

ORIGINAL PUBLICATIONS

1. Koppensteiner P, Bhandari P, Önal C, Borges-Merjane C, Le Monnier E, Roy U, Nakamura Y, Sadakata T, Sanbo M, Hirabayashi M, Rhee J, Brose N, **Jonas P**, Shigemoto, R (2024). GABA_B receptors induce phasic release from medial habenula terminals through activity-dependent recruitment of release-ready vesicles. PNAS, provisionally accepted.
2. Chen J-J, Kaufmann WA, Chen, C, Arai, I, Kim, O., Shigemoto R, and **Jonas P** (2024). Developmental transformation of Ca²⁺ channel-vesicle nanotopography at a central GABAergic synapse. Neuron, accepted for publication.
3. Michalska JM, Lyudchik J, Velicky P, Štefaničková H, Watson JF, Cenameri A, Sommer C, Amberg N, Venturino A, Roessler K, Czech T, Höftberger R, Siegert S, Novarino G, **Jonas P**, Danzl JG (2023) Imaging brain tissue architecture across millimeter to nanometer scales. Nat Biotechnol. doi: 10.1038/s41587-023-01911-8. Epub ahead of print.
4. Velicky P, Miguel E, Michalska JM, Lyudchik J, Wei D, Lin Z, Watson JF, Troidl J, Beyer J, Ben-Simon Y, Sommer C, Jahr W, Cenameri A, Broichhagen J, Grant SGN, **Jonas P**, Novarino G, Pfister H, Bickel B, Danzl JG (2023) Dense 4D nanoscale reconstruction of living brain tissue. Nat Methods 20, 1256–1265.
5. Rothman JS, Borges-Merjane C, Holderith N, **Jonas P**, Silver RA (2023). Validation of a stereological method for estimating particle size and density from 2D projections with high accuracy. PLOS One 18, e0277148.
6. Sumser A, Joesch M, **Jonas P**, Ben-Simon Y (2022). Fast, high-throughput production of improved rabies viral vectors for specific, efficient and versatile transsynaptic retrograde labeling. eLife 11, e79848.
7. Ben-Simon Y, Kaefer K, Velicky P, Csicsvari J, Danzl JG, **Jonas P** (2022). A direct excitatory projection from entorhinal layer 6b neurons to the hippocampus contributes to spatial coding and memory. Nature Communications 13, 4826.
8. Guzman SJ, Schlögl A, Espinoza C, Zhang X, Suter BA, **Jonas P** (2021) How connectivity rules and synaptic properties shape the efficacy of pattern separation in the entorhinal cortex–dentate gyrus–CA3 network. Nature Computational Science 1, 830–842 [News and Views by Aertsen A, Nature Computational Science 1, 782–783].
9. Vandael D, Okamoto Y, **Jonas P** (2021) Transsynaptic modulation of presynaptic short-term plasticity in hippocampal mossy fiber synapses. Nature Communications 12, 2912 [Editor's highlights].

