

Walter Marcotti

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

67
papers

3,695
citations

35
h-index

60
g-index

72
ext. papers

4,340⁰
ext. citations

7.5
avg, IF

5.27
L-index

#	Paper	IF	Citations
67	The aminoglycoside antibiotic dihydrostreptomycin rapidly enters mouse outer hair cells through the mechano-electrical transducer channels. <i>Journal of Physiology</i> , 2005 , 567, 505-21	3.9	265
66	Restoration of auditory evoked responses by human ES-cell-derived otic progenitors. <i>Nature</i> , 2012 , 490, 278-82	50.4	259
65	Developmental changes in the expression of potassium currents of embryonic, neonatal and mature mouse inner hair cells. <i>Journal of Physiology</i> , 2003 , 548, 383-400	3.9	207
64	Prestin-driven cochlear amplification is not limited by the outer hair cell membrane time constant. <i>Neuron</i> , 2011 , 70, 1143-54	13.9	198
63	Developmental expression of the potassium current $I_{K,n}$ contributes to maturation of mouse outer hair cells. <i>Journal of Physiology</i> , 1999 , 520 Pt 3, 653-60	3.9	170
62	Development and properties of stereociliary link types in hair cells of the mouse cochlea. <i>Journal of Comparative Neurology</i> , 2005 , 485, 75-85	3.4	169
61	Sodium and calcium currents shape action potentials in immature mouse inner hair cells. <i>Journal of Physiology</i> , 2003 , 552, 743-61	3.9	150
60	Increase in efficiency and reduction in Ca^{2+} dependence of exocytosis during development of mouse inner hair cells. <i>Journal of Physiology</i> , 2005 , 563, 177-91	3.9	148
59	Position-dependent patterning of spontaneous action potentials in immature cochlear inner hair cells. <i>Nature Neuroscience</i> , 2011 , 14, 711-7	25.5	120
58	A transiently expressed SK current sustains and modulates action potential activity in immature mouse inner hair cells. <i>Journal of Physiology</i> , 2004 , 560, 691-708	3.9	102
57	Mutations in protocadherin 15 and cadherin 23 affect tip links and mechanotransduction in mammalian sensory hair cells. <i>PLoS ONE</i> , 2011 , 6, e19183	3.7	102
56	Tonotopic variation in the calcium dependence of neurotransmitter release and vesicle pool replenishment at mammalian auditory ribbon synapses. <i>Journal of Neuroscience</i> , 2008 , 28, 7670-8	6.6	95
55	Synaptotagmin IV determines the linear Ca^{2+} dependence of vesicle fusion at auditory ribbon synapses. <i>Nature Neuroscience</i> , 2010 , 13, 45-52	25.5	94
54	Elementary properties of $CaV1.3$ Ca^{2+} channels expressed in mouse cochlear inner hair cells. <i>Journal of Physiology</i> , 2010 , 588, 187-99	3.9	93
53	<i>Tmc1</i> is necessary for normal functional maturation and survival of inner and outer hair cells in the mouse cochlea. <i>Journal of Physiology</i> , 2006 , 574, 677-98	3.9	89
52	Calcium entry into stereocilia drives adaptation of the mechano-electrical transducer current of mammalian cochlear hair cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 14918-23	11.5	81
51	Effects of intracellular stores and extracellular Ca^{2+} on Ca^{2+} -activated K^{+} currents in mature mouse inner hair cells. <i>Journal of Physiology</i> , 2004 , 557, 613-33	3.9	81

