Robert Fettiplace

List of Publications by Year
in descending order

50 papers	4,458 citations	126907 33 h-index	243625 44 g-index
51 all docs	51 docs citations	51 times ranked	2331 citing authors

#	Article	IF	Citations
1	Localization of inner hair cell mechanotransducer channels using high-speed calcium imaging. Nature Neuroscience, 2009, 12, 553-558.	14.8	387
2	The sensory and motor roles of auditory hair cells. Nature Reviews Neuroscience, 2006, 7, 19-29.	10.2	357
3	The Physiology of Mechanoelectrical Transduction Channels in Hearing. Physiological Reviews, 2014, 94, 951-986.	28.8	250
4	Prestin-Driven Cochlear Amplification Is Not Limited by the Outer Hair Cell Membrane Time Constant. Neuron, 2011, 70, 1143-1154.	8.1	241
5	Hair Cell Transduction, Tuning, and Synaptic Transmission in the Mammalian Cochlea. , 2017, 7, 1197-1227.		230
6	Fast adaptation of mechanoelectrical transducer channels in mammalian cochlear hair cells. Nature Neuroscience, 2003, 6, 832-836.	14.8	224
7	Tonotopic Variation in the Conductance of the Hair Cell Mechanotransducer Channel. Neuron, 2003, 40, 983-990.	8.1	184
8	The Concentrations of Calcium Buffering Proteins in Mammalian Cochlear Hair Cells. Journal of Neuroscience, 2005, 25, 7867-7875.	3.6	183
9	Confocal imaging of calcium microdomains and calcium extrusion in turtle hair cells. Neuron, 1995, 15, 1323-1335.	8.1	160
10	A Large-Conductance Calcium-Selective Mechanotransducer Channel in Mammalian Cochlear Hair Cells. Journal of Neuroscience, 2006, 26, 10992-11000.	3.6	157
11	The Transduction Channel Filter in Auditory Hair Cells. Journal of Neuroscience, 2005, 25, 7831-7839.	3.6	145
12	Subunit determination of the conductance of hair-cell mechanotransducer channels. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 1589-1594.	7.1	141
13	CIB2 interacts with TMC1 and TMC2 and is essential for mechanotransduction in auditory hair cells. Nature Communications, 2017, 8, 43.	12.8	121
14	Adaptation in auditory hair cells. Current Opinion in Neurobiology, 2003, 13, 446-451.	4.2	106
15	Mechanosensory hair cells express two molecularly distinct mechanotransduction channels. Nature Neuroscience, 2017, 20, 24-33.	14.8	106
16	Calcium Balance and Mechanotransduction in Rat Cochlear Hair Cells. Journal of Neurophysiology, 2010, 104, 18-34.	1.8	93
17	Developmental changes in the cochlear hair cell mechanotransducer channel and their regulation by transmembrane channelâ€“like proteins. Journal of General Physiology, 2013, 141, 141-148.	1.9	93
18	The Actions of Calcium on Hair Bundle Mechanics in Mammalian Cochlear Hair Cells. Biophysical Journal, 2008, 94, 2639-2653.	0.5	90

