# Satellite Symposium: Pharmacological Therapeutics of Inner Ear Diseases

## Drug Delivery System (DDS)  Room A

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>13:00</td>
<td>SS1-1</td>
<td>Tinnitus in Meniere’s Disorder</td>
<td>Pyykkö I, Stephens D, Levo H, Kentala E, Poe D, Auramo Y (Finland, UK)</td>
</tr>
<tr>
<td>13:20</td>
<td>SS1-2</td>
<td>Current Status of Local Drug Delivery to the Inner Ear</td>
<td>Plontke SK (Germany)</td>
</tr>
<tr>
<td>13:40</td>
<td>SS1-3</td>
<td>Hydrogel Technology of Drug Delivery System for Pharmacological Therapeutics</td>
<td>Tabata Y (Japan)</td>
</tr>
<tr>
<td>14:00-14:30</td>
<td>Coffee Break</td>
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## Tinnitus  Room A

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>14:30</td>
<td>SS2-1</td>
<td>Molecular Aspects of Tinnitus</td>
<td>Knipper M, Singer W, Rüttiger L, Zuccotti A, Baur M, Reinbothe T, Panford-Walsh R, Köpschall I, Rohbock K, Zimmermann U (Germany)</td>
</tr>
<tr>
<td>14:50</td>
<td>SS2-2</td>
<td>Repetitive Transcranial Magnetic Stimulation (rTMS) for Treatment of Chronic Tinnitus</td>
<td>Minami S, Shinden S, Okamoto Y, Watabe T, Kanzaki S, Saito H, Inoue Y, Ogawa K (Japan)</td>
</tr>
<tr>
<td>15:10</td>
<td>SS2-3</td>
<td>Possibility and Reality of Treatment of Tinnitus Using Local Lidocaine Application via Inner Ear DDS</td>
<td>Sakamoto T, Horie RT, Tabata Y, Nakagawa T, Ito J (Japan)</td>
</tr>
<tr>
<td>15:30-16:00</td>
<td>Coffee Break</td>
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## Reactive Oxygen Species (ROS)  Room A

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
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</thead>
<tbody>
<tr>
<td>16:00</td>
<td>SS3-1</td>
<td>STAT1 Inhibition Attenuates Cisplatin Ototoxicity in the Mouse Utricle <em>in vitro</em> but not in the Mouse Cochlea <em>in vivo</em></td>
<td>Schmitt NC, Rubel EW, Nathanson NM (USA)</td>
</tr>
<tr>
<td>16:20</td>
<td>SS3-2</td>
<td>The Strategies against the Hair Cell Degeneration with Otoprotective Molecules</td>
<td>Yamashita H (Japan)</td>
</tr>
<tr>
<td>16:40</td>
<td>SS3-3</td>
<td>Generation and Reduction of Reactive Oxygen Species in the Cochlea</td>
<td>Kikkawa YS, Nakagawa T, Horie RT, Taniguchi M, Lin Y, Matsumoto Y, Yamasoba T, Ito J (Japan, China)</td>
</tr>
</tbody>
</table>
## Sixth International Symposium on Meniere’s Disease and Inner Ear Disorders

### Opening Ceremony

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Chairperson</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00-9:20</td>
<td>Opening Ceremony (Ikebana Performance)</td>
<td>Sasaoka R (Head Master Designate of Misho-ryu Sasaoka)</td>
</tr>
<tr>
<td>9:30-9:40</td>
<td>Opening Remarks by President</td>
<td>Ito J (Japan)</td>
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</tbody>
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### Opening Lecture

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Chairperson</th>
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<tbody>
<tr>
<td>9:40-9:55</td>
<td>History of the International Symposium on Meniere’s Disease</td>
<td>Ito J (Japan)</td>
</tr>
<tr>
<td>9:55-10:10</td>
<td>Coffee Break</td>
<td></td>
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### Plenary Lecture 1

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Chairperson</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:10-11:10</td>
<td>The Biology of the Endolymphatic Sac and Its Role in Meniere’s Disease</td>
<td>Igarashi M (Japan)</td>
</tr>
</tbody>
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### Presidential Lecture

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Chairperson</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:10-12:00</td>
<td>Regeneration Medicine for Inner Ear Diseases</td>
<td>Ito J (Japan)</td>
</tr>
</tbody>
</table>

### Luncheon Seminar 1

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Chairperson</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:15-13:15</td>
<td>Surgical Approaches to the Treatment of Meniere’s Related Vertigo</td>
<td>Friedman RA (USA)</td>
</tr>
</tbody>
</table>
Symposium 1: Phathophysiology of Meniere’s Disease  Room A

