Ren-Jie Chai

List of Publications by Citations

130 papers	4,095 citations	37 h-index	58 g-index
141 ext. papers	5,528 ext. citations	8.1 avg, IF	5.75 L-index

#	Paper	IF	Citations
130	Wnt signaling induces proliferation of sensory precursors in the postnatal mouse cochlea. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 8167-72	11.5	208
129	Spontaneous hair cell regeneration in the neonatal mouse cochlea in vivo. *Development (Cambridge)*, **2014**, 141, 816-29	6.6	187
128	Autophagy protects auditory hair cells against neomycin-induced damage. *Autophagy*, **2017**, 13, 1884-1904	14.2	141
127	Notch inhibition induces mitotically generated hair cells in mammalian cochleae via activating the Wnt pathway. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 166-71	11.5	119
126	Lgr5+ cells regenerate hair cells via proliferation and direct transdifferentiation in damaged neonatal mouse utricle. *Nature Communications*, **2015**, 6, 6613	17.4	109
125	Dynamic expression of Lgr5, a Wnt target gene, in the developing and mature mouse cochlea. *JARO - Journal of the Association for Research in Otolaryngology*, **2011**, 12, 455-69	3.3	105
124	Stress-Induced Metabolic Disorder in Peripheral CD4 T Cells Leads to Anxiety-like Behavior. *Cell*, **2019**, 179, 864-879.e19	56.2	95
123	Accelerating bioelectric functional development of neural stem cells by graphene coupling: Implications for neural interfacing with conductive materials. *Biomaterials*, **2016**, 106, 193-204	15.6	91
122	Wnt Signaling Activates TP53-Induced Glycolysis and Apoptosis Regulator and Protects Against Cisplatin-Induced Spiral Ganglion Neuron Damage in the Mouse Cochlea. *Antioxidants and Redox Signaling*, **2019**, 30, 1389-1410	8.4	89
121	Critical role of spectrin in hearing development and deafness. *Science Advances*, **2019**, 5, eaav7803	14.3	85
120	AAV-ie enables safe and efficient gene transfer to inner ear cells. *Nature Communications*, **2019**, 10, 3733	17.4	83
119	The nuclear transcription factor FoxG1 affects the sensitivity of mimetic aging hair cells to inflammation by regulating autophagy pathways. *Redox Biology*, **2020**, 28, 101364	11.3	82
118	Looking into the Future: Toward Advanced 3D Biomaterials for Stem-Cell-Based Regenerative Medicine. *Advanced Materials*, **2018**, 30, e1705388	24	79
117	Knockdown of Foxg1 in supporting cells increases the trans-differentiation of supporting cells into hair cells in the neonatal mouse cochlea. *Cellular and Molecular Life Sciences*, **2020**, 77, 1401-1419	10.3	71
116	Loss of CIB2 Causes Profound Hearing Loss and Abolishes Mechanoelectrical Transduction in Mice. *Frontiers in Molecular Neuroscience*, **2017**, 10, 401	6.1	69
115	MiRNA-320 in the human follicular fluid is associated with embryo quality in vivo and affects mouse embryonic development in vitro. *Scientific Reports*, **2015**, 5, 8689	4.9	64
114	Bio-Inspired Anisotropic Wettability Surfaces from Dynamic Ferrofluid Assembled Templates. *Advanced Functional Materials*, **2018**, 28, 1705802	15.6	59

113	Bmi1 Regulates the Proliferation of Cochlear Supporting Cells Via the Canonical Wnt Signaling Pathway. *Molecular Neurobiology*, **2017**, 54, 1326-1339	6.2	58
112	A cytoskeleton structure revealed by super-resolution fluorescence imaging in inner ear hair cells. *Cell Discovery*, **2019**, 5, 12	22.3	57
111	Blebbistatin Inhibits Neomycin-Induced Apoptosis in Hair Cell-Like HEI-OC-1 Cells and in Cochlear Hair Cells. *Frontiers in Cellular Neuroscience*, **2019**, 13, 590	6.1	55