50	Eps8 regulates hair bundle length and functional maturation of mammalian auditory hair cells. <i>PLoS Biology</i> , 2011 , 9, e1001048	9.7	80
49	Biophysical properties of CaV1.3 calcium channels in gerbil inner hair cells. <i>Journal of Physiology</i> , 2008 , 586, 1029-42	3.9	68
48	Human fetal auditory stem cells can be expanded in vitro and differentiate into functional auditory neurons and hair cell-like cells. <i>Stem Cells</i> , 2009 , 27, 1196-204	5.8	62
47	Lack of brain-derived neurotrophic factor hampers inner hair cell synapse physiology, but protects against noise-induced hearing loss. <i>Journal of Neuroscience</i> , 2012 , 32, 8545-53	6.6	60
46	Presynaptic maturation in auditory hair cells requires a critical period of sensory-independent spiking activity. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 8720-5	11.5	58
45	The resting transducer current drives spontaneous activity in prehearing mammalian cochlear inner hair cells. <i>Journal of Neuroscience</i> , 2012 , 32, 10479-83	6.6	51
44	Tmc1 Point Mutation Affects Ca ²⁺ Sensitivity and Block by Dihydrostreptomycin of the Mechanoelectrical Transducer Current of Mouse Outer Hair Cells. <i>Journal of Neuroscience</i> , 2016 , 36, 336-49	6.6	50
43	Progressive hearing loss and gradual deterioration of sensory hair bundles in the ears of mice lacking the actin-binding protein Eps8L2. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 13898-903	11.5	47
42	Helios is a key transcriptional regulator of outer hair cell maturation. <i>Nature</i> , 2018 , 563, 696-700	50.4	47
41	Burst activity and ultrafast activation kinetics of CaV1.3 Ca ²⁺ channels support presynaptic activity in adult gerbil hair cell ribbon synapses. <i>Journal of Physiology</i> , 2013 , 591, 3811-20	3.9	45
40	Connexin-Mediated Signaling in Nonsensory Cells Is Crucial for the Development of Sensory Inner Hair Cells in the Mouse Cochlea. <i>Journal of Neuroscience</i> , 2017 , 37, 258-268	6.6	44
39	Functional maturation of the exocytotic machinery at gerbil hair cell ribbon synapses. <i>Journal of Physiology</i> , 2009 , 587, 1715-26	3.9	43
38	Transduction without tip links in cochlear hair cells is mediated by ion channels with permeation properties distinct from those of the mechano-electrical transducer channel. <i>Journal of Neuroscience</i> , 2014 , 34, 5505-14	6.6	42
37	Genetic deletion of SK2 channels in mouse inner hair cells prevents the developmental linearization in the Ca ²⁺ dependence of exocytosis. <i>Journal of Physiology</i> , 2007 , 583, 631-46	3.9	42
36	In vivo and in vitro biophysical properties of hair cells from the lateral line and inner ear of developing and adult zebrafish. <i>Journal of Physiology</i> , 2014 , 592, 2041-58	3.9	41
35	Cholinergic efferent synaptic transmission regulates the maturation of auditory hair cell ribbon synapses. <i>Open Biology</i> , 2013 , 3, 130163	7	41
34	The Coupling between Ca Channels and the Exocytotic Ca Sensor at Hair Cell Ribbon Synapses Varies Tonotopically along the Mature Cochlea. <i>Journal of Neuroscience</i> , 2017 , 37, 2471-2484	6.6	39
33	Mechanotransduction is required for establishing and maintaining mature inner hair cells and regulating efferent innervation. <i>Nature Communications</i> , 2018 , 9, 4015	17.4	37