PUBLICATIONS PETER JONAS

10. Bhandari P, Vandael D, Fernández-Fernández D, Fritzius T, Kleindienst D, Montanaro J, Gassmann M, **Jonas P**, Kulik A, Bettler B, Shigemoto R, Koppensteiner P (2021) GABAB receptor auxiliary subunits modulate Cav2.3-mediated release from medial habenula terminals. *eLife* 10, e68274.
11. Vandael D, Okamoto Y, Borges-Merjane C, Vargas Barroso V, Suter BA, **Jonas P** (2021) Subcellular patch-clamp techniques for single-bouton stimulation and simultaneous pre- and postsynaptic recording at cortical synapses. *Nature Protocols* 16, 2947–2967.
12. Zhang X, Schlögl A, Vandael D, **Jonas P** (2021) MOD: A novel machine-learning optimal-filtering method for accurate and efficient detection of subthreshold synaptic events *in vivo*. *J Neurosci Methods* 357, 109125.
13. Zhang X, Schlögl A, **Jonas P** (2020) Selective routing of spatial information flow from input to output in hippocampal granule cells. *Neuron* 107, 1212–1225 [Faculty Opinions recommendation].
14. Vandael D, Borges-Merjane C, Zhang X, **Jonas P** (2020) Short-term plasticity at hippocampal mossy fiber synapses is induced by natural activity patterns and associated with vesicle pool engram formation. *Neuron* 107, 509–521.e7 [Editor's choice, Science; Perspective by Vargish GA, McBain CJ (2020) *Neuron* 107, 395–396].
15. Borges-Merjane C, Kim OS, **Jonas P** (2020) Functional electron microscopy, “flash and freeze”, in identified cortical synapses in acute brain slices. *Neuron* 105, 992–1006. [Cover Article].
16. Espinoza C, Guzman SJ, Zhang X, **Jonas P** (2018) Parvalbumin⁺ interneurons obey unique connectivity rules and establish a powerful lateral-inhibition microcircuit in dentate gyrus. *Nature Communications* 9, 4605 [recommended by Faculty of 1000 Prime].
17. Hu H, Roth FC, Vandael D, **Jonas P** (2018) Complementary tuning of Na⁺ and K⁺ channel gating underlies fast and energy-efficient action potentials in GABAergic interneuron axons. *Neuron* 98, 156–165.
18. Chen C, Satterfield R, Young SM Jr, **Jonas P** (2017) Triple function of synaptotagmin 7 ensures efficiency of high-frequency transmission at central GABAergic synapses. *Cell Rep* 21, 2082–2089.
19. Strüber M, **Jonas P**, Bartos M (2017) Distance-dependent inhibition facilitates focality of gamma oscillations in the dentate gyrus *Nature Communications* 8, 758.

PUBLICATIONS PETER JONAS

20. Chen C, Arai I, Satterfield R, Young SM Jr, **Jonas P** (2017) Synaptotagmin 2 is the fast Ca^{2+} sensor at a central inhibitory synapse. *Cell Rep* 18, 723–736.
21. Gan J, Weng S-m, Pernía-Andrade AJ, Csicsvari J, **Jonas P** (2017) Phase-locked inhibition, but not excitation, underlies hippocampal ripple oscillations in awake mice *in vivo*. *Neuron* 93, 308–314.
22. Vyleta NP, Borges-Merjane C, **Jonas P** (2016) Plasticity-dependent, full detonation at hippocampal mossy fiber–CA3 pyramidal neuron synapses. *Elife* 5, e17977.
23. Guzman SJ, Schlögl A, Frotscher M, **Jonas P** (2016) Synaptic mechanisms of pattern completion in the hippocampal CA3 network. *Science* 353, 1117–1123 [This week in Science].
24. Mishra RK, Kim S, Guzman SJ, **Jonas P** (2016) Symmetric spike timing-dependent plasticity at CA3–CA3 synapses optimizes storage and recall in autoassociative networks. *Nature Communications* 7, 11552.
25. Kowalski J, Gan J, **Jonas P**, Pernía-Andrade AJ (2016) Intrinsic membrane properties determine hippocampal differential firing pattern *in vivo* in anesthetized rats. *Hippocampus* 26, 668–682.
26. Hammer M, Krueger-Burg D, Tuffy LP, Cooper BH, Taschenberger H, Goswami SP, Ehrenreich H, **Jonas P**, Varoqueaux F, Rhee JS, Brose N (2015) Perturbed hippocampal synaptic inhibition and γ -oscillations in a neuroligin-4 knockout mouse model of autism. *Cell Rep* 13, 516–523.
27. Strüber M, **Jonas P**, Bartos M (2015) Strength and duration of perisomatic GABAergic inhibition depend on distance between synaptically connected cells. *Proc Natl Acad Sci USA* 112, 1220–1225.
28. Arai I, **Jonas P** (2014) Nanodomain coupling explains Ca^{2+} independence of transmitter release time course at a fast central synapse. *Elife* 3, e04057.
29. Hu H, **Jonas P** (2014) A supercritical density of Na^+ channels ensures fast signaling in GABAergic interneuron axons. *Nature Neuroscience* 17, 686–693.
30. Studer D, Zhao S, Chai X, **Jonas P**, Graber W, Nestel S, Frotscher M (2014). Capture of activity-induced ultrastructural changes at synapses by high-pressure freezing of brain tissue. *Nature Protocols* 9, 1480–1495.
31. Vyleta NP, **Jonas P** (2014). Loose coupling between Ca^{2+} channels and release sensors at a plastic hippocampal synapse. *Science* 343, 665–670.

