Jeffrey R Holt

List of Publications by Year
in descending order

54 papers	6,008 citations	136950 32 h-index	149698 56 g-index
59 all docs	59 docs citations	59 times ranked	4610 citing authors

#	Article	IF	Citations
1	TRPA1 is a candidate for the mechanosensitive transduction channel of vertebrate hair cells. Nature, 2004, 432, 723-730.	27.8	657
2	Treatment of autosomal dominant hearing loss by in vivo delivery of genome editing agents. Nature, 2018, 553, 217-221.	27.8	412
3	TMC1 and TMC2 Are Components of the Mechanotransduction Channel in Hair Cells of the Mammalian Inner Ear. Neuron, 2013, 79, 504-515.	8.1	363
4	Mechanotransduction in mouse inner ear hair cells requires transmembrane channelâ€“like genes. Journal of Clinical Investigation, 2011, 121, 4796-4809.	8.2	352
5	A Chemical-Genetic Strategy Implicates Myosin-1c in Adaptation by Hair Cells. Cell, 2002, 108, 371-381.	28.9	318
6	TMC1 Forms the Pore of Mechanosensory Transduction Channels in Vertebrate Inner Ear Hair Cells. Neuron, 2018, 99, 736-753.e6.	8.1	250
7	Generation of inner ear organoids containing functional hair cells from human pluripotent stem cells. Nature Biotechnology, 2017, 35, 583-589.	17.5	249
8	A synthetic AAV vector enables safe and efficient gene transfer to the mammalian inner ear. Nature Biotechnology, 2017, 35, 280-284.	17.5	248
9	Gene therapy restores auditory and vestibular function in a mouse model of Usher syndrome type 1c. Nature Biotechnology, 2017, 35, 264-272.	17.5	247
10	<i>Tmc</i> gene therapy restores auditory function in deaf mice. Science Translational Medicine, 2015, 7, 295ra108.	12.4	222
11	Continuous evolution of base editors with expanded target compatibility and improved activity. Nature Biotechnology, 2019, 37, 1070-1079.	17.5	215
12	Sound Strategies for Hearing Restoration. Science, 2014, 344, 1241062.	12.6	208
13	TMC1 and TMC2 Localize at the Site of Mechanotransduction in Mammalian Inner Ear Hair Cell Stereocilia. Cell Reports, 2015, 12, 1606-1617.	6.4	152
14	Allele-specific gene editing prevents deafness in a model of dominant progressive hearing loss. Nature Medicine, 2019, 25, 1123-1130.	30.7	149
15	Tonotopic Gradient in the Developmental Acquisition of Sensory Transduction in Outer Hair Cells of the Mouse Cochlea. Journal of Neurophysiology, 2009, 101, 2961-2973.	1.8	148
16	Developmental acquisition of sensory transduction in hair cells of the mouse inner ear. Nature Neuroscience, 2003, 6, 1019-1020.	14.8	147
17	Fast Adaptation in Vestibular Hair Cells Requires Myosin-1c Activity. Neuron, 2005, 47, 541-553.	8.1	142
18	In vivo base editing restores sensory transduction and transiently improves auditory function in a mouse model of recessive deafness. Science Translational Medicine, 2020, 12, .	12.4	114

