



Anthony J. Ricci, PhD

Edward C. and Amy H. Sewall Professor in the School of Medicine and Professor of Otolaryngology - Head & Neck Surgery (OHNS) and, by courtesy of Molecular and Cellular Physiology

Otolaryngology (Head and Neck Surgery)

 Curriculum Vitae available Online

CONTACT INFORMATION

• Administrative Contact

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Bio

BIO

I was born in the Bronx, NYC, nearby Yankee stadium. As a kid education was not a priority more of a distraction. Fortunately, my grandmother pushed me to go to college and to go away to college. As the first family member to leave NYC as well as to attend college it was really eye opening. At Case Western Reserve in Cleveland, I majored in Chemistry, with minors in Biology, Sociology and Biomedical Engineering. It was here through a work study job that I was introduced to research and found that there were real life applications to the textbook learning. I was fortunate to work in the lab of a PI who saw potential in me and helped direct me toward graduate school. I was also fortunate to work in an upward bound program where I realized I enjoyed teaching and working toward giving others opportunities academically. I was the first graduate of a new neuroscience PhD program at Tulane University. It was here, aside from falling in love with New Orleans, that I found my niche working in sensory neuroscience at the cell and molecular level. Following graduate school, I bounced to the University of Texas Medical Branch at Galveston where I dabbled with imaging technology and moving. Having largely failed in my major research project, I moved to Madison WI, intent on developing new technologies that would allow me to answer the questions for which I was most interested. It was here where I was successful and leveraged technical knowledge and newly developed tools to work on mechanotransduction in auditory sensory hair cells. I launched an independent research career, with a first faculty position back in New Orleans at LSU Medical Center. Hurricane Katrina washed us out to the West coast, where I became part of a new Otolaryngology department with a mission built around optimizing healthcare, building a strong research footprint and educating the next generation of surgeons and scientists. Since joining Stanford, my research interest have expanded to include translational work as well as investigating at the systems level, the role of hearing loss on cognitive function.

I have also had the opportunity to engage in teaching and in building programs that expand the population of students who have the chance to reach their scientific potential. These programs enrich our community and help to shape what academia will be in the future. I served as the director of the Neuroscience Graduate Program for about eight years. I was a co-founder of the ADVANCE Summer Institute, an onboarding program for incoming bioscience graduate students from underserved backgrounds. I was the faculty lead for this program for more than 10 years. I was part of the group that created the Bioscience Diversity Advisory Committee, that contributes to ensuring best practices in admissions and recruitment were available to all graduate programs. I was part of the team that built Propel, a postdoctoral fellows program that works to help transition postdocs to faculty positions.

Most recently, I helped to create a new postbaccalaureate program as part of the REACH initiative. This program provides a strong research-based opportunity to scholars from underrepresented backgrounds interested in a research or medical career.

ACADEMIC APPOINTMENTS

- Professor, Otolaryngology (Head and Neck Surgery)
- Professor (By courtesy), Molecular and Cellular Physiology
- Member, Bio-X
- Member, Wu Tsai Human Performance Alliance
- Member, Maternal & Child Health Research Institute (MCHRI)
- Member, Wu Tsai Neurosciences Institute

ADMINISTRATIVE APPOINTMENTS

- Director of the Advance Summer Institute, Stanford University, (2012-2019)
- Director of the Neuroscience Training Program, Stanford University, (2013-2019)
- Vice Chair for Research, Department of Otolaryngology, Stanford University School of Medicine, (2018- present)
- Division Chief of Research for Department of Otolaryngology, Stanford University, (2018- present)
- Director of Propel Postdoctoral training program, Stanford University, (2020-2022)
- Associate Dean of Graduate Education and Postdoctoral Affairs, Stanford University School of Medicine, (2020-2022)
- Faculty Director of REACH Postbac Program, Stanford University, (2021- present)
- Co-Chair Neuroscience Graduate Program Admissions Committee, Stanford School of Medicine, (2024- present)

HONORS AND AWARDS

- Excellence in Diversity and Inclusion, Biosciences (2018)
- Excellence in Diversity and Inclusion, Stanford Biosciences (2014)
- Burt Evans Young Investigator Award, National Organization for Hearing (2002)
- Young Investigator Award, Deafness Research Foundation (1999)

BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Graduate student Sustainable funding group, Stanford Medical School (2014 - 2019)
- VPGE Faculty Advisory Committee, Stanford University (2020 - present)
- Program Committee, Association for Research in Otolaryngology (2021 - present)
- Board of Scientific Councillors, NIDCD (2014 - 2017)
- Faculty Mentoring Champions, Stanford Medical school (2019 - present)
- Admissions Committee, Neuroscience training program (2006 - 2018)
- Program Committee, Neuroscience Training Program (2010 - 2018)
- Postdoc Reviewing Committee, SNI (2017 - present)
- BDAC committee, Stanford Medical School (2015 - present)

PROFESSIONAL EDUCATION

- PhD, Tulane University , Neuroscience (1992)
- BA, Case Western Reserve University , Chemistry (1985)

PATENTS

- Anthony Ricci, Alan Cheng, Robert Greenhouse. "United States Patent 61/792,256 Aminoglycoside Antibiotics with Reduced Ototoxicity", Leland Stanford Junior University, Mar 15, 2013

LINKS

- Google Scholar: <https://scholar.google.com/citations?user=bB7hoYgAAAAJ>

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Hair cell mechanotransduction is the initial step in hearing and vestibular signal processing and is the most vulnerable site for initiating hearing loss, whether it be through genetic disorder, ageing, noise trauma or oto-toxins. My interests have largely focused upon the sensory hair bundle as a machine for converting mechanical displacement into electrical signals. The hair bundle does this with sensitivities at the molecular level. As more of the molecules of mechanotransduction are identified, we have the ability to dissect the roles of these molecules as part of the complex sensory organelle. At present we have two foci of investigation. The first is the role of the lipid bilayer in regulating force transduction. The plasma membrane is becoming a major focus in understanding mechanotransduction more broadly, the role of the bilayer within the inner ear is largely unexplored. We have demonstrated that the hair bundle plasma membrane is tightly regulated during development. We are testing hypotheses that the mechanical regulation of the bilayer underlies the kinetics and sensitivities of the mechanotransduction process. We are developing new tools to directly test these hypotheses. The second area of investigation involves the sensory hair bundle mechanics where we have shown that unlike any other hair bundles the stereocilia that comprise the hair bundle are not tightly coupled to each other. We suspect this unusual property makes the hair bundle more responsive to specific modes of stimulation and allows it to operate at higher frequencies. Despite these differences, we are showing that the mechanical properties of the hair bundle and their sensitivities to voltage and calcium are common across inner ear end organs and species. The molecules contributing to these properties remain unknown as do the specific functions of these processes. We focus on resolving these mysteries. The development of high speed (greater than 50,00fps) and high spatial resolution (single nanometer motion detection) enable our ability to investigate hair bundle mechanics. Our translational work has been expanding over the past decade. A central theme has been on understanding how the sensory hair cells are susceptible to aminoglycoside antibiotics as a means of creating a pathway to alleviate the toxicity. Our foundational hypothesis is that if we can prevent hair cell uptake of aminoglycosides we can prevent toxicity. We have found two pathways to this end, one is modifying the aminoglycosides so as to prevent their ability to enter the hair cells and the second is to prevent the aminoglycosides from entering the inner ear space. We are now refining our approaches so as to move toward clinical applications. We are also expanding our scope to determine whether the cancer treating cisplatin class of drugs can be similarly modified. A second translational direction is developing surgical approaches to access the inner ear for more effective therapeutic delivery. We are developing tools for implantable devices for slow release of compounds, and chemo- mechanical approaches to bone removal. We are refining drug delivery approaches to target specific inner ear compartments. We are investigating gene therapy from the perspective of how different cell types respond to similar viral transduction to better enable gene therapeutic efficacy. Our newest line of research balances translational and basic science interests to explore how hearing loss impacts cognitive function. We are expanding our toolbox to include behavioral testing as well as in vivo imaging and electrophysiology to identify the specific regions of the brain impacted by hearing loss. We hope to develop diagnostic tools to identify people most susceptible to cognitive decline, to determine the level of hearing loss requiring intervention to prevent cognitive decline and to potentially establish new therapeutic approaches to reduce the impact of hearing loss on cognitive function.