PUBLICATIONS PETER JONAS

32. Pernía-Andrade AJ, **Jonas P** (2014) Theta–gamma modulated synaptic currents in hippocampal granule cells *in vivo* define a mechanism for network oscillations. *Neuron* 81, 140–152.
33. Hosp JA, Strüber M, Vida I, Yanagawa Y, Obata K, **Jonas P**, Bartos M (2014) Morpho-physiological criteria divide dentate gyrus interneurons into classes. *Hippocampus* 24, 189–203.
34. Pernia-Andrade AJ, Goswami SP, Stickler Y, Fröbe U, Schlögl A, **Jonas P** (2012) A deconvolution-based method with high sensitivity and temporal resolution for detection of spontaneous synaptic currents in vitro and in vivo. *Biophys J* 103, 1429–1439.
35. Goswami SP, Bucurenciu I, **Jonas, P** (2012) Miniature IPSCs in hippocampal granule cells are triggered by voltage-gated Ca²⁺ channels via microdomain coupling. *J Neurosci* 32, 14294–14304.
36. Kim S, Guzman SJ, Hu H, **Jonas P** (2012) Active dendrites support efficient initiation of dendritic spikes in hippocampal CA3 pyramidal neurons. *Nature Neuroscience* 15, 600–606.
37. Eggermann E, **Jonas P** (2012) How the “slow” Ca²⁺ buffer parvalbumin affects transmitter release in nanodomain coupling regimes at GABAergic synapses. *Nature Neuroscience* 15, 20–22.
38. Nörenberg A, Hu H, Vida I, Bartos M, **Jonas P** (2010) Distinct non-uniform cable properties optimize rapid and efficient activation of fast-spiking GABAergic interneurons. *Proc Natl Acad Sci USA* 107, 894–899.
39. Bucurenciu I, Bischofberger J, **Jonas P** (2010) A small number of open Ca²⁺ channels trigger transmitter release at a central GABAergic synapse. *Nature Neuroscience* 13, 19–21.
40. Hu H, Martina M, **Jonas P** (2010) Dendritic mechanisms underlying rapid synaptic activation of fast-spiking hippocampal interneurons. *Science* 327, 52–58 [“Must read” according to Faculty of 1000 Biology].
41. Schwenk J, Harmel N, Zolles G, Bildl W, Kulik A, Heimrich B, Chisaka O, **Jonas P**, Schulte U, Fakler B, Klöcker N (2009) Functional proteomics identify *Cornichon* proteins as auxiliary subunits of AMPA receptors. *Science* 323, 1313–1319 [see comment by Tigaret C, Choquet D (2009) *Science* 323, 1295–1296]
42. Doischer D, Hosp JA, Yanagawa Y, Obata K, **Jonas P**, Vida I, Bartos M (2008) Postnatal differentiation of basket cells from slow to fast signaling devices. *J Neurosci* 28, 12956–12968.