32	Functional assembly of mammalian cochlear hair cells. <i>Experimental Physiology</i> , 2012 , 97, 438-51	2.4	35
31	Integration of Tmc1/2 into the mechanotransduction complex in zebrafish hair cells is regulated by Transmembrane O-methyltransferase (Tomt). <i>ELife</i> , 2017 , 6,	8.9	35
30	Coordinated calcium signalling in cochlear sensory and non-sensory cells refines afferent innervation of outer hair cells. <i>EMBO Journal</i> , 2019 , 38,	13	32
29	Enlargement of Ribbons in Zebrafish Hair Cells Increases Calcium Currents But Disrupts Afferent Spontaneous Activity and Timing of Stimulus Onset. <i>Journal of Neuroscience</i> , 2017 , 37, 6299-6313	6.6	31
28	The acquisition of mechano-electrical transducer current adaptation in auditory hair cells requires myosin VI. <i>Journal of Physiology</i> , 2016 , 594, 3667-81	3.9	23
27	Hair cell maturation is differentially regulated along the tonotopic axis of the mammalian cochlea. <i>Journal of Physiology</i> , 2020 , 598, 151-170	3.9	21
26	Absence of Neuroplastin-65 Affects Synaptogenesis in Mouse Inner Hair Cells and Causes Profound Hearing Loss. <i>Journal of Neuroscience</i> , 2016 , 36, 222-34	6.6	20
25	In vivo physiological recording from the lateral line of juvenile zebrafish. <i>Journal of Physiology</i> , 2016 , 594, 5427-38	3.9	17
24	TMC2 Modifies Permeation Properties of the Mechanoelectrical Transducer Channel in Early Postnatal Mouse Cochlear Outer Hair Cells. <i>Frontiers in Molecular Neuroscience</i> , 2017 , 10, 326	6.1	17
23	Age-related changes in the biophysical and morphological characteristics of mouse cochlear outer hair cells. <i>Journal of Physiology</i> , 2020 , 598, 3891-3910	3.9	16
22	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. <i>PLoS ONE</i> , 2014 , 9, e87331	3.7	13
21	Loss of Baiap2l2 destabilizes the transducing stereocilia of cochlear hair cells and leads to deafness. <i>Journal of Physiology</i> , 2021 , 599, 1173-1198	3.9	13
20	Gata3 is required for the functional maturation of inner hair cells and their innervation in the mouse cochlea. <i>Journal of Physiology</i> , 2019 , 597, 3389-3406	3.9	11
19	Clarin-2 is essential for hearing by maintaining stereocilia integrity and function. <i>EMBO Molecular Medicine</i> , 2019 , 11, e10288	12	11
18	Pathophysiological changes in inner hair cell ribbon synapses in the ageing mammalian cochlea. <i>Journal of Physiology</i> , 2020 , 598, 4339-4355	3.9	11
17	Functional Development of Hair Cells in the Mammalian Inner Ear 2014 , 155-188		10
16	Hair Cell Afferent Synapses: Function and Dysfunction. <i>Cold Spring Harbor Perspectives in Medicine</i> , 2019 , 9,	5.4	10
15	Biophysical and morphological changes in inner hair cells and their efferent innervation in the ageing mouse cochlea. <i>Journal of Physiology</i> , 2021 , 599, 269-287	3.9	10

14	Generation of Otic Lineages from Integration-Free Human-Induced Pluripotent Stem Cells Reprogrammed by mRNAs. <i>Stem Cells International</i> , 2020 , 2020, 3692937	5	7
13	An allosteric gating model recapitulates the biophysical properties of I expressed in mouse vestibular type I hair cells. <i>Journal of Physiology</i> , 2017 , 595, 6735-6750	3.9	6
12	MET currents and otoacoustic emissions from mice with a detached tectorial membrane indicate the extracellular matrix regulates Ca near stereocilia. <i>Journal of Physiology</i> , 2021 , 599, 2015-2036	3.9	6
11	Distinct roles of Eps8 in the maturation of cochlear and vestibular hair cells. <i>Neuroscience</i> , 2016 , 328, 80-91	3.9	6
10	Exocytosis in mouse vestibular Type II hair cells shows a high-order Ca dependence that is independent of synaptotagmin-4. <i>Physiological Reports</i> , 2020 , 8, e14509	2.6	3
9	Connexin-Mediated Signaling in Nonsensory Cells Is Crucial for the Development of Sensory Inner Hair Cells in the Mouse Cochlea. <i>Journal of Neuroscience</i> , 2017 , 37, 258-268	6.6	2
8	Spontaneous and coordinated Ca ²⁺ activity of cochlear sensory and non-sensory cells drives the maturation of OHC afferent innervation		2
7	Synaptojanin2 Mutation Causes Progressive High-frequency Hearing Loss in Mice. <i>Frontiers in Cellular Neuroscience</i> , 2020 , 14, 561857	6.1	2
6	Functional development and regeneration of hair cells in the zebrafish lateral line. <i>Journal of Physiology</i> , 2021 , 599, 3913-3936	3.9	2
5	Current Response in Ca _v 1.3 Mouse Vestibular and Cochlear Hair Cells.. <i>Frontiers in Neuroscience</i> , 2021 , 15, 749483	5.1	2
4	Sensory adaptation at ribbon synapses in the zebrafish lateral line. <i>Journal of Physiology</i> , 2021 , 599, 3677-3696	3.9	6
3	Grxcr1 regulates hair bundle morphogenesis and is required for normal mechano-electrical transduction in mouse cochlear hair cells.. <i>PLoS ONE</i> , 2022 , 17, e0261530	3.7	0
2	Neuroplastin genetically interacts with Cadherin 23 and the encoded isoform Np55 is sufficient for cochlear hair cell function and hearing.. <i>PLoS Genetics</i> , 2022 , 18, e1009937	6	
1	Hair Cells1-9		