Stuart Leigh Johnson

List of Publications by Year
in descending order

39 papers	2,529 citations	236925 25 h-index	315739 38 g-index
41 all docs	41 docs citations	41 times ranked	1577 citing authors

#	Article	IF	Citations
1	Prestin-Driven Cochlear Amplification Is Not Limited by the Outer Hair Cell Membrane Time Constant. Neuron, 2011, 70, 1143-1154.	8.1	241
2	Developmental changes in the expression of potassium currents of embryonic, neonatal and mature mouse inner hair cells. Journal of Physiology, 2003, 548, 383-400.	2.9	230
3	Sodium and calcium currents shape action potentials in immature mouse inner hair cells. Journal of Physiology, 2003, 552, 743-761.	2.9	173
4	Increase in efficiency and reduction in Ca2+dependence of exocytosis during development of mouse inner hair cells. Journal of Physiology, 2005, 563, 177-191.	2.9	160
5	Position-dependent patterning of spontaneous action potentials in immature cochlear inner hair cells. Nature Neuroscience, 2011, 14, 711-717.	14.8	147
6	Tonotopic Variation in the Calcium Dependence of Neurotransmitter Release and Vesicle Pool Replenishment at Mammalian Auditory Ribbon Synapses. Journal of Neuroscience, 2008, 28, 7670-7678.	3.6	115
7	Elementary properties of Ca_V1.3 Ca²⁺ channels expressed in mouse cochlear inner hair cells. Journal of Physiology, 2010, 588, 187-199.	2.9	110
8	A transiently expressed SK current sustains and modulates action potential activity in immature mouse inner hair cells. Journal of Physiology, 2004, 560, 691-708.	2.9	107
9	Synaptotagmin IV determines the linear Ca2+ dependence of vesicle fusion at auditory ribbon synapses. Nature Neuroscience, 2010, 13, 45-52.	14.8	106
10	Calcium entry into stereocilia drives adaptation of the mechanoelectrical transducer current of mammalian cochlear hair cells. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 14918-14923.	7.1	101
11	Biophysical properties of Ca_V1.3 calcium channels in gerbil inner hair cells. Journal of Physiology, 2008, 586, 1029-1042.	2.9	80
12	Presynaptic maturation in auditory hair cells requires a critical period of sensory-independent spiking activity. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 8720-8725.	7.1	70
13	The Resting Transducer Current Drives Spontaneous Activity in Prehearing Mammalian Cochlear Inner Hair Cells. Journal of Neuroscience, 2012, 32, 10479-10483.	3.6	66
14	<i>Tmc1</i>Point Mutation Affects Ca²⁺Sensitivity and Block by Dihydrostreptomycin of the Mechanoelectrical Transducer Current of Mouse Outer Hair Cells. Journal of Neuroscience, 2016, 36, 336-349.	3.6	62
15	Connexin-Mediated Signaling in Nonsensory Cells Is Crucial for the Development of Sensory Inner Hair Cells in the Mouse Cochlea. Journal of Neuroscience, 2017, 37, 258-268.	3.6	61
16	Cholinergic efferent synaptic transmission regulates the maturation of auditory hair cell ribbon synapses. Open Biology, 2013, 3, 130163.	3.6	56
17	Mechanotransduction is required for establishing and maintaining mature inner hair cells and regulating efferent innervation. Nature Communications, 2018, 9, 4015.	12.8	54
18	<i>In vivo</i> and <i>in vitro</i> biophysical properties of hair cells from the lateral line and inner ear of developing and adult zebrafish. Journal of Physiology, 2014, 592, 2041-2058.	2.9	53

