

# Stephan J Sigrist

## List of Publications by Year in descending order

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93  
papers

9,083  
citations

76326

40  
h-index

46799

89  
g-index

101  
all docs

101  
docs citations

101  
times ranked

10148  
citing authors

#	ARTICLE	IF	CITATIONS
1	Bruchpilot Promotes Active Zone Assembly, Ca <sup>2+</sup> Channel Clustering, and Vesicle Release. <i>Science</i> , 2006, 312, 1051-1054.	12.6	976
2	Bruchpilot, a Protein with Homology to ELKS/CAST, Is Required for Structural Integrity and Function of Synaptic Active Zones in <i>Drosophila</i> . <i>Neuron</i> , 2006, 49, 833-844.	8.1	802
3	Cardioprotection and lifespan extension by the natural polyamine spermidine. <i>Nature Medicine</i> , 2016, 22, 1428-1438.	30.7	801
4	Maturation of active zone assembly by <i>Drosophila</i> Bruchpilot. <i>Journal of Cell Biology</i> , 2009, 186, 129-145.	5.2	627
5	Protein scaffolds in the coupling of synaptic exocytosis and endocytosis. <i>Nature Reviews Neuroscience</i> , 2011, 12, 127-138.	10.2	497
6	A Syd-1 homologue regulates pre- and postsynaptic maturation in <i>Drosophila</i> . <i>Journal of Cell Biology</i> , 2010, 188, 565-579.	5.2	427
7	Naked Dense Bodies Provoke Depression. <i>Journal of Neuroscience</i> , 2010, 30, 14340-14345.	3.6	338
8	Restoring polyamines protects from age-induced memory impairment in an autophagy-dependent manner. <i>Nature Neuroscience</i> , 2013, 16, 1453-1460.	14.8	283
9	RIM-Binding Protein, a Central Part of the Active Zone, Is Essential for Neurotransmitter Release. <i>Science</i> , 2011, 334, 1565-1569.	12.6	257
10	Nucleocytosolic Depletion of the Energy Metabolite Acetyl-Coenzyme A Stimulates Autophagy and Prolongs Lifespan. <i>Cell Metabolism</i> , 2014, 19, 431-444.	16.2	221
11	RIM Controls Homeostatic Plasticity through Modulation of the Readily-Releasable Vesicle Pool. <i>Journal of Neuroscience</i> , 2012, 32, 16574-16585.	3.6	180
12	Experience-Dependent Strengthening of <i>Drosophila</i> Neuromuscular Junctions. <i>Journal of Neuroscience</i> , 2003, 23, 6546-6556.	3.6	175
13	Active zone scaffolds differentially accumulate Unc13 isoforms to tune Ca <sup>2+</sup> channel-vesicle coupling. <i>Nature Neuroscience</i> , 2016, 19, 1311-1320.	14.8	166
14	Guidelines and recommendations on yeast cell death nomenclature. <i>Microbial Cell</i> , 2018, 5, 4-31.	3.2	158
15	Seeing the forest tree by tree: super-resolution light microscopy meets the neurosciences. <i>Nature Neuroscience</i> , 2013, 16, 790-797.	14.8	143
16	Presynaptic Biogenesis Requires Axonal Transport of Lysosome-Related Vesicles. <i>Neuron</i> , 2018, 99, 1216-1232.e7.	8.1	109
17	Stable Positioning of Unc13 Restricts Synaptic Vesicle Fusion to Defined Release Sites to Promote Synchronous Neurotransmission. <i>Neuron</i> , 2017, 95, 1350-1364.e12.	8.1	106
18	Ultrafast, temporally stochastic STED nanoscopy of millisecond dynamics. <i>Nature Methods</i> , 2015, 12, 827-830.	19.0	104