110	Age-related transcriptome changes in Sox2+ supporting cells in the mouse cochlea. *Stem Cell Research and Therapy*, **2019**, 10, 365	8.3	52
109	The role of FOXG1 in the postnatal development and survival of mouse cochlear hair cells. *Neuropharmacology*, **2019**, 144, 43-57	5.5	51
108	Pre-treatment With Fasudil Prevents Neomycin-Induced Hair Cell Damage by Reducing the Accumulation of Reactive Oxygen Species. *Frontiers in Molecular Neuroscience*, **2019**, 12, 264	6.1	49
107	Co-regulation of the Notch and Wnt signaling pathways promotes supporting cell proliferation and hair cell regeneration in mouse utricles. *Scientific Reports*, **2016**, 6, 29418	4.9	48
106	Extensive Supporting Cell Proliferation and Mitotic Hair Cell Generation by In Vivo Genetic Reprogramming in the Neonatal Mouse Cochlea. *Journal of Neuroscience*, **2016**, 36, 8734-45	6.6	46
105	Wnt activation followed by Notch inhibition promotes mitotic hair cell regeneration in the postnatal mouse cochlea. *Oncotarget*, **2016**, 7, 66754-66768	3.3	46
104	Disruption of Atg7-dependent autophagy causes electromotility disturbances, outer hair cell loss, and deafness in mice. *Cell Death and Disease*, **2020**, 11, 913	9.8	46
103	c-Myb knockdown increases the neomycin-induced damage to hair-cell-like HEI-OC1 cells in vitro. *Scientific Reports*, **2017**, 7, 41094	4.9	45
102	An episomal vector-based CRISPR/Cas9 system for highly efficient gene knockout in human pluripotent stem cells. *Scientific Reports*, **2017**, 7, 2320	4.9	43
101	In vivo overexpression of X-linked inhibitor of apoptosis protein protects against neomycin-induced hair cell loss in the apical turn of the cochlea during the ototoxic-sensitive period. *Frontiers in Cellular Neuroscience*, **2014**, 8, 248	6.1	43
100	Loss of ARHGEF6 Causes Hair Cell Stereocilia Deficits and Hearing Loss in Mice. *Frontiers in Molecular Neuroscience*, **2018**, 11, 362	6.1	43
99	MicroRNA-10a/10b represses a novel target gene mib1 to regulate angiogenesis. *Cardiovascular Research*, **2016**, 110, 140-50	9.9	41
98	Reduced TRMU expression increases the sensitivity of hair-cell-like HEI-OC-1 cells to neomycin damage in vitro. *Scientific Reports*, **2016**, 6, 29621	4.9	41
97	Biomimetic 3D bacterial cellulose-graphene foam hybrid scaffold regulates neural stem cell proliferation and differentiation. *Colloids and Surfaces B: Biointerfaces*, **2021**, 200, 111590	6	40
96	The Three-Dimensional Culture System with Matrigel and Neurotrophic Factors Preserves the Structure and Function of Spiral Ganglion Neuron In Vitro. *Neural Plasticity*, **2016**, 2016, 4280407	3.3	40

95	Espin distribution as revealed by super-resolution microscopy of stereocilia. *American Journal of Translational Research (discontinued)*, **2020**, 12, 130-141	3	39
94	Novel compounds protect auditory hair cells against gentamycin-induced apoptosis by maintaining the expression level of H3K4me2. *Drug Delivery*, **2018**, 25, 1033-1043	7	38
93	Isolation and analysis of extracellular vesicles in a Morpho butterfly wing-integrated microvortex biochip. *Biosensors and Bioelectronics*, **2020**, 154, 112073	11.8	37
92	Role of Wnt and Notch signaling in regulating hair cell regeneration in the cochlea. *Frontiers of Medicine*, **2016**, 10, 237-49	12	37
91	Citicoline Protects Auditory Hair Cells Against Neomycin-Induced Damage. *Frontiers in Cell and Developmental Biology*, **2020**, 8, 712	5.7	35
90	PRDX1 activates autophagy via the PTEN-AKT signaling pathway to protect against cisplatin-induced spiral ganglion neuron damage. *Autophagy*, **2021**, 1-23	10.2	35