PUBLICATIONS PETER JONAS

43. Kerr AM, Reisinger E, **Jonas P** (2008) Differential dependence of phasic transmitter release on synaptotagmin 1 at GABAergic and glutamatergic hippocampal synapses. *Proc Natl Acad Sci USA* 105, 15581–15586.
44. Aponte Y, Bischofberger J, **Jonas P** (2008) Efficient Ca²⁺ buffering in fast-spiking basket cells of rat hippocampus. *J Physiol (Lond)* 586, 2061–2075 [see comment by Neher E (2008) *J Physiol (Lond)* 586, 2031].
45. Schmidt-Hieber C, **Jonas P**, Bischofberger J (2008) Action potential initiation and propagation in hippocampal mossy fibre axons. *J Physiol (Lond)* 586, 1849–1857.
46. Bucurenciu I, Kulik A, Schwaller B, Frotscher M, **Jonas P** (2008) Nanodomain coupling between Ca²⁺ channels and Ca²⁺ sensors promotes fast and efficient transmitter release at a cortical GABAergic synapse. *Neuron* 57, 536–545 [“Must read” according to Faculty of 1000 Biology].
47. Li L, Bischofberger J, **Jonas P** (2007) Differential gating and recruitment of P/Q-, N-, and R-type Ca²⁺ channels in hippocampal mossy fiber boutons. *J Neurosci* 27, 13420–13429.
48. Rollenhagen A, Sätzler K, Rodríguez EP, **Jonas P**, Frotscher M, Lübke JHR (2007) Structural determinants of transmission at large hippocampal mossy fiber synapses. *J Neurosci* 27, 10434–10444.
49. Schmidt-Hieber C, **Jonas P**, Bischofberger J (2007) Subthreshold dendritic signal processing and coincidence detection in dentate gyrus granule cells. *J Neurosci* 27, 8430–8441.
50. Bischofberger J, Engel D, Li L, Geiger JRP, **Jonas P** (2006) Patch-clamp recording from mossy fiber terminals in hippocampal slices. *Nature Protocols* 1, 2075–2081.
51. Aponte Y, Lien CC, Reisinger E, **Jonas P** (2006) Hyperpolarization-activated cation channels in fast-spiking interneurons of rat hippocampus. *J Physiol (Lond)* 574, 229–243 [see comment by Debanne D, Gastrein P, Campanac E (2006) *J Physiol (Lond)* 574, 2].
52. Vida I, Bartos M, **Jonas P** (2006) Shunting inhibition improves robustness of gamma oscillations in hippocampal interneuron networks by homogenizing firing rates. *Neuron* 49, 107–117 [see comment by Mann EO, Paulsen O (2006) *Neuron* 49, 8–9].
53. Hefft S, **Jonas P** (2005) Asynchronous GABA release generates long-lasting inhibition at a hippocampal interneuron–principal neuron synapse. *Nature Neuroscience* 8, 1319–1328 [see comment by Hestrin S, Galarreta M (2005) *Nature Neuroscience* 8, 1283–1284].

PUBLICATIONS PETER JONAS

54. Engel D, **Jonas P** (2005) Presynaptic action potential amplification by voltage-gated Na⁺ channels in hippocampal mossy fiber boutons. *Neuron* 45, 405–417 [see comment by Pelkey KA, McBain CJ (2005) *Neuron* 45, 327–329].
55. Schmidt-Hieber C, **Jonas P**, Bischofberger J (2004) Enhanced synaptic plasticity in newly generated granule cells of the adult hippocampus. *Nature* 429, 184–187.
56. Oliver D, Lien C-C, Soom M, Baukowitz T, **Jonas P**, Fakler B (2004) Functional conversion between A-type and delayed rectifier K⁺ channels by membrane lipids. *Science* 304, 265–270 [see comment by Hilgemann DW (2004) *Science* 304, 223–224].
57. Kampa BM, Clements J, **Jonas P**, Stuart GJ (2004) Kinetics of Mg²⁺ unblock of NMDA receptors: Implications for spike-timing dependent synaptic plasticity. *J Physiol (Lond)* 556, 337–345.
58. Hallermann S, Pawlu C, **Jonas P***, Heckmann M (2003) A large pool of releasable vesicles in a cortical glutamatergic synapse. *Proc Natl Acad Sci USA* 100, 8975–8980. [see comment by Kushmerick C, von Gersdorff H (2003) *Proc Natl Acad Sci USA* 100, 8618–8620]. * = corresponding author.
59. Lien CC, **Jonas P** (2003) Kv3 potassium conductance is necessary and kinetically optimized for high-frequency action potential generation in hippocampal interneurons. *J Neurosci* 23, 2058–2068.
60. Bischofberger J, Geiger JRP, **Jonas P** (2002) Timing and efficacy of Ca²⁺ channel activation in hippocampal mossy fiber boutons. *J Neurosci* 22, 10593–10602.
61. Bartos M, Vida I, Frotscher M, Meyer A, Monyer H, Geiger JRP, **Jonas P** (2002) Fast synaptic inhibition promotes synchronized gamma oscillations in hippocampal interneuron networks. *Proc Natl Acad Sci USA* 99, 13222–13227.
62. Hefft S, Kraushaar U, Geiger JRP, **Jonas P** (2002) Presynaptic short-term depression is maintained during regulation of transmitter release at a GABAergic synapse in rat hippocampus. *J Physiol (Lond)* 539, 201–208.
63. Lien CC, Martina M, Schultz JH, Ehmke H, **Jonas P** (2002) Gating, modulation and subunit composition of voltage-gated K⁺ channels in dendritic inhibitory interneurons of rat hippocampus. *J Physiol (Lond)* 538, 405–419.