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19	The Bruchpilot cytomatrix determines the size of the readily releasable pool of synaptic vesicles. <i>Journal of Cell Biology</i> , 2013, 202, 667-683.	5.2	101
20	Attenuated palmitoylation of serotonin receptor 5-HT1A affects receptor function and contributes to depression-like behaviors. <i>Nature Communications</i> , 2019, 10, 3924.	12.8	100
21	The flavonoid 4,4-dimethoxychalcone promotes autophagy-dependent longevity across species. <i>Nature Communications</i> , 2019, 10, 651.	12.8	100
22	The effect of spermidine on memory performance in older adults at risk for dementia: A randomized controlled trial. <i>Cortex</i> , 2018, 109, 181-188.	2.4	98
23	Dietary spermidine improves cognitive function. <i>Cell Reports</i> , 2021, 35, 108985.	6.4	98
24	Rapid active zone remodeling consolidates presynaptic potentiation. <i>Nature Communications</i> , 2019, 10, 1085.	12.8	97
25	Structural Long-Term Changes at Mushroom Body Input Synapses. <i>Current Biology</i> , 2010, 20, 1938-1944.	3.9	93
26	RIM-binding protein 2 regulates release probability by fine-tuning calcium channel localization at murine hippocampal synapses. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 11615-11620.	7.1	86
27	Presynapses in Kenyon Cell Dendrites in the Mushroom Body Calyx of <i>Drosophila</i> . <i>Journal of Neuroscience</i> , 2011, 31, 9696-9707.	3.6	83
28	Spermidine Suppresses Age-Associated Memory Impairment by Preventing Adverse Increase of Presynaptic Active Zone Size and Release. <i>PLoS Biology</i> , 2016, 14, e1002563.	5.6	82
29	Effects of spermidine supplementation on cognition and biomarkers in older adults with subjective cognitive decline (SmartAge) study protocol for a randomized controlled trial. <i>Alzheimer's Research and Therapy</i> , 2019, 11, 36.	6.2	74
30	Network-Specific Synchronization of Electrical Slow-Wave Oscillations Regulates Sleep Drive in <i>Drosophila</i> . <i>Current Biology</i> , 2019, 29, 3611-3621.e3.	3.9	66
31	Homeostatic scaling of active zone scaffolds maintains global synaptic strength. <i>Journal of Cell Biology</i> , 2019, 218, 1706-1724.	5.2	66
32	Dynamical Organization of Syntaxin-1A at the Presynaptic Active Zone. <i>PLoS Computational Biology</i> , 2015, 11, e1004407.	3.2	65
33	Dietary spermidine for lowering high blood pressure. <i>Autophagy</i> , 2017, 13, 767-769.	9.1	63
34	Spermidine-triggered autophagy ameliorates memory during aging. <i>Autophagy</i> , 2014, 10, 178-179.	9.1	62
35	Structural and functional plasticity of the cytoplasmic active zone. <i>Current Opinion in Neurobiology</i> , 2011, 21, 144-150.	4.2	60
36	eIF5A hypusination, boosted by dietary spermidine, protects from premature brain aging and mitochondrial dysfunction. <i>Cell Reports</i> , 2021, 35, 108941.	6.4	56

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37	Optical super-resolution microscopy in neurobiology. <i>Current Opinion in Neurobiology</i> , 2012, 22, 86-93.	4.2	53
38	Spermidine boosts autophagy to protect from synapse aging. <i>Autophagy</i> , 2017, 13, 444-445.	9.1	53
39	Autophagy within the mushroom body protects from synapse aging in a non-cell autonomous manner. <i>Nature Communications</i> , 2019, 10, 1318.	12.8	53
40	Presynaptic spinophilin tunes neurexin signalling to control active zone architecture and function. <i>Nature Communications</i> , 2015, 6, 8362.	12.8	51
41	Active Zone Scaffold Protein Ratios Tune Functional Diversity across Brain Synapses. <i>Cell Reports</i> , 2018, 23, 1259-1274.	6.4	47
42	RIM-BP2 primes synaptic vesicles via recruitment of Munc13-1 at hippocampal mossy fiber synapses. <i>ELife</i> , 2019, 8, .	6.0	46
43	Presynaptic morphogenesis, active zone organization and structural plasticity in <i>Drosophila</i> . <i>Current Opinion in Neurobiology</i> , 2017, 43, 119-129.	4.2	43
44	Acetyl-coenzyme A. <i>Autophagy</i> , 2014, 10, 1335-1337.	9.1	42
45	Mechanisms controlling assembly and plasticity of presynaptic active zone scaffolds. <i>Current Opinion in Neurobiology</i> , 2016, 39, 69-76.	4.2	40
46	Drep-2 is a novel synaptic protein important for learning and memory. <i>ELife</i> , 2014, 3, .	6.0	39
47	Vesicle release site organization at synaptic active zones. <i>Neuroscience Research</i> , 2018, 127, 3-13.	1.9	36
48	A Presynaptic Role for the Cytomatrix Protein GIT in Synaptic Vesicle Recycling. <i>Cell Reports</i> , 2014, 7, 1417-1425.	6.4	35
49	Presynaptic Active Zone Plasticity Encodes Sleep Need in <i>Drosophila</i> . <i>Current Biology</i> , 2020, 30, 1077-1091.e5.	3.9	35
50	Spermidine-induced hypusination preserves mitochondrial and cognitive function during aging. <i>Autophagy</i> , 2021, 17, 2037-2039.	9.1	35
51	Coupling the Structural and Functional Assembly of Synaptic Release Sites. <i>Frontiers in Neuroanatomy</i> , 2018, 12, 81.	1.7	33
52	Spermidine protects from age-related synaptic alterations at hippocampal mossy fiber-CA3 synapses. <i>Scientific Reports</i> , 2019, 9, 19616.	3.3	33
53	Quantitative Analysis of <i>Drosophila</i> Larval Neuromuscular Junction Morphology. <i>Cold Spring Harbor Protocols</i> , 2012, 2012, pdb.prot068601.	0.3	29
54	<i>Drosophila</i> Syd-1, Liprin-Å, and Protein Phosphatase 2A B' Subunit Wrd Function in a Linear Pathway to Prevent Ectopic Accumulation of Synaptic Materials in Distal Axons. <i>Journal of Neuroscience</i> , 2014, 34, 8474-8487.	3.6	26