Chairpersons: Harris JP (USA)
Mori N (Japan)

13:30- S1-1 Genome-wide Association Study for Genes that Predispose to Meniere’s Disease
Ohmen J, White C, Wang J, Derebery J, Friedman RA (USA)

13:55- S1-2 Immunological Aspects of Meniere’s Disease and Its Implication on Pathogenesis
Tomiyama S (Japan)

14:20- S1-3 Hormonal Regulation of Endolymph Homeostasis and Its Involvement in the Pathogenesis of Meniere’s Disease
Ferrary E, Nevoux J, Couloigner V, Lombès M, Sterkers O (France)

14:45-15:00 Break

15:00- S1-4 Aquaporins: Molecular Mediators of Water Homeostasis in the Inner Ear
Löwenheim H (Germany)

15:25- S1-5 Role of Ion Transport in Endolymphatic Sac in Pathogenesis of Meniere’s Disease
Mori N (Japan)

15:50- S1-6 The Role of Mechanical Disturbances of the Organ of Corti in Hearing Sensitivity Changes of the Hydropic Ear
Salt AN (USA)

16:15-16:30 Coffee Break

Symposium 2: Protection of Inner Ear and Its Clinical Application  Room A

Chairpersons: Schacht J (USA)
Yamasoba T (Japan)

16:30- S2-1 Acquired Hearing Loss Today
Schacht J (USA)

16:55- S2-2 New Insights into Noise-Induced Hearing Loss: Mechanisms, Prevention and Therapy
Vlajkovic SM¹, Wong ACY¹,², Guo CX¹, Lee KH¹, Housley GD¹,², Thorne PR¹
(¹New Zealand, ²Australia)

17:20- S2-3 Basic and Translational Issues in Drug-induced Hearing Loss
Cunningham LL (USA)

17:45-17:55 Break

17:55- S2-4 Molecular Mechanisms of Age-related Hearing Loss in Mice: Toward Its Prevention in Humans
Yamasoba T, Someya S, Kashio A, Kondo K, Tonokura M (Japan)

18:20- S2-5 Clinical Studies on the Prevention of Acquired Hearing Loss
Sha SH (USA)
Symposium 3: Peer Support in Meniere’s Disease

Chairperson: Pyykkö I (Finland)

13:30 - S3-1 Peer-Support Program for Meniere’s Disease
Auramo Y1, Stephens D2, Levo H1, Kentala E1, Poe D1, Pyykkö I1 (1Finland, 2 UK)

13:50 - S3-2 The Role of Positive Experiences in Meniere’s Disorder
Stephens D1, Pyykkö I1, Levo H2, Kentala E2, Poe D2, Auramo Y2 (1UK, 2Finland)

14:10 - S3-3 Attitudes and Expectations (SOC) in MD – Can They be Changed?
Kentala E1, Stephens D2, Levo H1, Auramo Y1, Pyykkö I1, Poe D1 (1Finland, 2UK)

14:30 - S3-4 Vitality as a Key Factor in Alleviating the Impact of Meniere’s Disease
Pyykkö I1, Stephens D2, Levo H1, Kentala E1, Poe D1, Auramo Y1 (1Finland, 2UK)

14:50 - S3-5 Time Trade-off versus Self-rated Quality of Life in Evaluation of the Disease Burden in Meniere’s Disorder
Levo H1, Kentala E1, Stephens D2, Poe D1, Auramo Y1, Pyykkö I1 (1Finland, 2UK)

15:10-15:25 Break

15:25 - S3-6 The Impact of Meniere’s Disorder on Those Close to the Patient – Negative and Positive
Stephens D1, Pyykkö I2, Levo H2, Kentala E2, Poe D2, Auramo Y2 (1UK, 2Finland)

15:45 - S3-7 What ICF can Teach Us about Patients with MD
Yoshida T1, Pyykkö I2, Stephens D2, Poe D2, Kentala E2, Levo H2, Auramo Y2
(1Japan, 2Finland, 3UK)

16:05 - S3-8 The Value of Self-help Techniques Used by Patients with MD
Kentala E1, Stephens D2, Levo H1, Auramo Y1, Pyykkö I1, Poe D1 (1Finland, 2UK)

16:25 - S3-9 Improving Quality of Life in Meniere’s Disorder with Peer Support
Levo H1, Kentala E1, Stephens D2, Poe D1, Auramo Y1, Pyykkö I1 (1Finland, 2UK)
Podium 1: Surgery of Inner Ear Diseases
Room B-1

Chairpersons: Pfister M (Germany)
               Ishikawa K (Japan)

