

Robert Fettiplace

List of Publications by Citations

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48
papers

3,478
citations

32
h-index

51
g-index

51
ext. papers

4,123
ext. citations

8.7
avg, IF

5.9
L-index

#	Paper	IF	Citations
48	Localization of inner hair cell mechanotransducer channels using high-speed calcium imaging. <i>Nature Neuroscience</i> , 2009 , 12, 553-8	25.5	308
47	The sensory and motor roles of auditory hair cells. <i>Nature Reviews Neuroscience</i> , 2006 , 7, 19-29	13.5	292
46	Fast adaptation of mechano-electrical transducer channels in mammalian cochlear hair cells. <i>Nature Neuroscience</i> , 2003 , 6, 832-6	25.5	205
45	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
44	The physiology of mechano-electrical transduction channels in hearing. <i>Physiological Reviews</i> , 2014 , 94, 951-86	47.9	181
43	Tonotopic variation in the conductance of the hair cell mechanotransducer channel. <i>Neuron</i> , 2003 , 40, 983-90	13.9	152
42	The concentrations of calcium buffering proteins in mammalian cochlear hair cells. <i>Journal of Neuroscience</i> , 2005 , 25, 7867-75	6.6	152
41	Confocal imaging of calcium microdomains and calcium extrusion in turtle hair cells. <i>Neuron</i> , 1995 , 15, 1323-35	13.9	151
40	Hair Cell Transduction, Tuning, and Synaptic Transmission in the Mammalian Cochlea. <i>Comprehensive Physiology</i> , 2017 , 7, 1197-1227	7.7	136
39	A large-conductance calcium-selective mechanotransducer channel in mammalian cochlear hair cells. <i>Journal of Neuroscience</i> , 2006 , 26, 10992-1000	6.6	131
38	The transduction channel filter in auditory hair cells. <i>Journal of Neuroscience</i> , 2005 , 25, 7831-9	6.6	127
37	Subunit determination of the conductance of hair-cell mechanotransducer channels. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015 , 112, 1589-94	11.5	100
36	Adaptation in auditory hair cells. <i>Current Opinion in Neurobiology</i> , 2003 , 13, 446-51	7.6	92
35	The role of transmembrane channel-like proteins in the operation of hair cell mechanotransducer channels. <i>Journal of General Physiology</i> , 2013 , 142, 493-505	3.4	76
34	Developmental changes in the cochlear hair cell mechanotransducer channel and their regulation by transmembrane channel-like proteins. <i>Journal of General Physiology</i> , 2013 , 141, 141-8	3.4	75
33	Depolarization of cochlear outer hair cells evokes active hair bundle motion by two mechanisms. <i>Journal of Neuroscience</i> , 2006 , 26, 2757-66	6.6	74
32	Mechanosensory hair cells express two molecularly distinct mechanotransduction channels. <i>Nature Neuroscience</i> , 2017 , 20, 24-33	25.5	73