PUBLICATIONS PETER JONAS

64. Geiger JRP, Bischofberger J, Vida I, Fröbe U, Pfitzinger S, Weber HJ, Haverkamp K, **Jonas P** (2002) Patch-clamp recording in brain slices with improved slicer technology. *Pflügers Arch* 443, 491–501.
65. Alle H, **Jonas P**, Geiger JRP (2001) PTP and LTP at a hippocampal mossy fiber-interneuron synapse. *Proc Natl Acad Sci USA* 98, 14708–14713.
66. Jerecic J, Schulze CH, **Jonas P**, Sprengel R, Seeburg PH, Bischofberger J (2001) Impaired NMDA receptor function in mouse olfactory bulb neurons by tetracycline-sensitive NR1 (N598R) expression. *Mol Br Res* 94, 96–104.
67. Jones MV, **Jonas P**, Sahara Y, Westbrook GL (2001) Microscopic kinetics and energetics distinguish GABA_A receptor agonists from antagonists. *Biophys J* 81, 2660–2670.
68. Bartos M, Vida I, Frotscher M, Geiger JRP, **Jonas P** (2001) Rapid signaling at inhibitory synapses in a dentate gyrus interneuron network. *J Neurosci* 21, 2687–2698.
69. Geiger JRP, **Jonas P** (2000) Dynamic control of presynaptic Ca²⁺ inflow by fast-inactivating K⁺ channels in hippocampal mossy fiber boutons. *Neuron* 28, 927–939.
70. Martina M, Vida I, **Jonas P** (2000) Distal initiation and active propagation of action potentials in interneuron dendrites. *Science* 287, 295–300 [see comment by Miles R (2000) *Science* 287, 244–246].
71. Normann C, Peckys D, Schulze CH, Walden J, **Jonas P**, Bischofberger J (2000) Associative long-term depression in the hippocampus is dependent on postsynaptic N-type Ca²⁺ channels. *J Neurosci* 20, 8290–8297.
72. Kraushaar U, **Jonas P** (2000) Efficacy and stability of quantal GABA release at a hippocampal interneuron-principal neuron synapse. *J Neurosci* 20, 5594–5607.
73. Martina M, Schultz JH, Ehmke H, Monyer H, **Jonas P** (1998) Functional and molecular differences between voltage-gated K⁺ channels of fast-spiking interneurons and pyramidal neurons of rat hippocampus. *J Neurosci* 18, 8111–8125.
74. **Jonas P**, Bischofberger J, Sandkühler J (1998) Corelease of two fast neurotransmitters at a central synapse. *Science* 281, 419–424 [see comment by Nicoll RA, Malenka RC (1998) *Science* 281, 360–361].
75. Bischofberger J, **Jonas P** (1997) Action potential propagation into the presynaptic dendrites of rat mitral cells. *J Physiol (Lond)* 504, 359–365.