Teaching

STANFORD ADVISEES

Doctoral Dissertation Reader (AC)

Wagner Nors

Orals Chair

Colin Muir

Postdoctoral Faculty Sponsor

Sevda Abdavinejad Mirkoohi, Jamis McGrath

Doctoral Dissertation Advisor (AC)

Liz Lopez, Jordi Martinez

GRADUATE AND FELLOWSHIP PROGRAM AFFILIATIONS

- Molecular and Cellular Physiology (Phd Program)
- Neurosciences (Phd Program)

Publications

PUBLICATIONS

- **Auditory Hair Cell Mechanotransduction Channels Dynamically Shape the Mechanical Properties of Their Membrane Environment.** *Advanced science (Weinheim, Baden-Wurttemberg, Germany)*
Sam George, S., Ricci, A. J.
2025: e08268
- **Infrared light stimulates the cochlea through a mechanical displacement detected and amplified by hair cells.** *Proceedings of the National Academy of Sciences of the United States of America*
Azimzadeh, J. B., Quiñones, P. M., Oghalai, J. S., Ricci, A. J.
2025; 122 (17): e2422076122
- **The auditory hair cell mechanotransduction complex dynamically regulates stereocilia membrane mechanics**
George, S., Ricci, A. J.
CELL PRESS.2025: 179A-180A
- **Cochlear Mechanics Are Preserved After Inner Ear Delivery of Gold Nanoparticles.** *International journal of molecular sciences*
Pan, D. W., Kim, J., Quiñones, P. M., Ricci, A. J., Applegate, B. E., Oghalai, J. S.
2024; 26 (1)
- **Semicircular canal drug delivery safely targets the inner ear perilymphatic space.** *JCI insight*
Kim, J., Maldonado, J., Pan, D. W., Quiñones, P. M., Zenteno, S., Oghalai, J. S., Ricci, A. J.
2024; 9 (21)
- **Large-scale annotated dataset for cochlear hair cell detection and classification.** *Scientific data*
Buswinka, C. J., Rosenberg, D. B., Simikyan, R. G., Osgood, R. T., Fernandez, K., Nitta, H., Hayashi, Y., Liberman, L. W., Nguyen, E., Yildiz, E., Kim, J., Jarysta, A., Renauld, et al
2024; 11 (1): 416
- **Lipid bilayer regulation of cochlear hair cells involves transmembrane channel-like proteins**
George, S., Ricci, A. J.
CELL PRESS.2024: 506A
- **The Cousa objective: a long-working distance air objective for multiphoton imaging in vivo.** *Nature methods*
Yu, C. H., Yu, Y., Adsit, L. M., Chang, J. T., Barchini, J., Moberly, A. H., Benisty, H., Kim, J., Young, B. K., Heng, K., Farinella, D. M., Leikvoll, A., Pavan, et al
2023
- **GIPC3 couples to MYO6 and PDZ domain proteins and shapes the hair cell apical region.** *Journal of cell science*
Chatterjee, P., Morgan, C. P., Krey, J. F., Benson, C., Goldsmith, J., Bateschell, M., Ricci, A. J., Barr-Gillespie, P. G.
2023