89	Development and Application of Cochlear Implant-Based Electric-Acoustic Stimulation of Spiral Ganglion Neurons. *ACS Biomaterials Science and Engineering*, **2019**, 5, 6735-6741	5.5	35
88	A Three-Dimensional Culture System with Matrigel Promotes Purified Spiral Ganglion Neuron Survival and Function In Vitro. *Molecular Neurobiology*, **2018**, 55, 2070-2084	6.2	34
87	Hoxc-Dependent Mesenchymal Niche Heterogeneity Drives Regional Hair Follicle Regeneration. *Cell Stem Cell*, **2018**, 23, 487-500.e6	18	34
86	2D TiCTMXene couples electrical stimulation to promote proliferation and neural differentiation of neural stem cells. *Acta Biomaterialia*, **2020**, 139, 105-105	10.8	34
85	The structural development of primary cultured hippocampal neurons on a graphene substrate. *Colloids and Surfaces B: Biointerfaces*, **2016**, 146, 442-51	6	32
84	TeraVR empowers precise reconstruction of complete 3-D neuronal morphology in the whole brain. *Nature Communications*, **2019**, 10, 3474	17.4	32
83	FOXG1 promotes aging inner ear hair cell survival through activation of the autophagy pathway. *Autophagy*, **2021**, 1-22	10.2	32
82	Laminin-Coated Electrospun Regenerated Silk Fibroin Mats Promote Neural Progenitor Cell Proliferation, Differentiation, and Survival. *Frontiers in Bioengineering and Biotechnology*, **2019**, 7, 190	5.8	31
81	Tuberous sclerosis complex-mediated mTORC1 overactivation promotes age-related hearing loss. *Journal of Clinical Investigation*, **2018**, 128, 4938-4955	15.9	31
80	Characterization of the Transcriptomes of Lgr5+ Hair Cell Progenitors and Lgr5- Supporting Cells in the Mouse Cochlea. *Frontiers in Molecular Neuroscience*, **2017**, 10, 122	6.1	30
79	The gene is required for hair cell development in zebrafish. *Aging*, **2020**, 12, 18804-18821	5.6	30
78	MiR-182-5p protects inner ear hair cells from cisplatin-induced apoptosis by inhibiting FOXO3a. *Cell Death and Disease*, **2016**, 7, e2362	9.8	29

77	Frizzled-9+ Supporting Cells Are Progenitors for the Generation of Hair Cells in the Postnatal Mouse Cochlea. *Frontiers in Molecular Neuroscience*, **2019**, 12, 184	6.1	28
76	Hedgehog Signaling Promotes the Proliferation and Subsequent Hair Cell Formation of Progenitor Cells in the Neonatal Mouse Cochlea. *Frontiers in Molecular Neuroscience*, **2017**, 10, 426	6.1	28
75	Characterization of Lgr5+ progenitor cell transcriptomes in the apical and basal turns of the mouse cochlea. *Oncotarget*, **2016**, 7, 41123-41141	3.3	28
74	Transduction of Adeno-Associated Virus Vectors Targeting Hair Cells and Supporting Cells in the Neonatal Mouse Cochlea. *Frontiers in Cellular Neuroscience*, **2019**, 13, 8	6.1	27
73	Characterization of Lgr6+ Cells as an Enriched Population of Hair Cell Progenitors Compared to Lgr5+ Cells for Hair Cell Generation in the Neonatal Mouse Cochlea. *Frontiers in Molecular Neuroscience*, **2018**, 11, 147	6.1	27
72	Three-Dimensional Graphene Enhances Neural Stem Cell Proliferation Through Metabolic Regulation. *Frontiers in Bioengineering and Biotechnology*, **2019**, 7, 436	5.8	27
71	The Role of FoxG1 in the Inner Ear. *Frontiers in Cell and Developmental Biology*, **2020**, 8, 614954	5.7	27
70	Generation of mature and functional hair cells by co-expression of Gfi1, Pou4f3, and Atoh1 in the postnatal mouse cochlea. *Cell Reports*, **2021**, 35, 109016	10.6	27
69	Regeneration of hair cells in the mammalian vestibular system. *Frontiers of Medicine*, **2016**, 10, 143-51	12	27