PUBLICATIONS PETER JONAS

76. Martina M, **Jonas P** (1997) Functional differences in Na⁺ channel gating between fast-spiking interneurons and principal neurons in rat hippocampus. *J Physiol (Lond)* 505, 593–603.
77. Geiger JRP, Lübke J, Roth A, Frotscher M, **Jonas P** (1997) Submillisecond AMPA receptor-mediated signaling at a principal neuron-interneuron synapse. *Neuron* 18, 1009–1023.
78. Ceranik K, Bender R, Geiger JRP, Monyer H, **Jonas P**, Frotscher M, Lübke J (1997) A novel type of GABAergic interneuron connecting the input and the output regions of the hippocampus. *J Neurosci* 17, 5380–5394.
79. Götz T, Kraushaar U, Geiger J, Lübke J, Berger T, **Jonas P** (1997) Functional properties of AMPA and NMDA receptors expressed in identified types of basal ganglia neurons. *J Neurosci* 17, 204–215.
80. Koh DS, Burnashev N, **Jonas P** (1995) Block of native Ca²⁺-permeable AMPA receptors in rat brain by intracellular polyamines generates double rectification. *J Physiol (Lond)* 486, 305–312.
81. Geiger JRP, Melcher T, Koh DS, Sakmann B, Seeburg PH, **Jonas P***, Monyer H (1995) Relative abundance of subunit mRNAs determines gating and Ca²⁺ permeability of AMPA receptors in principal neurons and interneurons in rat CNS. *Neuron* 15, 193–204. * = corresponding author.
82. Koh DS, Geiger JRP, **Jonas P**, Sakmann B (1995) Ca²⁺-permeable AMPA and NMDA receptor channels in basket cells of rat hippocampal dentate gyrus. *J Physiol (Lond)* 485, 383–402.
83. Spruston N, **Jonas P**, Sakmann B (1995) Dendritic glutamate receptor channels in rat hippocampal CA3 and CA1 pyramidal neurons. *J Physiol (Lond)* 482, 325–352.
84. **Jonas P**, Racca C, Sakmann B, Seeburg PH, Monyer H (1994) Differences in Ca²⁺ permeability of AMPA-type glutamate receptor channels in neocortical neurons caused by differential GluR-B subunit expression. *Neuron* 12, 1281–1289.
85. Major G, Larkman AU, **Jonas P**, Sakmann B, Jack JJB (1994) Detailed passive cable models of whole-cell recorded CA3 pyramidal neurons in rat hippocampal slices. *J Neurosci* 14, 4613–4638.
86. Koh DS, **Jonas P**, Vogel W (1994) Na⁺-activated K⁺ channels localized in the nodal region of myelinated axons of *Xenopus*. *J Physiol (Lond)* 479, 183–197.

PUBLICATIONS PETER JONAS

87. **Jonas P**, Major G, Sakmann B (1993) Quantal components of unitary EPSCs at the mossy fibre synapse on CA3 pyramidal cells of rat hippocampus. *J Physiol (Lond)* 472, 615–663.
88. Ruppertsberg JP, Ermler M, Knopf M, Kues W, **Jonas P**, Koenen M (1993) Properties of *Shaker*-homologous potassium channels expressed in the mammalian brain. *Cell Physiol Biochem* 3, 250–269.
89. Koh DS, **Jonas P**, Bräu ME, Vogel W (1992) A TEA-insensitive flickering potassium channel active around the resting potential in myelinated nerve. *J Membrane Biol* 130, 149–162.
90. Colquhoun D, **Jonas P**, Sakmann B (1992) Action of brief pulses of glutamate on AMPA/kainate receptors in patches from different neurones of rat hippocampal slices. *J Physiol (Lond)* 458, 261–287.
91. **Jonas P**, Sakmann B (1992) Glutamate receptor channels in isolated patches from CA1 and CA3 pyramidal cells of rat hippocampal slices. *J Physiol (Lond)* 455, 143–171.
92. Burnashev N, Khodorova A, **Jonas P**, Helm PJ, Wisden W, Monyer H, Seeburg PH, Sakmann B (1992) Calcium-permeable AMPA-kainate receptors in fusiform cerebellar glial cells. *Science* 256, 1566–1570.
93. **Jonas P**, Koh DS, Kampe K, Hermsteiner M, Vogel W (1991) ATP-sensitive and Ca-activated K channels in vertebrate axons: novel links between metabolism and excitability. *Pflügers Arch* 418, 68–73.
94. Bräu ME, Dreyer F, **Jonas P**, Repp H, Vogel W (1990) A K⁺ channel in *Xenopus* nerve fibres selectively blocked by bee and snake toxins: binding and voltage-clamp experiments. *J Physiol (Lond)* 420, 365–385.
95. **Jonas P**, Bräu ME, Hermsteiner M, Vogel W (1989) Single-channel recording in myelinated nerve fibers reveals one type of Na channel but different K channels. *Proc Natl Acad Sci USA* 86, 7238–7242.
96. **Jonas P** (1989) Temperature dependence of gating current in myelinated nerve fibers. *J Membrane Biol* 112, 277–289.
97. **Jonas P**, Vogel W, Arantes EC, Giglio JR (1986) Toxin γ of the scorpion *Tityus serrulatus* modifies both activation and inactivation of sodium permeability of nerve membrane. *Pflügers Arch* 407, 92–99.

