# Robert Fettiplace

## List of Publications by Year in Descending Order



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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 | 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 | 11.5 | 2 |
| 47 | New Tmc1 Deafness Mutations Impact Mechanotransduction in Auditory Hair Cells. *Journal of Neuroscience*, **2021**, 41, 4378-4391 | 6.6 | 5 |
| 46 | The speed of the hair cell mechanotransducer channel revealed by fluctuation analysis. *Journal of General Physiology*, **2021**, 153, | 3.4 | 3 |
| 45 | Diverse Mechanisms of Sound Frequency Discrimination in the Vertebrate Cochlea. *Trends in Neurosciences*, **2020**, 43, 88-102 | 13.3 | 15 |
| 44 | The contribution of TMC1 to adaptation of mechanoelectrical transduction channels in cochlear outer hair cells. *Journal of Physiology*, **2019**, 597, 5949-5961 | 3.9 | 7 |
| 43 | A 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 | 11.5 | 17 |
| 42 | Tonotopy in calcium homeostasis and vulnerability of cochlear hair cells. *Hearing Research*, **2019**, 376, 11-21 | 3.9 | 40 |
| 41 | Variable number of TMC1-dependent mechanotransducer channels underlie tonotopic conductance gradients in the cochlea. *Nature Communications*, **2018**, 9, 2185 | 17.4 | 47 |
| 40 | PIEZO2 as the anomalous mechanotransducer channel in auditory hair cells. *Journal of Physiology*, **2017**, 595, 7039-7048 | 3.9 | 13 |
| 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 | 3.7 | 15 |
| 38 | Hair Cell Transduction, Tuning, and Synaptic Transmission in the Mammalian Cochlea. *Comprehensive Physiology*, **2017**, 7, 1197-1227 | 7.7 | 136 |
| 37 | CIB2 interacts with TMC1 and TMC2 and is essential for mechanotransduction in auditory hair cells. *Nature Communications*, **2017**, 8, 43 | 17.4 | 69 |
| 36 | Mechanosensory hair cells express two molecularly distinct mechanotransduction channels. *Nature Neuroscience*, **2017**, 20, 24-33 | 25.5 | 73 |
| 35 | Evaluation of Nestin Expression in the Developing and Adult Mouse Inner Ear. *Stem Cells and Development*, **2016**, 25, 1419-32 | 4.4 | 7 |
| 34 | 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, 6767-72 | 11.5 | 26 |
| 33 | Is TMC1 the Hair Cell Mechanotransducer Channel?. *Biophysical Journal*, **2016**, 111, 3-9 | 2.9 | 41 |
| 32 | 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, 1589-94 | 11.5 | 100 |

