



8:00-8:50 Morning Seminar 2

Room A

Chair: Shojaku H (Japan)

MS2 **Neural Mechanisms of Motion Sickness and Spatial Disorientation**
Takeda N (Japan)

Co-sponsor: Kowa Pharmaceutical Co. Ltd.

9:00-10:24 Podium 16: Stem Cells

Room A

Chairs: Gale JE (UK)
Taura A (Japan)

9:00 89 **The Regenerative Therapy for Vestibular Disorders with Human Induced Pluripotent Stem (iPS) Cells**

Taura A, Nakashima N, Onishi H, Nakagawa T, Ito J (Japan)

9:12 90 **The Paracrine Effect of Mesenchymal Stem Cells Restored Autoimmune Sensorineural Hearing Loss (hASC)**

Zhou B (USA), Du X (USA), Di Girolamo S (Italy), Barbieri M (Italy), Yoo TJ (USA, Korea)

9:24 91 **Auditory Brainstem Whole Mounts Promote the Differentiation of Neuronal Stem Cells of the Cochlear Nucleus in Co-culture Experiments**

Rak K, Voelker J, Voelker C, Schendzielorz P, Radeloff A, Hagen R (Germany)

9:36 92 **Toxicity Evaluation of Hydroxyapatite Powder Prepared for Tissue Engineering Using Adipo Derived Stem Cell (ADSC)**

Pham TK, Do QM, Le MD, Pham VP (Vietnam)

9:48 93 **In vitro Transition of Mouse Embryonic Stem-Cell Differentiation into Inner Ear Progenitors**

Abboud N, Fontbonne A, Brézun JM, Feron F, Zine A (France)

10:12 94 **Differentiation of Human Induced Pluripotent Stem Cells into Glutamatergic Neurons on 3D Scaffolds**

Ohnishi H, Skerleva D, Sakamoto T, Yamamoto N, Ito J, Nakagawa T (Japan)

10:00 95 **Transplantation of Neurons Derived from Human Induced Pluripotent Stem Cells into Guinea Pig Cochleae**

Ishikawa M, Onishi H, Skerleva D, Sakamoto T, Yamamoto N, Ito J, Nakagawa T (Japan)

11:00-12:00 Special Lecture

Room A

Chair: Ito J (Japan)

SL **Recent Progress in iPS Cell Research and Application**
Yamanaka S (Japan)

12:15-13:15 Luncheon Seminar 3

Room A

Chair: Sato H (Japan)

LS3 **Cochlear Implant Technologies – An Evolution**
Kulkarni A (USA)

Additional Speaker: Gulock R

Co-sponsor: Advanced Bionics Japan

8:45-9:29 Podium 17: Ototoxicity 2

Annex 2

Chairs: Rüttiger L (Germany)
Yamashita D (Japan)

- 8:45 96 Environmental Demands and Pharmacological Activation of Soluble Guanylyl Cyclase (sGC) Interact with the Progression of Age Related and Noise Induced Hearing Loss**
Target Lecture Rüttiger L, Varakina K, Möhrle D, Bing D, Knipper M (Germany)
- 9:05 97 Noise-induced Cochlear F-actin Depolymerization is Mediated by ROCK2/p-ERM Signaling Pathway**
Sha S-H, Han Y (USA)
- 9:17 98 Characterisation of Noise-Induced Cochlear Inflammation in a Mouse Model**
Tan WJT, Telang RS, Thorne PR, Vlajkovic SM (New Zealand)

9:30-10:38 Podium 18: Regeneration

Annex 2

Chairs: Edge ASB (USA)
Okano T (Japan)

- 9:30 99 Cochlear Hair Cell Generation from Lgr5-Positive Supporting Cells**
Target Lecture Bramhall NF, Shi F, Edge ASB (USA)
- 9:50 100 DAPT Enhances Atoh1 Activity to Generate New Hair Cells in situ Following Neomycin Ototoxicity in Rat Cochleae in vitro**
Yang J-M, Luo W-W, Han Z, Chi F-L (China)
- 10:02 101 DNA Damage Signaling Regulates Age-Dependent Proliferative Capacity of the Inner Ear Supporting Cells**
Laos M, Pirvola U (Finland)
- 10:14 102 Induction of Auditory Neurons in Cochlear Endogenous Cells in the Mammalian Cochlea**
Nishimura K, Dabdoub A (Canada)
- 10:26 103 Hearing Regeneration for Severe Sudden Deafness**
Ishizaki H (Japan)



8:45-10:33 Podium 19: Vestibular

Room B-1

Chairs: Magnusson M (Sweden)
Ishikawa K (Japan)