REVIEWS, PERSPECTIVES

1. Zhang X, **Jonas P** (2020) Integration of spatial and non-spatial information by heterogeneous dentate gyrus granule cells. *J Life Sci* 2, 19-24.
2. Chen C, **Jonas P** (2017) Synaptotagmins: That's why so many. *Neuron* 94, 694–696.
3. Vandael DHF, Espinoza C, **Jonas P** (2015) Excitement about inhibitory presynaptic terminals. *Neuron* 85, 1149–1151.
4. **Jonas P**, Lisman J (2014) Structure, function, and plasticity of hippocampal dentate gyrus microcircuits. *Front Neural Circuits* 8, 107.
5. Hu H, Gan J, **Jonas P** (2014) Fast-spiking, parvalbumin⁺ GABAergic interneurons: From cellular design to microcircuit function. *Science* 345, DOI: 10.1126/science.1255263.
6. Eggermann E, Bucurenciu I, Goswami SP, **Jonas P** (2012) Nanodomain coupling between Ca²⁺ channels and sensors of exocytosis at fast mammalian synapses. *Nature Reviews Neuroscience* 13, 7–21 [Featured Article].
7. Pernía-Andrade A, **Jonas P** (2011) The multiple faces of RIM. *Neuron* 69, 185–187.
8. Guzman SJ, **Jonas P** (2010) Beyond TARPs: the growing list of auxiliary AMPAR subunits. *Neuron* 66, 8–10.
9. **Jonas P**, Hefft S (2010) GABA release at terminals of CCK-interneurons: synchrony, asynchrony, and modulation by cannabinoid receptors. *Eur J Neurosci* 31, 1194–1195.
10. Kerr AM, **Jonas P** (2008) The two sides of hippocampal mossy fiber plasticity. *Neuron* 57, 5–7.
11. Bartos M, Vida I, **Jonas P** (2007) Synaptic mechanisms of synchronized gamma oscillations in inhibitory interneuron networks. *Nature Reviews Neuroscience* 8, 45–56.
12. Frotscher M, Jonas P, Sloviter R (2006) Synapses formed by normal and abnormal hippocampal mossy fibers. *Cell Tissue Res* 326, 361–367.
13. Bischofberger J, Engel D, Frotscher M, **Jonas, P** (2006) Mechanisms underlying the efficacy of transmitter release at mossy fiber synapses in the hippocampal network. *Pflügers Arch Eur J Physiol* 453, 361–372.