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55	Conserved regulation of neurodevelopmental processes and behavior by FoxP in <i>Drosophila</i> . <i>PLoS ONE</i> , 2019, 14, e0211652.	2.5	26
56	RIM-binding protein couples synaptic vesicle recruitment to release sites. <i>Journal of Cell Biology</i> , 2020, 219, .	5.2	26
57	A high affinity RIM-binding protein/Aplip1 interaction prevents the formation of ectopic axonal active zones. <i>ELife</i> , 2015, 4, .	6.0	26
58	Systematic interaction network filtering identifies CRMP1 as a novel suppressor of huntingtin misfolding and neurotoxicity. <i>Genome Research</i> , 2015, 25, 701-713.	5.5	24
59	Rapid Ca <sup>2+</sup> channel accumulation contributes to cAMP-mediated increase in transmission at hippocampal mossy fiber synapses. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	7.1	23
60	Diacylglycerol triggers Rim101 pathway-dependent necrosis in yeast: a model for lipotoxicity. <i>Cell Death and Differentiation</i> , 2018, 25, 767-783.	11.2	22
61	Differential centrifugation-based biochemical fractionation of the <i>Drosophila</i> adult CNS. <i>Nature Protocols</i> , 2014, 9, 2796-2808.	12.0	21
62	Inhibition of oxidative stress in cholinergic projection neurons fully rescues aging-associated olfactory circuit degeneration in <i>Drosophila</i> . <i>ELife</i> , 2018, 7, .	6.0	21
63	Synaptogenesis. <i>Current Biology</i> , 2014, 24, R1076-R1080.	3.9	20
64	In Vivo Imaging of the <i>Drosophila</i> Larval Neuromuscular Junction. <i>Cold Spring Harbor Protocols</i> , 2012, 2012, pdb.prot068593.	0.3	18
65	A histone point mutation that switches on autophagy. <i>Autophagy</i> , 2014, 10, 1143-1145.	9.1	18
66	Structural Remodeling of Active Zones Is Associated with Synaptic Homeostasis. <i>Journal of Neuroscience</i> , 2020, 40, 2817-2827.	3.6	18
67	Recruitment of release sites underlies chemical presynaptic potentiation at hippocampal mossy fiber boutons. <i>PLoS Biology</i> , 2021, 19, e3001149.	5.6	18
68	Novel aspects of age-protection by spermidine supplementation are associated with preserved telomere length. <i>GeroScience</i> , 2021, 43, 673-690.	4.6	18
69	Neurotransmission: Spontaneous and Evoked Release Filing for Divorce. <i>Current Biology</i> , 2014, 24, R192-R194.	3.9	17
70	Structural and Molecular Properties of Insect Type II Motor Axon Terminals. <i>Frontiers in Systems Neuroscience</i> , 2018, 12, 5.	2.5	17
71	Maintenance of cell type-specific connectivity and circuit function requires Tao kinase. <i>Nature Communications</i> , 2019, 10, 3506.	12.8	17
72	Effects of Spermidine Supplementation on Cognition and Biomarkers in Older Adults With Subjective Cognitive Decline. <i>JAMA Network Open</i> , 2022, 5, e2213875.	5.9	17