- 8:45 104 **Conservatively Managed Sporadic Vestibular Schwannoma: Audiovestibular Factors Influencing Quality of Life**
Hansen S, Yde J, Stangerup S, Nue Møller M, Workman C, Thomasen PC (Denmark)
- 8:57 105 **Otolith Dysfunction Caused by Acoustic Neuroma Affects Head Stability during Gait**
Ishikawa K, Itasaka Y, Omi E, Koizumi K (Japan)
- 9:09 106 **Long-term Administration of Vasopressin Can Cause Meniere's Disease in Mice**
Takumida M (Japan), Katagiri Y (Japan), Hirakawa K (Japan), Anniko M (Sweden)
- 9:21 107 **Psychiatric Comorbidity in Patients with Dizziness and the Therapy of Psychotropic Drugs**
Kiyomizu K, Matsuda K, Torihara K, Yoshida K, Tono T (Japan)
- 9:33 108 **Hearing Preservation on Intra Tympanic Gentamicin Treatment for Meniere's Disease**
Ishizaki H (Japan)
- 9:45 109 **Balance Deficit Enhances Anxiety and Balance Training Decreases Anxiety in Vestibular Mutant Mice**
Mintz M, Shefer S, Gordon C, Avraham KB (Israel)
- 9:57 110 **Utilizing the Oval Window as a Route for Gentamicin in Ablation of the Vestibular Apparatus, When Transtympanic Installments Fail in Patients with Meniere's Disease**
Magnusson M, Karlberg M, Tjernström F, Degerman E (Sweden)
- 10:09 111 **Dysfunction of the Peripheral Vestibular Organs may Contribute to Vertigo in Vestibulo-cochlear Schwannomas. A Human Temporal Bone Histopathology Study**
Nue Møller M, Hansen S, Miyazaki H, Thomasen PC (Denmark)
- 10:21 112 **Nondestructive Observation of the Vestibular Systems of *Slc26a4* K.O. Mice Using Optical Coherence Tomography**
Sakamoto T, Tona Y, Taura A, Nakagawa T, Ito J (Japan)

13:30-14:15 Keynote Lecture 5

Room A

Chair: Koizuka I (Japan)

KL5 **Synaptic Diversity and the Functional Roles of Cochlear Afferents**
Fuchs PA (USA)

14:20-15:40 Podium 20: Physiology

Room A

Chairs: Santos-Sacchi J (USA)
Nakagawa T (Japan)

14:20 113 **On the Area Motor Model of Prestin Activity**

Target Lecture Santos-Sacchi J, Song L (USA)

14:40 114 **Biophysical Properties of Mouse Ca^{2+} Channels Alter Before and After Onset of Hearing**

Inagaki A, Murakami S (Japan)

14:52 115 **Rab Interacting Molecule 2a (RIM2a) Regulates the Number and Function of $Ca_v1.3$ Ca^{2+} Channels at the Mouse Inner Hair Cell Afferent Synapse**

Oshima-Takago T, Jung S, Chakrabarti R, Picher MM, Wong AB, Jing Z, Michel K, Yamanbaeva G, Göttfert F, Predoehl F, Hell S, Schoch S, Strenzke N, Wichmann C, Moser T (Germany)

15:04 116 **Evaluation of Synaptic Function of Otoferlin at the Mouse Inner Hair Cell Ribbon Synapse by Postsynaptic Recording**

Takago H (Germany, Japan), Moser T (Germany)

117 **Assessment of Efferent Control of the Cochlea Using Wide Band Reflectance Measurement**

Harada T (Japan) ⇒ moved to Poster presentation

15:16 118 **Cochlear Adaptation Underpins Some Aspects of Temporary Threshold Shift**

Thorne PR (New Zealand), Vljakovic SM (New Zealand), Telang RS (New Zealand), Ryan AF (USA), Housley GD (Australia)

15:40- Closing Ceremony

Room A

Closing Remarks

Ito J (Japan)



14:20-15:28 Podium 21: Gene Therapy and Drug Delivery

Annex 2

Chairs: Raphael Y (USA)
Hakuba N (Japan)

- 14:20 119 Neurotrophin Gene Therapy Enhances the Neural Substrate of the Deaf Cochlea**
Target Lecture Takada Y (USA), Fukui H (USA), Shibata SB (USA), Budenz CJ (USA), Colesa DJ (USA), Swiderski DL (USA), Shivatzki S (Israel), Avraham KB (Israel), Pflingst BE (USA), Raphael Y (USA)
- 14:40 120 Protein Transduction Using Arginine-rich Cell Penetrating Peptides into the Inner Ear through the Round Window**
Takeda H, Minoda R, Yamada T, Ise M, Yumoto E (Japan)
- 14:52 121 How Long should Patients Remain in the Supine Treatment Position after Intratympanic Dexamethasone Injection?**
Park SH, Park C, Seo JY, Moon IS (Korea)
- 15:04 122 Round Window Membrane Vibration may Increase the Effect of Intratympanic Dexamethasone Injection**
Park SH, Moon IS (Korea)
- 15:16 123 Virally-mediated Gene Therapy to Restore Hearing for the Most Common Types of Human Congenital Deafness Caused by Null Mutations in *Gjb6*, *Gjb2*, *Slc26a4* and *Kcnq1* Show Promising Therapeutic Effects in Mouse Models**
Wang JJ, Chang Q, Li Q, Zhou BF, Wall S, Lin X (USA)