31	Calcium balance and mechanotransduction in rat cochlear hair cells. <i>Journal of Neurophysiology</i> , 2010 , 104, 18-34	3.2	72
30	The actions of calcium on hair bundle mechanics in mammalian cochlear hair cells. <i>Biophysical Journal</i> , 2008 , 94, 2639-53	2.9	72
29	CIB2 interacts with TMC1 and TMC2 and is essential for mechanotransduction in auditory hair cells. <i>Nature Communications</i> , 2017 , 8, 43	17.4	69
28	Conductance and block of hair-cell mechanotransducer channels in transmembrane channel-like protein mutants. <i>Journal of General Physiology</i> , 2014 , 144, 55-69	3.4	61
27	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
26	A prestin motor in chicken auditory hair cells: active force generation in a nonmammalian species. <i>Neuron</i> , 2013 , 79, 69-81	13.9	50
25	Variable number of TMC1-dependent mechanotransducer channels underlie tonotopic conductance gradients in the cochlea. <i>Nature Communications</i> , 2018 , 9, 2185	17.4	47
24	The distribution of calcium buffering proteins in the turtle cochlea. <i>Journal of Neuroscience</i> , 2003 , 23, 4577-89	6.6	47
23	Defining features of the hair cell mechano-electrical transducer channel. <i>Pflügers Archiv European Journal of Physiology</i> , 2009 , 458, 1115-23	4.6	43
22	Is TMC1 the Hair Cell Mechanotransducer Channel?. <i>Biophysical Journal</i> , 2016 , 111, 3-9	2.9	41
21	The effects of Tmc1 Beethoven mutation on mechanotransducer channel function in cochlear hair cells. <i>Journal of General Physiology</i> , 2015 , 146, 233-43	3.4	40
20	The ultrastructural distribution of prestin in outer hair cells: a post-embedding immunogold investigation of low-frequency and high-frequency regions of the rat cochlea. <i>European Journal of Neuroscience</i> , 2010 , 31, 1595-605	3.5	40
19	Tonotopy in calcium homeostasis and vulnerability of cochlear hair cells. <i>Hearing Research</i> , 2019 , 376, 11-21	3.9	40
18	Force transmission in the organ of Corti micromachine. <i>Biophysical Journal</i> , 2010 , 98, 2813-21	2.9	34
17	Theoretical conditions for high-frequency hair bundle oscillations in auditory hair cells. <i>Biophysical Journal</i> , 2008 , 95, 4948-62	2.9	32
16	Optimal electrical properties of outer hair cells ensure cochlear amplification. <i>PLoS ONE</i> , 2012 , 7, e50572	3.7	32
15	The development, distribution and density of the plasma membrane calcium ATPase 2 calcium pump in rat cochlear hair cells. <i>European Journal of Neuroscience</i> , 2012 , 36, 2302-10	3.5	30
14	Development and localization of reverse-polarity mechanotransducer channels in cochlear hair cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 6767-72	11.5	26

13	Electrical tuning and transduction in short hair cells of the chicken auditory papilla. <i>Journal of Neurophysiology</i> , 2013 , 109, 2007-20	3.2	22
12	Mechanoelectrical Transduction in Auditory Hair Cells 2006 , 154-203		20
11	A mutation reduces calcium permeability and expression of mechanoelectrical transduction channels in cochlear hair cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019 , 116, 20743-20749	11.5	17
10	Diverse Mechanisms of Sound Frequency Discrimination in the Vertebrate Cochlea. <i>Trends in Neurosciences</i> , 2020 , 43, 88-102	13.3	15
9	Spatiotemporal changes in the distribution of LHFPL5 in mice cochlear hair bundles during development and in the absence of PCDH15. <i>PLoS ONE</i> , 2017 , 12, e0185285	3.7	15
8	PIEZO2 as the anomalous mechanotransducer channel in auditory hair cells. <i>Journal of Physiology</i> , 2017 , 595, 7039-7048	3.9	13
7	The contribution of TMC1 to adaptation of mechanoelectrical transduction channels in cochlear outer hair cells. <i>Journal of Physiology</i> , 2019 , 597, 5949-5961	3.9	7
6	Evaluation of Nestin Expression in the Developing and Adult Mouse Inner Ear. <i>Stem Cells and Development</i> , 2016 , 25, 1419-32	4.4	7
5	New Tmc1 Deafness Mutations Impact Mechanotransduction in Auditory Hair Cells. <i>Journal of Neuroscience</i> , 2021 , 41, 4378-4391	6.6	5
4	The speed of the hair cell mechanotransducer channel revealed by fluctuation analysis. <i>Journal of General Physiology</i> , 2021 , 153,	3.4	3
3	Atypical tuning and amplification mechanisms in gecko auditory hair cells.. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022 , 119, e2122501119	11.5	2
2	A Cochlear Partition Model Incorporating Realistic Electrical and Mechanical Parameters for Outer Hair Cells 2011 ,		1
1	Transduction Channels in Hair Cells 2005 , 31-56		1