17:00 - O1-1  Long-term Hearing and Balance Outcomes of the Semicircular Canal Plugging in
              Patients with Intractable BPPV
              Seo T, Saka N, Sakagami M (Japan)

17:15 - O1-2  Transmastoid Plugging for Superior Semi-Circular Canal Dehiscence Syndrome:
              Is the Subarcuate Artery a Good Surgical Landmark?
              Somers T, Rotteveel L, Van Dinther J, Vanspauwen R, Defoer B, Zarowski A, Offeciers E
              (Belgium)

17:30 - O1-3  Minimally Invasive Approach for Cochlear Implantation Using a Microendoscope
              Hiraumi H, Yamamoto N, Sakamoto T, Ito J (Japan)

17:45 - O1-4  Effectiveness of Cochlear Implantation in Children with Sensorineural Hearing Loss:
              Comparison of Congenital Cytomegalovirus Infection and GJB2 Mutation
              Matsui T, Ogawa H, Yamada N, Baba Y, Nomoto M, Omori K (Japan)

18:00 - O1-5  The Fully Implantable Cochlea Amplifier CARINA – An Experience in 54 Patients
              with Combined Sensorineural as well as Middle Ear Hearing Loss
              Pfister M, Rodriguez J, Zenner HP (Germany)

18:15 - O1-6  A Novel Stapes Surgery Procedure for Otosclerosis
              Takagi A, Gyo K, Hori S, Umeda H, Tona Y, Yamada T (Japan)

18:30 - O1-7  Surgical Experience in Managing Patients with Labyrinthine Fistula
              Abdullah A, Faiz D, Mazita A, Goh BS, Salina H, Mohd Razif MY, Suraya A,
              Hamzaini AH, Saim L (Malaysia)

18:45 - O1-8  Impact of the Site of the Cochleostomy on Vestibular Functions
              Fraysse B, Martin-dupont N, Marx M, Deguine O, Esteve-Fraysse MJ (France)
Podium 2: Animal Models and Molecular Mechanisms of Inner Ear Diseases  Room B-2

First Half

Chairpersons: Hirose K (USA)  Kakigi A (Japan)

13:15- O2-1  Mechanism of Tinnitus: Immunohistological Findings for GABA in the Rat Cochlea
Horie RT¹, Nakagawa T¹, Sakamoto T¹, Singer W², Ruettiger L², Knipper M², Ito J¹
(¹Japan, ²Germany)

13:30- O2-2  Molecular Mechanism Underlying the Inner Ear Disorder Associated with Enlarged Vestibular Aqueduct
Yang T¹, Wu H¹, Smith RJH² (¹China, ²USA)

13:45- O2-3  Molecular Biology of Meniere Syndrome: Cytokine and Endocrine Causes
Brookler KH, Gilston N (USA)

14:00- O2-4  Na⁺ Transport Mechanism in the Reissner’s Membrane of the Cochlea
Lee JH, Kim CH, Jang JH, Kim HY, Lee HS, Kim CS, Oh SH, Chang SO (Korea)

14:15- O2-5  Role of HSF1 in Age-Related Hearing Loss
Lomax MI, Gong T-W, Dolan DF, Galecki A, Altschuler RA, Kohrmann DC (USA)

14:30- O2-6  One of Prostaglandin E Receptor is Involved with Maintenance of Hearing and Its Agonist Has Protective Effect against Noise Trauma in Mice
Hamaguchi K, Nakagawa T, Yamamoto N, Ito J (Japan)

14:45- O2-7  CLIMP-63 is a Gentamicin-Binding Protein Involved in Drug-Induced Cytotoxicity
Karasawa T, Wang Q, David LL, Steyger PS (USA)

15:00- O2-8  Oxidative Stress as a Final Common Pathway to Cell Death in the Inner Ear
Miller J¹,², Prieskorn D¹, DeRemer S¹, Altschuler R¹, Le Prell C¹ (¹USA, ²Sweden)

15:15-15:30 Coffee Break

Second Half

Chairpersons: Miller J (USA)  Yamane H (Japan)

15:30- O2-9  Time-lapse Live Imaging of Mouse Cochlear Cultures Demonstrates Activation and Rapid Mobilization of Cochlear Macrophages after Ototoxic Injury
Hirose K, Li SZ, Warchol M (USA)

15:45- O2-10  Experimental Autoimmune Saccitis
Friis M, Thomsen AR, Hansen JM, Qvortrup K (Denmark)

16:00- O2-11  Vestibular Function in a New Animal Model for Meniere’s Disease
16:15- O2-12  A Novel Mouse Model of Hearing Loss Associated with Enlargement of the Vestibular Aqueduct