68	Targeting HSP90-HDAC6 Regulating Network Implicates Precision Treatment of Breast Cancer. *International Journal of Biological Sciences*, **2017**, 13, 505-517	11.2	25
67	Knockdown of in Sox9+ supporting cells increases the trans-differentiation of supporting cells into hair cells in the neonatal mouse utricle. *Aging*, **2020**, 12, 19834-19851	5.6	23
66	Deficiency of Klc2 Induces Low-Frequency Sensorineural Hearing Loss in C57BL/6J Mice and Human. *Molecular Neurobiology*, **2021**, 58, 4376-4391	6.2	23
65	Mechanism and Prevention of Ototoxicity Induced by Aminoglycosides. *Frontiers in Cellular Neuroscience*, **2021**, 15, 692762	6.1	23
64	Characterization of Lgr5+ Progenitor Cell Transcriptomes after Neomycin Injury in the Neonatal Mouse Cochlea. *Frontiers in Molecular Neuroscience*, **2017**, 10, 213	6.1	22
63	Inhibition of ARC decreases the survival of HEI-OC-1 cells after neomycin damage in vitro. *Oncotarget*, **2016**, 7, 66647-66659	3.3	22
62	Characterization of Wnt and Notch-Responsive Lgr5+ Hair Cell Progenitors in the Striolar Region of the Neonatal Mouse Utricle. *Frontiers in Molecular Neuroscience*, **2018**, 11, 137	6.1	21
61	Protection of Hair Cells from Ototoxic Drug-Induced Hearing Loss. *Advances in Experimental Medicine and Biology*, **2019**, 1130, 17-36	3.6	20
60	LSD1 is Required for Hair Cell Regeneration in Zebrafish. *Molecular Neurobiology*, **2016**, 53, 2421-34	6.2	20

59	Transcriptomic profiling of neural stem cell differentiation on graphene substrates. *Colloids and Surfaces B: Biointerfaces*, **2019**, 182, 110324	6	20
58	Disruption of the autism-related gene Pak1 causes stereocilia disorganization, hair cell loss, and deafness in mice. *Journal of Genetics and Genomics*, **2021**, 48, 324-332	4	18
57	Bone morphogenetic protein 4 promotes the survival and preserves the structure of flow-sorted Bhlhb5+ cochlear spiral ganglion neurons in vitro. *Scientific Reports*, **2017**, 7, 3506	4.9	17
56	Histone deacetylase 1 is required for the development of the zebrafish inner ear. *Scientific Reports*, **2016**, 6, 16535	4.9	17
55	Hair cell regeneration from inner ear progenitors in the mammalian cochlea. *American Journal of Stem Cells*, **2020**, 9, 25-35	2.4	16
54	Autophagy Regulates the Survival of Hair Cells and Spiral Ganglion Neurons in Cases of Noise, Ototoxic Drug, and Age-Induced Sensorineural Hearing Loss. *Frontiers in Cellular Neuroscience*, **2021**, 15, 760422	6.1	16
53	Deletion of Limk1 and Limk2 in mice does not alter cochlear development or auditory function. *Scientific Reports*, **2019**, 9, 3357	4.9	15
52	Hair Cell Regeneration. *Advances in Experimental Medicine and Biology*, **2019**, 1130, 1-16	3.6	15
51	The Roles of Exosomes in Visual and Auditory Systems. *Frontiers in Bioengineering and Biotechnology*, **2020**, 8, 525	5.8	15
50	Is Required for Zebrafish Posterior Lateral Line Development. *Frontiers in Molecular Neuroscience*, **2017**, 10, 241	6.1	15
49	Designs of Biomaterials and Microenvironments for Neuroengineering. *Neural Plasticity*, **2018**, 2018, 1021969	3.3	15
48	Multiomics analyses reveal a critical role of selenium in controlling T cell differentiation in Crohn's disease. *Immunity*, **2021**, 54, 1728-1744.e7	32.3	15
47	Characterization of Expression in Mouse Cochlear Hair Cells. *Frontiers in Genetics*, **2021**, 12, 625867	4.5	14
46	Characterization and toxicological effects of three-dimensional graphene foams in rats in vivo. *Journal of Nanoparticle Research*, **2016**, 18, 1	2.3	14