- **Cholesterol as a tool to probe the role of membrane in cochlear hair cell mechanotransduction**
George, S., Effertz, T., Ricci, A. J.
CELL PRESS.2023: 91A-92A
- **Tmc regulates membrane viscosity in mammalian cochlear hair cells.** *Biophysical journal*
Sam George, S., El Bahloul-Jaziri, A., Ricci, A. J.
2023; 122 (3S1): 91a
- **Coupling between the stereocilia of rat sensory inner-hair-cell hair bundles is weak, shaping their sensitivity to stimulation.** *The Journal of neuroscience : the official journal of the Society for Neuroscience*
Scharr, A. L., Maoileidigh, D. O., Ricci, A. J.
2023
- **A chemo-mechanical cochleostomy preserves hearing for the in vivo functional imaging of cochlear cells.** *Nature protocols*
Kim, J., Ricci, A. J.
2023
- **ANKRD24 organizes TRIOBP to reinforce stereocilia insertion points.** *The Journal of cell biology*
Krey, J. F., Liu, C., Belyantseva, I. A., Bateschell, M., Dumont, R. A., Goldsmith, J., Chatterjee, P., Morrill, R. S., Fedorov, L. M., Foster, S., Kim, J., Nuttall, A. L., Jones, et al
2022; 221 (4)
- **Identifying targets to prevent aminoglycoside ototoxicity.** *Molecular and cellular neurosciences*
Kim, J., Hemachandran, S., Cheng, A. G., Ricci, A. J.
2022: 103722
- **In vivo real-time imaging reveals megalin as the aminoglycoside gentamicin transporter into cochlea whose inhibition is otoprotective.** *Proceedings of the National Academy of Sciences of the United States of America*
Kim, J., Ricci, A. J.
2022; 119 (9)
- **The functional role of connectors in outer-hair-cell hair bundles**
Zhu, Z., Ricci, A. J., Maoileidigh, D. O.
CELL PRESS.2022: 436A
- **A two-photon FRAP protocol to measure the stereociliary membrane diffusivity in rat cochlear hair cells.** *STAR protocols*
George, S. S., Steele, C. R., Ricci, A. J.
2021; 2 (3): 100637
- **Functional subgroups of cochlear inner hair cell ribbon synapses differently modulate their EPSC properties in response to stimulation.** *Journal of neurophysiology*
Niwa, M., Young, E. D., Glowatzki, E., Ricci, A. J.
2021
- **Loxhd1 mutations cause mechanotransduction defects in cochlear hair cells.** *The Journal of neuroscience : the official journal of the Society for Neuroscience*
Trouillet, A., Miller, K. K., George, S. S., Wang, P., Ali, N., Ricci, A., Grillet, N.
2021
- **Fluid Jet Stimulation of Auditory Hair Bundles Reveal Spatial Non-uniformities and Two Viscoelastic-Like Mechanisms.** *Frontiers in cell and developmental biology*
Peng, A. W., Scharr, A. L., Caprara, G. A., Nettles, D., Steele, C. R., Ricci, A. J.
2021; 9: 725101
- **In situ motions of individual inner-hair-cell stereocilia from stapes stimulation in adult mice.** *Communications biology*
Wang, Y., Steele, C. R., Puria, S., Ricci, A. J.
2021; 4 (1): 958
- **Rat Auditory Inner Hair Cell Mechanotransduction and Stereociliary Membrane Diffusivity Are Similarly Modulated by Calcium.** *iScience*
George, S. S., Steele, C. R., Ricci, A. J.

