

ORIGINAL PUBLICATIONS

1. 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* 112, 755–771 [Featured Article; Research Highlight, *Nature Reviews Neuroscience*].
2. 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. *Proc Natl Acad Sci USA* 121, e2301449121. [Commentary by Guzikowski N and Kavalali ET *Proc Natl Acad Sci USA* 121, e2401734121]
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 [News and Views by Askari S and Misgeld T, *Nat Biotechnol*. doi: 10.1038/s41587-023-02036-8].
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 [Highlighted by *Nature Methods*, year in Review].
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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.
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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].
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.
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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.
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REVIEWS, PERSPECTIVES

1. Vandael D, **Jonas P** (2024). Review : Structure, biophysics, and circuit function of a “giant” cortical presynaptic terminal”. *Science* 383, eadg6757.
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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.
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