#	Article	IF	Citations
19	The role of transmembrane channelâ€“like proteins in the operation of hair cell mechanotransducer channels. Journal of General Physiology, 2013, 142, 493-505.	1.9	83
20	Depolarization of Cochlear Outer Hair Cells Evokes Active Hair Bundle Motion by Two Mechanisms. Journal of Neuroscience, 2006, 26, 2757-2766.	3.6	82
21	Variable number of TMC1-dependent mechanotransducer channels underlie tonotopic conductance gradients in the cochlea. Nature Communications, 2018, 9, 2185.	12.8	73
22	Conductance and block of hair-cell mechanotransducer channels in transmembrane channelâ€“like protein mutants. Journal of General Physiology, 2014, 144, 55-69.	1.9	69
23	The Resting Transducer Current Drives Spontaneous Activity in Prehearing Mammalian Cochlear Inner Hair Cells. Journal of Neuroscience, 2012, 32, 10479-10483.	3.6	66
24	Tonotopy in calcium homeostasis and vulnerability of cochlear hair cells. Hearing Research, 2019, 376, 11-21.	2.0	66
25	A Prestin Motor in Chicken Auditory Hair Cells: Active Force Generation in a Nonmammalian Species. Neuron, 2013, 79, 69-81.	8.1	63
26	The Distribution of Calcium Buffering Proteins in the Turtle Cochlea. Journal of Neuroscience, 2003, 23, 4577-4589.	3.6	56
27	The effects of Tmc1 Beethoven mutation on mechanotransducer channel function in cochlear hair cells. Journal of General Physiology, 2015, 146, 233-243.	1.9	55
28	Defining features of the hair cell mechanoelectrical transducer channel. Pflugers Archiv European Journal of Physiology, 2009, 458, 1115-1123.	2.8	52
29	Force Transmission in the Organ of Corti Micromachine. Biophysical Journal, 2010, 98, 2813-2821.	0.5	48
30	Is TMC1 the Hair Cell Mechanotransducer Channel?. Biophysical Journal, 2016, 111, 3-9.	0.5	47
31	The ultrastructural distribution of prestin in outer hair cells: a postâ€embedding immunogold investigation of lowâ€frequency and highâ€frequency regions of the rat cochlea. European Journal of Neuroscience, 2010, 31, 1595-1605.	2.6	44
32	The development, distribution and density of the plasma membrane calcium ATPase 2 calcium pump in rat cochlear hair cells. European Journal of Neuroscience, 2012, 36, 2302-2310.	2.6	44
33	Optimal Electrical Properties of Outer Hair Cells Ensure Cochlear Amplification. PLoS ONE, 2012, 7, e50572.	2.5	40
34	Theoretical Conditions for High-Frequency Hair Bundle Oscillations in Auditory Hair Cells. Biophysical Journal, 2008, 95, 4948-4962.	0.5	38
35	A Tmc1 mutation reduces calcium permeability and expression of mechanoelectrical transduction channels in cochlear hair cells. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 20743-20749.	7.1	34
36	Diverse Mechanisms of Sound Frequency Discrimination in the Vertebrate Cochlea. Trends in Neurosciences, 2020, 43, 88-102.	8.6	34

#	Article	IF	Citations
37	Development and localization of reverse-polarity mechanotransducer channels in cochlear hair cells. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 6767-6772.	7.1	31
38	Electrical tuning and transduction in short hair cells of the chicken auditory papilla. Journal of Neurophysiology, 2013, 109, 2007-2020.	1.8	27
39	Spatiotemporal changes in the distribution of LHFPL5 in mice cochlear hair bundles during development and in the absence of PCDH15. PLoS ONE, 2017, 12, e0185285.	2.5	25
40	PIEZO2 as the anomalous mechanotransducer channel in auditory hair cells. Journal of Physiology, 2017, 595, 7039-7048.	2.9	21
41	Mechanoelectrical Transduction in Auditory Hair Cells. , 2006, , 154-203.		20
42	New Tmc1 Deafness Mutations Impact Mechanotransduction in Auditory Hair Cells. Journal of Neuroscience, 2021, 41, 4378-4391.	3.6	18
43	The contribution of TMC1 to adaptation of mechanoelectrical transduction channels in cochlear outer hair cells. Journal of Physiology, 2019, 597, 5949-5961.	2.9	16
44	The speed of the hair cell mechanotransducer channel revealed by fluctuation analysis. Journal of General Physiology, 2021, 153, .	1.9	15
45	Evaluation of Nestin Expression in the Developing and Adult Mouse Inner Ear. Stem Cells and Development, 2016, 25, 1419-1432.	2.1	14
46	Atypical tuning and amplification mechanisms in gecko auditory hair cells. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2122501119.	7.1	5
47	A Cochlear Partition Model Incorporating Realistic Electrical and Mechanical Parameters for Outer Hair Cells. , 2011, , .		3
48	Transduction Channels in Hair Cells. , 2005, , 31-56.		1
49	MEASUREMENT OF OUTER HAIR CELL ELECTROMOTILITY USING A FAST VOLTAGE CLAMP. , 2009, , .		0
50	PRESTIN DISTRIBUTION IN RAT OUTER CELLS â€“ AN ULTRASTRUCTURAL STUDY. , 2009, , .		0