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19	Functional maturation of the exocytotic machinery at gerbil hair cell ribbon synapses. Journal of Physiology, 2009, 587, 1715-1726.	2.9	50
20	Genetic deletion of SK2 channels in mouse inner hair cells prevents the developmental linearization in the Ca²⁺ dependence of exocytosis. Journal of Physiology, 2007, 583, 631-646.	2.9	48
21	Burst activity and ultrafast activation kinetics of Ca_V1.3 Ca²⁺ channels support presynaptic activity in adult gerbil hair cell ribbon synapses. Journal of Physiology, 2013, 591, 3811-3820.	2.9	48
22	Absence of plastin 1 causes abnormal maintenance of hair cell stereocilia and a moderate form of hearing loss in mice. Human Molecular Genetics, 2015, 24, 37-49.	2.9	47
23	The Coupling between Ca²⁺Channels and the Exocytotic Ca²⁺Sensor at Hair Cell Ribbon Synapses Varies Tonotopically along the Mature Cochlea. Journal of Neuroscience, 2017, 37, 2471-2484.	3.6	47
24	Membrane capacitance measurement using patch clamp with integrated self-balancing lock-in amplifier. Pflugers Archiv European Journal of Physiology, 2002, 443, 653-663.	2.8	45
25	Membrane properties specialize mammalian inner hair cells for frequency or intensity encoding. ELife, 2015, 4, .	6.0	45
26	Hair cell maturation is differentially regulated along the tonotopic axis of the mammalian cochlea. Journal of Physiology, 2020, 598, 151-170.	2.9	34
27	Absence of Neuroplastin-65 Affects Synaptogenesis in Mouse Inner Hair Cells and Causes Profound Hearing Loss. Journal of Neuroscience, 2016, 36, 222-234.	3.6	30
28	Pathophysiological changes in inner hair cell ribbon synapses in the ageing mammalian cochlea. Journal of Physiology, 2020, 598, 4339-4355.	2.9	23
29	Hair Cell Afferent Synapses: Function and Dysfunction. Cold Spring Harbor Perspectives in Medicine, 2019, 9, a033175.	6.2	20
30	A reduction in Ptprq associated with specific features of the deafness phenotype of the miRâ€96 mutant mouse diminuendo. European Journal of Neuroscience, 2014, 39, 744-756.	2.6	19
31	Fine Tuning of CaV1.3 Ca2+ Channel Properties in Adult Inner Hair Cells Positioned in the Most Sensitive Region of the Gerbil Cochlea. PLoS ONE, 2014, 9, e113750.	2.5	15
32	The Actin-Binding Proteins Eps8 and Gelsolin Have Complementary Roles in Regulating the Growth and Stability of Mechanosensory Hair Bundles of Mammalian Cochlear Outer Hair Cells. PLoS ONE, 2014, 9, e87331.	2.5	15
33	Elementary properties of Ca2+ channels and their influence on multivesicular release and phase-locking at auditory hair cell ribbon synapses. Frontiers in Cellular Neuroscience, 2015, 9, 123.	3.7	15
34	MET currents and otoacoustic emissions from mice with a detached tectorial membrane indicate the extracellular matrix regulates Ca²⁺ near stereocilia. Journal of Physiology, 2021, 599, 2015-2036.	2.9	13
35	Functional Development of Hair Cells in the Mammalian Inner Ear. , 2014, , 155-188.		10
36	Exocytosis in mouse vestibular Type II hair cells shows a highâ€order Ca 2+ dependence that is independent of synaptotagminâ€4. Physiological Reports, 2020, 8, e14509.	1.7	4

#	Article	IF	Citations
37	Current Response in CaV1.3â€"/â€" Mouse Vestibular and Cochlear Hair Cells. Frontiers in Neuroscience, 2021, 15, 749483.	2.8	4
38	Grxcr1 regulates hair bundle morphogenesis and is required for normal mechanoelectrical transduction in mouse cochlear hair cells. PLoS ONE, 2022, 17, e0261530.	2.5	2
39	Electrophysiological Recordings of Voltage-Dependent and Mechanosensitive Currents in Sensory Hair Cells of the Auditory and Vestibular Organs of the Mouse. Neuromethods, 2022, , 221-264.	0.3	1