**2023 Symposium on the Past and Future of Hearing Research**

**In Honor of Professor Neil Segil**

Arnold & Mabel Beckman Center of the National Academies of Science & Engineering

100 Academy, Irvine, CA 92617

**(All times Pacific Standard Time)**

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|  | **Monday, May 22, 2023** |
| **9:00am-10:00am Registration/Check-in** |
| **10:00am-12:00pm SESSION 1 – CHAIR: Anne Calof** |
|  | **10:00am** |  **Introduction to Symposium (Scott Fraser, Anne Calof, Fan-Gang Zeng)** |
|  | **10:10am** | ***Opening Remarks: Andy McMahon,*** Professor and Director, Department of Stem Cell Biology and Regenerative Medicine, Eli and Edythe Broad CIRM Center USC (University of Southern California) |
|  | **10:15am** | ***Andy Groves*,** Professor and Director, Departments of Neuroscience and Molecular and Human Genetics**Title:** The potential and pitfalls of hair cell regeneration by transcription factor reprogramming |
|  | **10:45am** | ***Louise Menendez*,** Assistant Teaching Professor, USC Department of Stem Cell Biology and Regenerative Medicine**Title:** Characterization of an In Vitro Model of Sensory Hair Cells |
|  | **11:00am** | ***Robert Rainey*,** Postdoctoral Scientist, University of Southern California***Title:*** Creating human induced hair cells for high-throughput studies: a direct lineage reprogramming approach |
|  | **11:15am** | ***John Nguyen*,** PhD Student, University of Southern California**Title:** DNA methylation in the mouse cochlea promotes maturation of supporting cells and contributes to the failure of hair cell regeneration |
|  | **11:30pm** | ***David Raible*,** Virginia Merrill Bloedel Professor, University of Washington, Department of Otolaryngology***Title:*** Cell Shape and Cell Fate |
| **12:00pm -1:10pm LUNCH AND POSTER VIEW** |
| **1:10pm - 3:20pm SESSION 2 – CHAIR: Scott Fraser** |
|  | **1:10pm** | ***Fan-Gang Zeng*,** Professor, University of California, Irvine **Title:** Lessons from Cochlear implants: What leadership do we need in basic and translational research |
|  | **1:40pm** | ***Angelika Doetzlhofer,*** Associate Professor of Neuroscience, Johns Hopkins University School of Medicine**Title:** Molecular Mechanisms of Cochlear Supporting Cell Dedifferentiation and its Role in Hair Cell Regeneration |
|  | **2:00pm** | ***Patricia White*,** Associate Professor, Department of Neuroscience, Ernest J. Del Monte Institute for Neuroscience, University of Rochester School of Medicine and Dentistry **Title:** ERBB2 signaling as a candidate mediator of cochlear regeneration in mice |
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|  | **2:20pm** | ***Rodrigo Moneder*o,** Assistant Professor, Louisiana State University Health Science**Title:** AMPA receptors and PSD proteins expression at the auditory synapse and the formation of new neural connections |
|  | **2:40pm** | ***Ksenia Gnedeva*,** Assistant Professor, USC Caruso Department of Otolaryngology – Head and Neck Surgery and Eli and Edythe Broad CIRM Center for Regenerative Medicine and Stem Cell Research at USC (University of Southern California)**Title:** Establishment and Maintenance of the Post-Mitotic State in the Organ of Corti |
|  | **3:00pm** | ***Gage Crump*,** Professor of Stem Cell Biology and Regenerative Medicine, USC (University of Southern California)**Title:** My journey through the whole ear with Neil |
| **3:20pm - 4:00pm COFFEE BREAK AND POSTER VIEW** |
| **4:00pm – 5:45pm SESSION 3 - CHAIR: Fan-Gang Zeng** |
|  | **4:00pm** | ***Frank Lin*,** Professor of Otolaryngology and Epidemiology Director, Cochlear Center for Hearing and Public Health, Johns Hopkins University**Title:** Hearing, Aging, and Public Health – From Epidemiology to Public Policy in the U.S. |
|  | **4:30pm** | ***Tuo Shi,*** PhD Student, USC Stem Cell**Title:** Dissecting the requirement of atoh1a enhancers in zebrafish hair cell development and regeneration |
|  | **4:45pm** | ***Radha Kalluri*,** Assistant Professor, USC Caruso Department of Otolaryngology - Head and Neck Surgery**Title:** How biophysical diversity relates to functional diversity in inner ear bipolar neurons |
|  | **5:05pm** | ***Raymond Goldsworthy*,** Associate Professor of Otolaryngology, USC Keck School of Medicine**Title:** Music Appreciation after Cochlear Implantation |
|  | **5:25pm** | ***Martin Basch*,** Assistant Professor, Case Western Reserve University, School of Medicine**Title:** Building a sound (lateral) wall in the cochlea |
| **5:45pm - 6:30pm RECEPTION** |
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|  | **Tuesday, May 23, 2023** |
| **7:30am – 8:30am BREAKFAST** |
| **8:30am – 10:20am SESSION 4 - CHAIR: Steven Green** |
|  | **8:30am** | ***Lisa Goodrich*,** Professor, Department of Neurobiology**Title:** Transcriptional control of synaptic heterogeneity in the cochlea |
|  | **9:00am** | ***Justin Ichida,*** John Douglas French Alzheimer's Foundation Endowed Associate Professor of Stem Cell Biology and Regenerative Medicine, USC Keck School of Medicine**Title:** Generation of inner ear hair cells by direct lineage conversion and potential applications |
|  | **9:20am** | ***Talon Trecek*,** Graduate student, University of Southern California**Title:** The epigenetic landscapes underlying differentiation and plasticity in the developing organ of Corti. |
|  | **9:35am** | ***Xizi Emily Wang,*** Senior Bioinformatic data scientist, Atara Biotherapeutics Inc.**Title:** SoxC transcription factors shape the epigenetic landscape to establish competence for sensory differentiation in the organ of Corti |
|  | **9:50am** | ***Albert Edge,*** Eaton Peabody Professor, Department of Otolaryngology Harvard Medical School**Title:** Removing the barriers to hair cell regeneration by manipulation of epigenetic factors and protein half-life |
| **10:20am -11:00am COFFEE BREAK AND POSTER VIEW** |
| **11:00am- 12:50pm SESSION 5 – CHAIR: Edwin Rubel** |
|  | **11:00am** | ***Steven Green*,** Professor, University of Iowa**Title:** Reconnecting hair cells to the brain: synapse regeneration in the cochlea |
|  | **11:30am** | ***John Brigande*,** Professor of Otolaryngology; Professor, Oregon Nat’l Primate Research Center, Oregon Hearing Research Center, OHSU**Title:** Congenital Deafness, Vestibular Dysfunction, & Progressive Vision Impairment in a Rhesus Macaque Model of Usher Syndrome Type 1B |
|  | **11:50am** | ***Zhipeng Lu****,* Assistant Professor, USC Mann School of Pharmacy and Pharmaceutical Sciences**Title:** tRNA modifications controlling stem cell metabolism and fate determination |
|  | **12:10am** | ***Peter Barr-Gillespie,*** Chief Research Officer,Oregon Health & Science University**Title:** Building a bundle |
|  | **12:30pm** | ***Alain Dabdoub,*** Professor, Senior Scientist, University of Toronto/Sunnybrook Research Institute**Title:** Evidence of Repair and Regeneration in the Human Utricle |
| **12:50pm-1:00pm ADJOURNMENT AND CLOSING REMARKS** /Distribution of boxed Lunches |