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19	ImprovedÂTMC1 gene therapy restores hearing and balance in mice with genetic inner ear disorders. Nature Communications, 2019, 10, 236.	12.8	104
20	Mechanoelectrical Transduction and Adaptation in Hair Cells of the Mouse Utricle, a Low-Frequency Vestibular Organ. Journal of Neuroscience, 1997, 17, 8739-8748.	3.6	101
21	RNA Interference Prevents Autosomal-Dominant Hearing Loss. American Journal of Human Genetics, 2016, 98, 1101-1113.	6.2	95
22	Functional development of mechanosensitive hair cells in stem cell-derived organoids parallels native vestibular hair cells. Nature Communications, 2016, 7, 11508.	12.8	89
23	Emerging Gene Therapies for Genetic Hearing Loss. JARO - Journal of the Association for Research in Otolaryngology, 2017, 18, 649-670.	1.8	86
24	Transmembrane channel-like (TMC) genes are required for auditory and vestibular mechanosensation. Pflugers Archiv European Journal of Physiology, 2015, 467, 85-94.	2.8	78
25	Developmental Acquisition of Voltage-Dependent Conductances and Sensory Signaling in Hair Cells of the Embryonic Mouse Inner Ear. Journal of Neuroscience, 2004, 24, 11148-11159.	3.6	74
26	Sensory Transduction and Adaptation in Inner and Outer Hair Cells of the Mouse Auditory System. Journal of Neurophysiology, 2007, 98, 3360-3369.	1.8	58
27	Efficient viral transduction in mouse inner ear hair cells with utricle injection and AAV9-PHP.B. Hearing Research, 2020, 394, 107882.	2.0	55
28	Development and Regeneration of Sensory Transduction in Auditory Hair Cells Requires Functional Interaction Between Cadherin-23 and Protocadherin-15. Journal of Neuroscience, 2010, 30, 11259-11269.	3.6	52
29	The Mechanosensory Structure of the Hair Cell Requires Clarin-1, a Protein Encoded by Usher Syndrome III Causative Gene. Journal of Neuroscience, 2012, 32, 9485-9498.	3.6	52
30	The Mechanosensory Transduction Machinery in Inner Ear Hair Cells. Annual Review of Biophysics, 2021, 50, 31-51.	10.0	45
31	Are TMCs the Mechanotransduction Channels of Vertebrate Hair Cells?. Journal of Neuroscience, 2016, 36, 10921-10926.	3.6	43
32	Function and Dysfunction of TMC Channels in Inner Ear Hair Cells. Cold Spring Harbor Perspectives in Medicine, 2019, 9, a033506.	6.2	40
33	Neonatal AAV gene therapy rescues hearing in a mouse model of <i>SYNE4</i> deafness. EMBO Molecular Medicine, 2021, 13, e13259.	6.9	39
34	Regenerating hair cells in vestibular sensory epithelia from humans. ELife, 2018, 7, .	6.0	39
35	Single and Dual Vector Gene Therapy with AAV9-PHP.B Rescues Hearing in Tmc1 Mutant Mice. Molecular Therapy, 2021, 29, 973-988.	8.2	36
36	TMC function in hair cell transduction. Hearing Research, 2014, 311, 17-24.	2.0	35

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37	Stimulus Processing by Type II Hair Cells in the Mouse Utricle. Annals of the New York Academy of Sciences, 1999, 871, 15-26.	3.8	28
38	Recessive mutations of TMC1 associated with moderate to severe hearing loss. Neurogenetics, 2016, 17, 115-123.	1.4	28
39	Gene Transfer in Human Vestibular Epithelia and the Prospects for Inner Ear Gene Therapy. Laryngoscope, 2008, 118, 821-831.	2.0	24
40	Dual-vector gene therapy restores cochlear amplification and auditory sensitivity in a mouse model of DFNB16 hearing loss. Science Advances, 2021, 7, eabi7629.	10.3	24
41	Tmc2 expression partially restores auditory function in a mouse model of DFNB7/B11 deafness caused by loss of Tmc1 function. Scientific Reports, 2018, 8, 12125.	3.3	22
42	pH regulates potassium conductance and drives a constitutive proton current in human TMEM175. Science Advances, 2022, 8, eabm1568.	10.3	22
43	Transgenic Tmc2 expression preserves inner ear hair cells and vestibular function in mice lacking Tmc1. Scientific Reports, 2018, 8, 12124.	3.3	17
44	Increasing the expression level of ChR2 enhances the optogenetic excitability of cochlear neurons. Journal of Neurophysiology, 2019, 122, 1962-1974.	1.8	15
45	Putting the Pieces Together: the Hair Cell Transduction Complex. JARO - Journal of the Association for Research in Otolaryngology, 2021, 22, 601-608.	1.8	11
46	Optimized AAV Vectors for TMC1 Gene Therapy in a Humanized Mouse Model of DFNB7/11. Biomolecules, 2022, 12, 914.	4.0	10
47	The molecules that mediate sensory transduction in the mammalian inner ear. Current Opinion in Neurobiology, 2015, 34, 165-171.	4.2	9
48	Evolution and function of Tmc genes in mammalian hearing. Current Opinion in Physiology, 2020, 18, 11-19.	1.8	9
49	Gene Therapy for Deaf Mice Goes Viral. Molecular Therapy, 2012, 20, 1836-1837.	8.2	7
50	Sensory transduction is required for normal development and maturation of cochlear inner hair cell synapses. ELife, 2021, 10, .	6.0	7
51	Plug-N-Play: Mechanotransduction Goes Modular. Neuron, 2016, 89, 1128-1130.	8.1	4
52	Split otoferlins reunited. EMBO Molecular Medicine, 2019, 11, .	6.9	4
53	Introduction to the Hearing Research special issue on inner ear gene therapy. Hearing Research, 2020, 394, 108010.	2.0	4
54	Efficient Viral Transduction in Fetal and Adult Human Inner Ear Explants with AAV9-PHP.B Vectors. Biomolecules, 2022, 12, 816.	4.0	4