2020; 23 (12): 101773

- **Dissociating antibacterial from ototoxic effects of gentamicin C-subtypes.** *Proceedings of the National Academy of Sciences of the United States of America*
O'Sullivan, M. E., Song, Y., Greenhouse, R., Lin, R., Perez, A., Atkinson, P. J., MacDonald, J. P., Siddiqui, Z., Lagasca, D., Comstock, K., Huth, M. E., Cheng, A. G., Ricci, et al
2020
- **Effects of cochlear hair cell ablation on spatial learning/memory.** *Scientific reports*
Qian, Z. J., Ricci, A. J.
2020; 10 (1): 20687
- **Hair bundle stimulation mode modifies manifestations of mechanotransduction adaptation.** *The Journal of neuroscience : the official journal of the Society for Neuroscience*
Caprara, G. A., Mecca, A. A., Wang, Y., Ricci, A. J., Peng, A. W.
2019
- **A Bundle of Mechanisms: Inner-Ear Hair-Cell Mechanotransduction.** *Trends in neurosciences*
O Maoileidigh, D., Ricci, A. J.
2019
- **Uncoordinated maturation of developing and regenerating postnatal mammalian vestibular hair cells.** *PLoS biology*
Wang, T. n., Niwa, M. n., Sayyid, Z. N., Hosseini, D. K., Pham, N. n., Jones, S. M., Ricci, A. J., Cheng, A. G.
2019; 17 (7): e3000326
- **Dye Tracking Following Posterior Semicircular Canal or Round Window Membrane Injections Suggests a Role for the Cochlea Aqueduct in Modulating Distribution.** *Frontiers in cellular neuroscience*
Talaie, S., Schnee, M. E., Aaron, K. A., Ricci, A. J.
2019; 13: 471
- **Aminoglycoside ribosome interactions reveal novel conformational states at ambient temperature** *NUCLEIC ACIDS RESEARCH*
O'Sullivan, M. E., Poitevin, F., Sierra, R. G., Gati, C., Dao, E., Rao, Y., Aksit, F., Ciftci, H., Corsepilus, N., Greenhouse, R., Hayes, B., Hunter, M. S., Liang, et al
2018; 46 (18): 9793–9804
- **A mechanoelectrical mechanism for detection of sound envelopes in the hearing organ** *NATURE COMMUNICATIONS*
Nuttall, A. L., Ricci, A. J., Burwood, G., Harte, J. M., Stenfelt, S., Caye-Thomasen, P., Ren, T., Ramamoorthy, S., Zhang, Y., Wilson, T., Lunner, T., Moore, B. C. J., Fridberger, et al
2018; 9: 4175
- **TRPV6, TRPM6 and TRPM7 Do Not Contribute to Hair-Cell Mechanotransduction** *FRONTIERS IN CELLULAR NEUROSCIENCE*
Morgan, C. P., Zhao, H., LeMasurier, M., Xiong, W., Pan, B., Kazmierczak, P., Avenarius, M. R., Bateschell, M., Larisch, R., Ricci, A. J., Muller, U., Barr-Gillespie, P. G.
2018; 12: 41
- **The presynaptic ribbon maintains vesicle populations at the hair cell afferent fiber synapse** *ELIFE*
Becker, L., Schnee, M. E., Niwa, M., Sun, W., Maxeiner, S., Talaie, S., Kachar, B., Rutherford, M. A., Ricci, A. J.
2018; 7
- **Cell Membrane Organization is Important for Inner Hair Cell MET-Channel Gating**
Effertz, T., Scharr, A. L., Ricci, A. J.
edited by Bergevin, C., Puria, S.
AMER INST PHYSICS.2018
- **Inner Hair Cell Stereocilia Movements Captured In-Situ by a High-Speed Camera with Subpixel Image Processing**
Wang, Y., Puria, S., Steele, C. R., Ricci, A. J.
edited by Bergevin, C., Puria, S.
AMER INST PHYSICS.2018
- **Stimulus Dependent Properties of Mammalian Cochlear Hair Cell Mechanoelectrical Transduction**
Scharr, A. L., Ricci, A.

edited by Bergevin, C., Puria, S.
AMER INST PHYSICS.2018

- **Phosphoinositol-4,5-Bisphosphate Regulates Auditory Hair-Cell Mechanotransduction-Channel Pore Properties and Fast Adaptation** *JOURNAL OF NEUROSCIENCE*
Effertz, T., Becker, L., Peng, A. W., Ricci, A. J.
2017; 37 (48): 11632–46
- **Towards the Prevention of Aminoglycoside-Related Hearing Loss.** *Frontiers in cellular neuroscience*
O'Sullivan, M. E., Perez, A., Lin, R., Sajjadi, A., Ricci, A. J., Cheng, A. G.
2017; 11: 325
- **Activity-Dependent Phosphorylation by CaMKII δ Alters the Ca $^{2+}$ Affinity of the Multi-C2-Domain Protein Otoferlin.** *Frontiers in synaptic neuroscience*
Meese, S., Cepeda, A. P., Gahlen, F., Adams, C. M., Ficner, R., Ricci, A. J., Heller, S., Reisinger, E., Herget, M.
2017; 9: 13
- **Rise time reduction of thermal actuators operated in air and water through optimized pre-shaped open-loop driving** *JOURNAL OF MICROMECHANICS AND MICROENGINEERING*
Larsen, T., Doll, J. C., LOIZEAU, F., Hosseini, N., Peng, A. W., Fantner, G. E., Ricci, A. J., Pruitt, B. L.
2017; 27 (4)
- **Hair Cells and Their Synapses** *UNDERSTANDING THE COCHLEA*
Schnee, M. E., Ricci, A.
edited by Manley, G. A., Gummer, A. W., Popper, A. N., Fay, R. R.
2017; 62: 183–213
- **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*
Beurg, M., Goldring, A. C., Ricci, A. J., Fettiplace, R.
2016; 113 (24): 6767-6772
- **Adaptation Independent Modulation of Auditory Hair Cell Mechanotransduction Channel Open Probability Implicates a Role for the Lipid Bilayer** *JOURNAL OF NEUROSCIENCE*
Peng, A. W., Gnanasambandam, R., Sachs, F., Ricci, A. J.
2016; 36 (10): 2945-2956
- **Calcium-induced calcium release supports recruitment of synaptic vesicles in auditory hair cells.** *Journal of neurophysiology*
Castellano-Muñoz, M., Schnee, M. E., Ricci, A. J.
2016; 115 (1): 226-239
- **Glass Probe Stimulation of Hair Cell Stereocilia.** *Methods in molecular biology (Clifton, N.J.)*
Peng, A. W., Ricci, A. J.
2016; 1427: 487-500
- **Thyroid hormone is required for pruning, functioning and long-term maintenance of afferent inner hair cell synapses.** *The European journal of neuroscience*
Sundaresan, S., Kong, J. H., Fang, Q., Salles, F. T., Wangsawihardja, F., Ricci, A. J., Mustapha, M.
2015
- **Underestimated Sensitivity of Mammalian Cochlear Hair Cells Due to Splay between Stereociliary Columns** *BIOPHYSICAL JOURNAL*
Nam, J., Peng, A. W., Ricci, A. J.
2015; 108 (11): 2633-2647
- **Development and Characterization of Chemical Cochleostomy in the Guinea Pig** *OTOLARYNGOLOGY-HEAD AND NECK SURGERY*
Alyono, J. C., Corrales, C. E., Huth, M. E., Blevins, N. H., Ricci, A. J.
2015; 152 (6): 1113-1118
- **Activity-dependent regulation of prestin expression in mouse outer hair cells.** *Journal of neurophysiology*
Song, Y., Xia, A., Lee, H. Y., Wang, R., Ricci, A. J., Oghalai, J. S.
2015; 113 (10): 3531-3542