45	Inactivation of STAT3 Signaling Impairs Hair Cell Differentiation in the Developing Mouse Cochlea. *Stem Cell Reports*, **2017**, 9, 231-246	8	13
44	Suction-Cup-Inspired Adhesive Micromotors for Drug Delivery. *Advanced Science*, **2021**, e2103384	13.6	13
43	Oriented Neural Spheroid Formation and Differentiation of Neural Stem Cells Guided by Anisotropic Inverse Opals. *Frontiers in Bioengineering and Biotechnology*, **2020**, 8, 848	5.8	13
42	Regulation of Neural Stem Cell Proliferation and Differentiation by Graphene-Based Biomaterials. *Neural Plasticity*, **2019**, 2019, 3608386	3.3	13

41	Neurite Extension and Orientation of Spiral Ganglion Neurons Can Be Directed by Superparamagnetic Iron Oxide Nanoparticles in a Magnetic Field. *International Journal of Nanomedicine*, **2021**, 16, 4515-4526	7.3	12
40	Inhibition of H3K9me2 Reduces Hair Cell Regeneration after Hair Cell Loss in the Zebrafish Lateral Line by Down-Regulating the Wnt and Fgf Signaling Pathways. *Frontiers in Molecular Neuroscience*, **2016**, 9, 39	6.1	12
39	The Detrimental and Beneficial Functions of Macrophages After Cochlear Injury. *Frontiers in Cell and Developmental Biology*, **2021**, 9, 631904	5.7	12
38	Two-Photon Image Tracking of Neural Stem Cells via Iridium Complexes Encapsulated in Polymeric Nanospheres. *ACS Biomaterials Science and Engineering*, **2019**, 5, 1561-1568	5.5	11
37	HDAC3 Is Required for Posterior Lateral Line Development in Zebrafish. *Molecular Neurobiology*, **2016**, 53, 5103-17	6.2	11
36	Cochlear Surface Preparation in the Adult Mouse. *Journal of Visualized Experiments*, **2019**,	1.6	11
35	Ildr1b is essential for semicircular canal development, migration of the posterior lateral line primordium and hearing ability in zebrafish: implications for a role in the recessive hearing impairment DFNB42. *Human Molecular Genetics*, **2014**, 23, 6201-11	5.6	10
34	Spontaneous hair cell regeneration in the neonatal mouse cochlea in vivo. *Development (Cambridge)*, **2014**, 141, 1599-1599	6.6	10
33	A Polydopamine-Functionalized Carbon Microfibrous Scaffold Accelerates the Development of Neural Stem Cells. *Frontiers in Bioengineering and Biotechnology*, **2020**, 8, 616	5.8	9
32	Conductive Nerve Guidance Conduits Based on Butterfly Wings for Peripheral Nerve Repair.. *ACS Nano*, **2022**,	16.7	9
31	Auditory Neuropathy after Damage to Cochlear Spiral Ganglion Neurons in Mice Resulting from Conditional Expression of Diphtheria Toxin Receptors. *Scientific Reports*, **2017**, 7, 6409	4.9	8
30	Combining use of captopril and losartan attenuates the progress of Streptococcus pneumoniae-induced tympanosclerosis through the suppression of TGF-β1 expression. *PLoS ONE*, **2014**, 9, e111620	3.7	6
29	Cochlear implant-based electric-acoustic stimulation modulates neural stem cell-derived neural regeneration. *Journal of Materials Chemistry B*, **2021**, 9, 7793-7804	7.3	6
28	A humanized mouse model, demonstrating progressive hearing loss caused by MYO6 p.C442Y, is inherited in a semi-dominant pattern. *Hearing Research*, **2019**, 379, 79-88	3.9	5
27	Ligand recognition, unconventional activation, and G protein coupling of the prostaglandin E receptor EP2 subtype. *Science Advances*, **2021**, 7,	14.3	5
26	Ordered inverse-opal scaffold based on bionic transpiration to create a biomimetic spine. *Nanoscale*, **2021**, 13, 8614-8622	7.7	5
25	THOC1 deficiency leads to late-onset nonsyndromic hearing loss through p53-mediated hair cell apoptosis. *PLoS Genetics*, **2020**, 16, e1008953	6	4