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73	Unc13A and Unc13B contribute to the decoding of distinct sensory information in <i>Drosophila</i> . <i>Nature Communications</i> , 2021, 12, 1932.	12.8	16
74	The HSP40 chaperone Ydj1 drives amyloid beta 42 toxicity. <i>EMBO Molecular Medicine</i> , 2022, 14, e13952.	6.9	16
75	Rab2 regulates presynaptic precursor vesicle biogenesis at the trans-Golgi. <i>Journal of Cell Biology</i> , 2021, 220, .	5.2	14
76	Fat-body brummer lipase determines survival and cardiac function during starvation in <i>Drosophila melanogaster</i> . <i>IScience</i> , 2021, 24, 102288.	4.1	11
77	Interactions between amyloid precursor protein-like (APPL) and MAGUK scaffolding proteins contribute to appetitive long-term memory in <i>Drosophila melanogaster</i> . <i>Journal of Neurogenetics</i> , 2020, 34, 92-105.	1.4	10
78	Antagonistic interactions between two Neuroligins coordinate pre- and postsynaptic assembly. <i>Current Biology</i> , 2021, 31, 1711-1725.e5.	3.9	10
79	Translational control of polyamine metabolism by CNBP is required for <i>Drosophila</i> locomotor function. <i>ELife</i> , 2021, 10, .	6.0	10
80	Presynaptic and postsynaptic long-term plasticity in sleep homeostasis. <i>Current Opinion in Neurobiology</i> , 2021, 69, 1-10.	4.2	9
81	4,4'-Dimethoxychalcone: a natural flavonoid that promotes health through autophagy-dependent and -independent effects. <i>Autophagy</i> , 2019, 15, 1662-1664.	9.1	8
82	Postsynaptic cAMP signalling regulates the antagonistic balance of <i>Drosophila</i> glutamate receptor subtypes. <i>Development (Cambridge)</i> , 2020, 147, .	2.5	7
83	Targeting GATA transcription factors – a novel strategy for anti-aging interventions?. <i>Microbial Cell</i> , 2019, 6, 212-216.	3.2	6
84	(M)Unc13s in Active Zone Diversity: A <i>Drosophila</i> Perspective. <i>Frontiers in Synaptic Neuroscience</i> , 2021, 13, 798204.	2.5	6
85	The Yin and Yang of Synaptic Active Zone Assembly. <i>Science Signaling</i> , 2009, 2, pe32.	3.6	5
86	Structures of <i>Drosophila melanogaster</i> Rab2 and Rab3 bound to GMPPNP. <i>Acta Crystallographica Section F, Structural Biology Communications</i> , 2015, 71, 34-40.	0.8	5
87	Lights On for the Molecular Players of Presynaptic Plasticity. <i>Neuron</i> , 2015, 86, 603-604.	8.1	5
88	Phosphorylation of the Bruchpilot N-terminus unlocks axonal transport of active zone building blocks. <i>Journal of Cell Science</i> , 2019, 132, .	2.0	5
89	A new method to characterize function of the <i>Drosophila</i> heart by means of optical flow. <i>Journal of Experimental Biology</i> , 2017, 220, 4644-4653.	1.7	4
90	The Unc13A isoform is important for phasic release and olfactory memory formation at mushroom body synapses. <i>Journal of Neurogenetics</i> , 2020, 34, 106-114.	1.4	4

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91	Variance of filtered signals: Characterization for linear reaction networks and application to neurotransmission dynamics. <i>Mathematical Biosciences</i> , 2022, 343, 108760.	1.9	4
92	The presynaptic active zone: molecules, plasticity, and diseases. <i>Neuroscience Research</i> , 2018, 127, 1-2.	1.9	2
93	The Long and Short of It: A Dwarf Neurexin Suffices for Synapse Assembly. <i>Neuron</i> , 2018, 100, 6-8.	8.1	1