

# J Gerard G Borst

## List of Publications by Year in descending order

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Version: 2024-02-01

40  
papers

3,525  
citations

279798

23  
h-index

289244

40  
g-index

45  
all docs

45  
docs citations

45  
times ranked

2556  
citing authors

#	ARTICLE	IF	CITATIONS
1	Calcium Sensitivity of Glutamate Release in a Calyx-Type Terminal. <i>Science</i> , 2000, 289, 953-957.	12.6	468
2	Calcium Channel Types with Distinct Presynaptic Localization Couple Differentially to Transmitter Release in Single Calyx-Type Synapses. <i>Journal of Neuroscience</i> , 1999, 19, 726-736.	3.6	393
3	Short-term plasticity at the calyx of held. <i>Nature Reviews Neuroscience</i> , 2002, 3, 53-64.	10.2	336
4	Three-Dimensional Reconstruction of a Calyx of Held and Its Postsynaptic Principal Neuron in the Medial Nucleus of the Trapezoid Body. <i>Journal of Neuroscience</i> , 2002, 22, 10567-10579.	3.6	326
5	Calcium Secretion Coupling at Calyx of Held Governed by Nonuniform Channel Vesicle Topography. <i>Journal of Neuroscience</i> , 2002, 22, 1648-1667.	3.6	247
6	The Calyx of Held Synapse: From Model Synapse to Auditory Relay. <i>Annual Review of Physiology</i> , 2012, 74, 199-224.	13.1	195
7	Calcium action potentials in hair cells pattern auditory neuron activity before hearing onset. <i>Nature Neuroscience</i> , 2010, 13, 1050-1052.	14.8	183
8	Reliability and Precision of the Mouse Calyx of Held Synapse. <i>Journal of Neuroscience</i> , 2009, 29, 13770-13784.	3.6	175
9	The low synaptic release probability in vivo. <i>Trends in Neurosciences</i> , 2010, 33, 259-266.	8.6	152
10	Post-tetanic potentiation in the rat calyx of Held synapse. <i>Journal of Physiology</i> , 2005, 564, 173-187.	2.9	96
11	Directional Hearing by Linear Summation of Binaural Inputs at the Medial Superior Olive. <i>Neuron</i> , 2013, 78, 936-948.	8.1	90
12	The Hodgkin Huxley Katz Prize Lecture. <i>Journal of Physiology</i> , 2003, 547, 665-689.	2.9	79
13	Factors Controlling the Input-Output Relationship of Spherical Bushy Cells in the Gerbil Cochlear Nucleus. <i>Journal of Neuroscience</i> , 2011, 31, 4260-4273.	3.6	78
14	Dynamic development of the calyx of Held synapse. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 5603-5608.	7.1	69
15	Postsynaptic Ca <sup>2+</sup> Influx Mediated by Three Different Pathways during Synaptic Transmission at a Calyx-Type Synapse. <i>Journal of Neuroscience</i> , 1998, 18, 10409-10419.	3.6	49
16	Developmental Changes in Short-Term Plasticity at the Rat Calyx of Held Synapse. <i>Journal of Neuroscience</i> , 2011, 31, 11706-11717.	3.6	48
17	Branching of calyceal afferents during postnatal development in the rat auditory brainstem. <i>Journal of Comparative Neurology</i> , 2006, 496, 214-228.	1.6	45
18	How Do Short-Term Changes at Synapses Fine-Tune Information Processing?. <i>Journal of Neuroscience</i> , 2012, 32, 14058-14063.	3.6	45