24	Prevention of acquired sensorineural hearing loss in mice by in vivo Htra2 gene editing. *Genome Biology*, **2021**, 22, 86	18.3	4

23	Effects of local application of methylprednisolone delivered by the C/GP-hydrogel on the recovery of facial nerves. *Acta Oto-Laryngologica*, **2015**, 135, 1178-84	1.6	4
22	Stem Cell-Based Therapies in Hearing Loss. *Frontiers in Cell and Developmental Biology*, **2021**, 9, 730042	5.7	3
21	Surgery-free video-oculography in mouse models: enabling quantitative and short-interval longitudinal assessment of vestibular function. *Neuroscience Letters*, **2019**, 696, 212-218	3.3	3
20	In vitro expansion of pancreatic islet clusters facilitated by hormones and chemicals. *Cell Discovery*, **2020**, 6, 20	22.3	2
19	Spatiotemporal expression of Ezh2 in the developing mouse cochlear sensory epithelium. *Frontiers of Medicine*, **2016**, 10, 330-5	12	2
18	Hippo/YAP signaling pathway protects against neomycin-induced hair cell damage in the mouse cochlea.. *Cellular and Molecular Life Sciences*, **2022**, 79, 79	10.3	2
17	Hearing Loss: Reestablish the Neural Plasticity in Regenerated Spiral Ganglion Neurons and Sensory Hair Cells 2020. *Neural Plasticity*, **2021**, 2021, 1-4	3.3	2
16	Increased mitochondrial DNA copy number protects hair cells and HEI-OC1 cells against drug-induced apoptosis. *Molecular Medicine Reports*, **2020**, 21, 338-346	2.9	2
15	Deficiency of Klc2 induces Low-Frequency Sensorineural Hearing Loss in C57BL/6J Mice and Human		2
14	Activation of Rictor/mTORC2 signaling acts as a pivotal strategy to protect against sensorineural hearing loss.. *Proceedings of the National Academy of Sciences of the United States of America*, **2022**, 119, e2107357119	11.5	2
13	Scaffolds with anisotropic structure for neural tissue engineering. *Engineered Regeneration*, **2022**, 3, 154-162	5.2	2
12	Role of Autophagy in Auditory System Development and Survival. *Journal of Otorhinolaryngology Hearing and Balance Medicine*, **2018**, 1, 7		1
11	Approaches to Regenerate Hair Cell and Spiral Ganglion Neuron in the Inner Ear **2020**, 89-111		1
10	The Expression and Roles of the Super Elongation Complex in Mouse Cochlear Lgr5+ Progenitor Cells. *Frontiers in Cellular Neuroscience*, **2021**, 15, 735723	6.1	1
9	Characterization of the microRNA transcriptomes and proteomics of cochlear tissue-derived small extracellular vesicles from mice of different ages after birth.. *Cellular and Molecular Life Sciences*, **2022**, 79, 154	10.3	1
8	c-Myb protects cochlear hair cells from cisplatin-induced damage via the PI3K/Akt signaling pathway.. *Cell Death Discovery*, **2022**, 8, 78	6.9	1
7	Compact SchCas9 Recognizes the Simple NNGR PAM. *Advanced Science*, **2021**, e2104789	13.6	1
6	Regulation of autophagy: a promising therapeutic target for the treatment of hearing loss. *Journal of Bio-X Research*, **2019**, 2, 57-61	0.4	0

5	AAV-ie-K558R mediated cochlear gene therapy and hair cell regeneration.. *Signal Transduction and Targeted Therapy*, **2022**, 7, 109	21	0
4	Increased mitophagy protects cochlear hair cells from aminoglycoside-induced damage.. *Autophagy* , **2022**, 1-17	10.2	0
3	The Roles of Solute Carriers in Auditory Function.. *Frontiers in Genetics*, **2022**, 13, 823049	4.5	
2	Topographically Conductive Butterfly Wing Substrates for Directed Spiral Ganglion Neuron Growth (Small 38/2021). *Small*, **2021**, 17, 2170200	11	
1	Tetrandrine Prevents Neomycin-Induced Ototoxicity by Promoting Steroid Biosynthesis.. *Frontiers in Bioengineering and Biotechnology*, **2022**, 10, 876237	5.8	