- **Designer aminoglycosides prevent cochlear hair cell loss and hearing loss.** *Journal of clinical investigation*
Huth, M. E., Han, K., Sotoudeh, K., Hsieh, Y., Effertz, T., Vu, A. A., Verhoeven, S., Hsieh, M. H., Greenhouse, R., Cheng, A. G., Ricci, A. J.
2015; 125 (2): 583-592
- **Cytoarchitecture of the mouse organ of corti from base to apex, determined using in situ two-photon imaging.** *Journal of the Association for Research in Otolaryngology : JARO*
Soons, J. A., Ricci, A. J., Steele, C. R., Puria, S.
2015; 16 (1): 47-66
- **Cytoarchitecture of the mouse organ of corti from base to apex, determined using in situ two-photon imaging.** *Journal of the Association for Research in Otolaryngology : JARO*
Soons, J. A., Ricci, A. J., Steele, C. R., Puria, S.
2015; 16 (1): 47-66
- **The how and why of identifying the hair cell mechano-electrical transduction channel.** *Pflügers Archiv : European journal of physiology*
Effertz, T., Scharr, A. L., Ricci, A. J.
2015; 467 (1): 73-84
- **Adaptation of Mammalian auditory hair cell mechanotransduction is independent of calcium entry.** *Neuron*
Peng, A. W., Effertz, T., Ricci, A. J.
2013; 80 (4): 960-972
- **Response properties from turtle auditory hair cell afferent fibers suggest spike generation is driven by synchronized release both between and within synapses** *JOURNAL OF NEUROPHYSIOLOGY*
Schnee, M. E., Castellano-Munoz, M., Ricci, A. J.
2013; 110 (1): 204-220
- **The elusive hair cell gating spring, a potential role for the lipid membrane.** *Journal of the Acoustical Society of America*
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2013; 133 (5): 3509-?
- **A Novel Ion Channel Formed by Interaction of TRPML3 with TRPV5** *PLOS ONE*
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2013; 8 (2)
- **Patch-Clamp Recordings from Lateral Line Neuromast Hair Cells of the Living Zebrafish** *JOURNAL OF NEUROSCIENCE*
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2013; 33 (7): 3131-3134
- **Integrity and Regeneration of Mechanotransduction Machinery Regulate Aminoglycoside Entry and Sensory Cell Death** *PLOS ONE*
Vu, A. A., Nadaraja, G. S., Huth, M. E., Luk, L., Kim, J., Chai, R., Ricci, A. J., Cheng, A. G.
2013; 8 (1)
- **Faster than the Speed of Hearing: Nanomechanical Force Probes Enable the Electromechanical Observation of Cochlear Hair Cells** *NANO LETTERS*
Doll, J. C., Peng, A. W., Ricci, A. J., Pruitt, B. L.
2012; 12 (12): 6107-6111
- **Swept Field Laser Confocal Microscopy for Enhanced Spatial and Temporal Resolution in Live-Cell Imaging** *7th Omaha Imaging Symposium*
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CAMBRIDGE UNIV PRESS.2012: 753-60
- **Permeation properties of the hair cell mechanotransducer channel provide insight into its molecular structure** *JOURNAL OF NEUROPHYSIOLOGY*
Pan, B., WAGUESPACK, J., Schnee, M. E., Leblanc, C., Ricci, A. J.
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- **Tracking vesicle fusion from hair cell ribbon synapses using a high frequency, dual sine wave stimulus paradigm.** *Communicative & integrative biology*
Schnee, M. E., Castellano-Munoz, M., Kong, J., Santos-Sacchi, J., Ricci, A. J.