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| 31 | The effects of Tmc1 Beethoven mutation on mechanotransducer channel function in cochlear hair cells. *Journal of General Physiology*, **2015**, 146, 233-43 | 3.4 | 40 |
| 30 | The physiology of mechanoelectrical transduction channels in hearing. *Physiological Reviews*, **2014**, 94, 951-86 | 47.9 | 181 |
| 29 | Conductance and block of hair-cell mechanotransducer channels in transmembrane channel-like protein mutants. *Journal of General Physiology*, **2014**, 144, 55-69 | 3.4 | 61 |
| 28 | A prestin motor in chicken auditory hair cells: active force generation in a nonmammalian species. *Neuron*, **2013**, 79, 69-81 | 13.9 | 50 |
| 27 | The role of transmembrane channel-like proteins in the operation of hair cell mechanotransducer channels. *Journal of General Physiology*, **2013**, 142, 493-505 | 3.4 | 76 |
| 26 | Developmental changes in the cochlear hair cell mechanotransducer channel and their regulation by transmembrane channel-like proteins. *Journal of General Physiology*, **2013**, 141, 141-8 | 3.4 | 75 |
| 25 | Electrical tuning and transduction in short hair cells of the chicken auditory papilla. *Journal of Neurophysiology*, **2013**, 109, 2007-20 | 3.2 | 22 |
| 24 | 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, 2302-10 | 3.5 | 30 |
| 23 | The resting transducer current drives spontaneous activity in prehearing mammalian cochlear inner hair cells. *Journal of Neuroscience*, **2012**, 32, 10479-83 | 6.6 | 51 |
| 22 | Optimal electrical properties of outer hair cells ensure cochlear amplification. *PLoS ONE*, **2012**, 7, e50573 | 3.7 | 32 |
| 21 | Prestin-driven cochlear amplification is not limited by the outer hair cell membrane time constant. *Neuron*, **2011**, 70, 1143-54 | 13.9 | 198 |
| 20 | A Cochlear Partition Model Incorporating Realistic Electrical and Mechanical Parameters for Outer Hair Cells **2011**, | | 1 |
| 19 | 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. *European Journal of Neuroscience*, **2010**, 31, 1595-605 | 3.5 | 40 |
| 18 | Force transmission in the organ of Corti micromachine. *Biophysical Journal*, **2010**, 98, 2813-21 | 2.9 | 34 |
| 17 | Calcium balance and mechanotransduction in rat cochlear hair cells. *Journal of Neurophysiology*, **2010**, 104, 18-34 | 3.2 | 72 |
| 16 | Defining features of the hair cell mechanoelectrical transducer channel. *Pflugers Archiv European Journal of Physiology*, **2009**, 458, 1115-23 | 4.6 | 43 |
| 15 | Localization of inner hair cell mechanotransducer channels using high-speed calcium imaging. *Nature Neuroscience*, **2009**, 12, 553-8 | 25.5 | 308 |
| 14 | The actions of calcium on hair bundle mechanics in mammalian cochlear hair cells. *Biophysical Journal*, **2008**, 94, 2639-53 | 2.9 | 72 |

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| 13 | Theoretical conditions for high-frequency hair bundle oscillations in auditory hair cells. *Biophysical Journal*, **2008**, 95, 4948-62 | 2.9 | 32 |
| 12 | Depolarization of cochlear outer hair cells evokes active hair bundle motion by two mechanisms. *Journal of Neuroscience*, **2006**, 26, 2757-66 | 6.6 | 74 |
| 11 | A large-conductance calcium-selective mechanotransducer channel in mammalian cochlear hair cells. *Journal of Neuroscience*, **2006**, 26, 10992-1000 | 6.6 | 131 |
| 10 | Mechanoelectrical Transduction in Auditory Hair Cells **2006**, 154-203 | | 20 |
| 9 | The sensory and motor roles of auditory hair cells. *Nature Reviews Neuroscience*, **2006**, 7, 19-29 | 13.5 | 292 |
| 8 | The transduction channel filter in auditory hair cells. *Journal of Neuroscience*, **2005**, 25, 7831-9 | 6.6 | 127 |
| 7 | Transduction Channels in Hair Cells **2005**, 31-56 | | 1 |
| 6 | The concentrations of calcium buffering proteins in mammalian cochlear hair cells. *Journal of Neuroscience*, **2005**, 25, 7867-75 | 6.6 | 152 |
| 5 | The distribution of calcium buffering proteins in the turtle cochlea. *Journal of Neuroscience*, **2003**, 23, 4577-89 | 6.6 | 47 |
| 4 | Adaptation in auditory hair cells. *Current Opinion in Neurobiology*, **2003**, 13, 446-51 | 7.6 | 92 |
| 3 | Fast adaptation of mechanoelectrical transducer channels in mammalian cochlear hair cells. *Nature Neuroscience*, **2003**, 6, 832-6 | 25.5 | 205 |
| 2 | Tonotopic variation in the conductance of the hair cell mechanotransducer channel. *Neuron*, **2003**, 40, 983-90 | 13.9 | 152 |
| 1 | Confocal imaging of calcium microdomains and calcium extrusion in turtle hair cells. *Neuron*, **1995**, 15, 1323-35 | 13.9 | 151 |