchronized gamma oscillations in inhibitory interneuron networks. *Nat Rev Neurosci*. 2007 Jan;8(1):45-56 (859 citations).
- Hu H, Martina M, **Jonas P**. Dendritic mechanisms underlying rapid synaptic activation of fast-spiking hippocampal interneurons. *Science*. 2010 Jan 1;327(5961):52-8. doi: 10.1126/science.1177876 (99 citations).
- Pernía-Andrade AJ, **Jonas P**. Theta–gamma modulated synaptic currents in hippocampal granule cells *in vivo* define a mechanism for network oscillations. *Neuron*. 2014 Jan 8;81(1):140-52. doi: 10.1016/j.neuron.2013.09.046 (19 citations).
- Vyleta NP, **Jonas P**. Loose coupling between Ca²⁺ channels and release sensors at a plastic hippocampal synapse. *Science*. 2014 Feb 7;343(6171):665-70. doi: 10.1126/science.1244811 (20 citations).
- Hu H, **Jonas P**. A supercritical density of Na⁺ channels ensures fast signaling in GABAergic interneuron axons. *Nat Neurosci*. 2014 May;17(5):686-93. doi: 10.1038/nn.3678 (13 citations).