PUBLICATIONS PETER JONAS

14. **Jonas P**, Bischofberger J, Fricker D, Miles R (2004) Interneuron diversity series: Fast in, fast out - temporal and spatial signal processing in hippocampal interneurons. *TINS* 27, 30–40.
15. Bischofberger J, **Jonas P** (2002) TwoB or not TwoB: differential transmission at glutamatergic mossy fiber-interneuron synapses in the hippocampus. *TINS* 25, 600–603.
16. **Jonas P** (2000) The time course of signaling at central glutamatergic synapses. *NIPS* 15, 83–89.
17. Melcher T, Geiger JRP, **Jonas P**, Monyer H (1996) Analysis of molecular determinants in native AMPA receptors. *Neurochem Int* 28, 141–144.
18. **Jonas P**, Burnashev N (1995) Molecular mechanisms controlling calcium entry through AMPA-type glutamate receptor channels. *Neuron* 15, 987–990.
19. **Jonas P**, Spruston N (1994) Mechanisms shaping glutamate-mediated excitatory postsynaptic currents in the CNS. *Curr Opin Neurobiol* 4, 366–372.

BOOK ARTICLES

1. **Jonas P** (2019) Aktionspotential: Fortleitung im Axon. In: *Physiologie des Menschen* (Brandes R, Lang F, Schmidt RF, eds). Heidelberg:Springer-Verlag.
2. B. Fakler, **Jonas P** (2010) Grundlagen zellulärer Erregbarkeit. In: *Physiologie des Menschen* (Schmidt RF, Heckmann M, Lang F eds). Heidelberg:Springer-Verlag.
3. **Jonas P**, Unsicker K (2003) Molekulare und zelluläre Grundlagen des Nervensystems. In: *Lehrbuch vor klinische Medizin* (Schmidt RF, Unsicker K, eds). Köln:Deutscher Ärzte-Verlag.
4. Geiger JRP, Roth A, Taskin B, **Jonas P** (1999) Glutamate-mediated synaptic excitation of cortical interneurons. In: *Handbook of experimental pharmacology* Vol. 141 (Jonas P, Monyer H, eds), pp. 363–398. Berlin:Springer Verlag.
5. Monyer H, **Jonas P**, Rossier J (1999) Molecular determinants controlling functional properties of AMPARs and NMDARs in the mammalian CNS. In: *Handbook of experimental pharmacology* Vol. 141 (Jonas P, Monyer H, eds), pp. 309–339. Berlin:Springer Verlag.

PUBLICATIONS PETER JONAS

6. Catania MV, Weishaupt J, Melcher T, Geiger JRP, **Jonas P**, Monyer H (1996). Glutamate receptor subunit composition in principal neurons and interneurons of the central nervous system. In: Excitatory amino acids and the cerebral cortex (F Conti, TP Hicks, eds), pp. 45–52. Cambridge MA:MIT press.
7. **Jonas P** (1995) Fast application of agonists to isolated membrane patches. In: Single-channel recording (Sakmann B, Neher E, eds), pp. 231–243. New York:Plenum.
8. Monyer H, **Jonas P** (1995) Polymerase chain reaction analysis of ion channel expression in single neurons of brain slices. In: Single-channel recording (Sakmann B, Neher E, eds), pp. 357–373. New York:Plenum.
9. von Kitzing E, **Jonas P**, Sakmann B (1994) Quantal analysis of excitatory postsynaptic currents at the hippocampal mossy fiber-CA3 pyramidal cell synapse. In: Molecular and cellular mechanisms of neurotransmitter release, pp. 235–260. New York:Raven Press.
10. **Jonas P** (1993) AMPA-type glutamate receptors - nonselective cation channels mediating fast excitatory transmission in the CNS. In: Nonselective cation channels: Pharmacology, Physiology and Biophysics, pp. 61–76. Basel:Birkhäuser Verlag.
11. **Jonas P** (1993) Glutamate receptors in the central nervous system. Ann N Y Academy of Sciences 707, 126–135.

OTHER PUBLICATIONS

1. **Jonas P**, Buzsáki G (2007) Neural inhibition. Scholarpedia 2, 3286.
2. Guzmán J, Sendin G, **Jonas P** (2017) Patch-clamp 2.0 – die nächste Generation der Patch-Clamp-Methode.

CITATIONS ACCORDING TO GOOGLE SCHOLAR (JULY 2023)

Total number of citations: ~26645

H index: 77

Total number of publications: 126