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19	Synaptic Gain-of-Function Effects of Mutant Ca <sub>v</sub> 2.1 Channels in a Mouse Model of Familial Hemiplegic Migraine Are Due to Increased Basal [Ca <sup>2+</sup> ] <sub>i</sub> . <i>Journal of Neuroscience</i> , 2014, 34, 7047-7058.	3.6	45
20	Dynamics of the readily releasable pool during post-tetanic potentiation in the rat calyx of Held synapse. <i>Journal of Physiology</i> , 2007, 581, 467-478.	2.9	43
21	Large GABAergic neurons form a distinct subclass within the mouse dorsal cortex of the inferior colliculus with respect to intrinsic properties, synaptic inputs, sound responses, and projections. <i>Journal of Comparative Neurology</i> , 2013, 521, 189-202.	1.6	37
22	Single-Cell Stimulation in Barrel Cortex Influences Psychophysical Detection Performance. <i>Journal of Neuroscience</i> , 2018, 38, 2057-2068.	3.6	31
23	Resistance to action potential depression of a rat axon terminal in vivo. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 4249-4254.	7.1	29
24	Tonotopic and non-auditory organization of the mouse dorsal inferior colliculus revealed by two-photon imaging. <i>ELife</i> , 2019, 8, .	6.0	28
25	Enhanced Transmission at the Calyx of Held Synapse in a Mouse Model for Angelman Syndrome. <i>Frontiers in Cellular Neuroscience</i> , 2017, 11, 418.	3.7	26
26	Developmental changes in intrinsic excitability of principal neurons in the rat medial nucleus of the trapezoid body. <i>Developmental Neurobiology</i> , 2011, 71, 284-295.	3.0	25
27	In vivo synaptic transmission and morphology in mouse models of Tuberous sclerosis, Fragile X syndrome, Neurofibromatosis type 1, and Costello syndrome. <i>Frontiers in Cellular Neuroscience</i> , 2015, 9, 234.	3.7	24
28	Intracellular responses to frequency modulated tones in the dorsal cortex of the mouse inferior colliculus. <i>Frontiers in Neural Circuits</i> , 2013, 7, 7.	2.8	23
29	Subcortical input heterogeneity in the mouse inferior colliculus. <i>Journal of Physiology</i> , 2011, 589, 3955-3967.	2.9	20
30	Cockayne Syndrome Group B (Csb) and Group A (Csa) Deficiencies Predispose to Hearing Loss and Cochlear Hair Cell Degeneration in Mice. <i>Journal of Neuroscience</i> , 2015, 35, 4280-4286.	3.6	19
31	Modulation of synaptic depression of the calyx of Held synapse by GABA <sub>B</sub> receptors and spontaneous activity. <i>Journal of Physiology</i> , 2013, 591, 4877-4894.	2.9	18
32	Contribution of the mouse calyx of Held synapse to tone adaptation. <i>European Journal of Neuroscience</i> , 2011, 33, 251-258.	2.6	15
33	Accelerated loss of hearing and vision in the DNA-repair deficient <i>Ercc1</i> <sup>+/Δ</sup> mouse. <i>Mechanisms of Ageing and Development</i> , 2012, 133, 59-67.	4.6	13
34	A novel QTL underlying early-onset, low-frequency hearing loss in BXD recombinant inbred strains. <i>Genes, Brain and Behavior</i> , 2012, 11, 911-920.	2.2	12
35	A Test of the Stereausis Hypothesis for Sound Localization in Mammals. <i>Journal of Neuroscience</i> , 2017, 37, 7278-7289.	3.6	12
36	Delayed appearance of the scaffolding proteins PSD-95 and homer1 at the developing rat calyx of held synapse. <i>Journal of Comparative Neurology</i> , 2010, 518, 4581-4590.	1.6	11

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37	Structure–function relation of the developing calyx of Held synapse <i>in vivo</i> . Journal of Physiology, 2020, 598, 4603-4619.	2.9	8
38	<i>In vivo</i> matching of postsynaptic excitability with spontaneous synaptic inputs during formation of the rat calyx of Held synapse. Journal of Physiology, 2017, 595, 207-231.	2.9	6
39	Using ephaptic coupling to estimate the synaptic cleft resistivity of the calyx of Held synapse. PLoS Computational Biology, 2021, 17, e1009527.	3.2	2
40	Size matters: formation and function of giant synapses. Journal of Physiology, 2013, 591, 3123-3123.	2.9	1