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- **Integrating the biophysical and molecular mechanisms of auditory hair cell mechanotransduction** *NATURE COMMUNICATIONS*
Peng, A. W., Salles, F. T., Pan, B., Ricci, A. J.
2011; 2
- **Functional Hair Cell Mechanotransducer Channels Are Required for Aminoglycoside Ototoxicity** *PLOS ONE*
Alharazneh, A., Luk, L., Huth, M., Monfared, A., Steyger, P. S., Cheng, A. G., Ricci, A. J.
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Schnee, M. E., Santos-Sacchi, J., Castellano-Munoz, M., Kong, J., Ricci, A. J.
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- **Somatic motility and hair bundle mechanics, are both necessary for cochlear amplification?** *HEARING RESEARCH*
Peng, A. W., Ricci, A. J.
2011; 273 (1-2): 109-122
- **Mechanisms of aminoglycoside ototoxicity and targets of hair cell protection.** *International journal of otolaryngology*
Huth, M. E., Ricci, A. J., Cheng, A. G.
2011; 2011: 937861-?
- **New Devices for Investigating Hair Cell Mechanical Properties** *11th International Workshop on the Mechanics of Hearing*
Doll, J. C., Peng, A., Ricci, A., Pruitt, B. L.
AMER INST PHYSICS.2011
- **Exploring the Role of Mechanotransduction Activation and Adaptation Kinetics in Hair Cell Filtering Using a Hodgkin-Huxley Approach** *11th International Workshop on the Mechanics of Hearing*
Wells, G. B., Ricci, A. J.
AMER INST PHYSICS.2011
- **Elastostatic Analysis of the Membrane Tenting Deformation of Inner-Ear Stereocilia** *11th International Workshop on the Mechanics of Hearing*
Kim, J., Pinsky, P. M., Ricci, A. J., Puria, S., Steele, C. R.
AMER INST PHYSICS.2011
- **Three-Dimensional Imaging of the Mouse Organ of Corti Cytoarchitecture for Mechanical Modeling** *11th International Workshop on the Mechanics of Hearing*
Puria, S., Hartman, B., Kim, J., Oghalai, J. S., Ricci, A. J., Liberman, M. C.
AMER INST PHYSICS.2011
- **Mechanosensitive Hair Cell-like Cells from Embryonic and Induced Pluripotent Stem Cells** *CELL*
Oshima, K., Shin, K., Diensthuber, M., Peng, A. W., Ricci, A. J., Heller, S.
2010; 141 (4): 704-716
- **Rethinking How Hearing Happens** *NEURON*
Xu, Z., Ricci, A. J., Heller, S.
2009; 62 (3): 305-307
- **Localization of inner hair cell mechanotransducer channels using high-speed calcium imaging** *NATURE NEUROSCIENCE*
Beurg, M., Fettiplace, R., Nam, J., Ricci, A. J.
2009; 12 (5): 553-558
- **LOCALIZING HAIR CELL MECHANOTRANSDUCER CHANNELS USING HIGH SPEED CALCIUM IMAGING**
Ricci, A. J., Beurg, M., Nam, J., Fettiplace, R.
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