16:30- O2-13  Genetic Evidence Supports a Role for Protocadherin 15 and Cadherin 23 in the Tip-Link Complex
Alagramam KN¹, Goodyear RJ², Geng R¹, Furness DN², Aken AV², Marcotti W², Kros CJ², Richardson GP² (¹USA, ²UK)

16:45- O2-14  Loss of Endocochlear Potential is Solely Responsible for Hearing Impairment in the Connexin30 Null Mice

17:00- O2-15  Ush1c Gene Expression Levels in the Ear and Eye Suggest Different Roles for Ush1c in Neurosensory Organs in a New Ush1c Knockout Mouse

17:15- O2-16  Stem Cell Therapy for Regeneration of the Auditory Cranial Nerve
Olivius P¹, Novozhilova E¹, Yu J¹, Palmgren B¹, Kaiser A¹, Thonabulsombat C¹:² (¹Sweden ²Thailand)

Podium 3: Intratympanic Treatment of Inner Ear Diseases  Room B-2

17:45- O3-1  Audio-Vestibular Function after Intra-tympanic Gentamicin Treatment in Natural History of Meniere’s Disease
Ishizaki H¹, Pyykkö F¹, Selmani Z² (¹Japan, ²Finland)

18:00- O3-2  Intratympanic Gentamicin Instillations-effective Treatment of Intractable Vertigo
Tomanovic T (Sweden)

18:15- O3-3  Selective Oval Window Gentamicin Application to Enhance Labyrinthine Ablation and to Spare the Cochlea in Meniere’s Disease
Magnusson M (Sweden)

18:30- O3-4  Is Complete Vestibular Ablation Necessary in Chemical Labyrinthectomy?
Olusesi AD (Nigeria)

18:45- O3-5  Intratympanic Dexamethasone Treatment for Inner Ear Disease as Salvage Treatment
Takeichi N, Obara N, Fujiwara K, Tsubuku T, Fukuda S (Japan)
### Morning Seminar 1

**Chairperson:** Ito J (Japan)

**8:00-9:00**  
**MS1**  
**Use of Flow Cytometry to Purify Inner Ear Progenitor Cells with Regenerative Capacity**  
Sinkkonen ST, Oshima K, **Heller S** (USA)

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### Plenary Lecture 2

**Chairperson:** Ito J (Japan)

**9:00-10:00**  
**PL2**  
**Evidence-based Medicine in Meniere’s Disease**  
Zenner HP (Germany)

**10:00-10:15**  
**Coffee Break**

### Symposium 4: Surgical Treatment of Inner Ear Diseases

**Chairpersons:** Lee WS (Korea)  
Naito Y (Japan)

**10:15 - S4-1**  
**Vestibular Neurectomy for Intractable Meniere’s Disease**  
Kim SH, Lee WS (Korea)

**10:40 - S4-2**  
**Surgical Treatment of Meniere’s Disease – Endolymphatic Sac Drainage or Vestibular Neurectomy?**  
Caye-Thomasen P (Denmark)

**11:05 - S4-3**  
**Vestibular Neurectomy for Meniere’s Disease**  
Friedman RA (USA)

**11:30-11:40**  
**Break**

**11:40 - S4-4**  
**The Present Status of Endolymphatic Sac Surgery: Analysis of 202 Operations with the Intra-endolymphatic Sac Application of Large Doses of Steroids**  
Kitahara T (Japan)

**12:05 - S4-5**  
**Surgery for Superior Canal Dehiscence Syndrome**  
Carey JP (USA)

### Luncheon Seminar 2

**Chairperson:** Kobayashi T (Japan)

**12:45-13:45**  
**LS2**  
**Practical Use of Digital Volume Tomography (Accu-i-tomo) for Temporal Bone Surgery**  
Murakami S (Japan)
### Podium 4: Pharmacological Treatment of Inner Ear Diseases  Room B-1

Chiarpersons: Alagramam KN (USA)  
Tabuchi K (Japan)

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<tr>
<th>Time</th>
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<th>Authors</th>
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<tbody>
<tr>
<td>10:30</td>
<td>O4-2</td>
<td>Pharmacological Protection of Hearing Loss in the Mouse Model of Meniere’s Disease</td>
<td>Melki SJ, Heddon CM, Frankel JK, Levitt AH, Momin SR, Alagramam KN, Megerian CA (USA)</td>
</tr>
<tr>
<td>10:45</td>
<td>O4-3</td>
<td>Administration of Atrial Natriuretic Peptide Improves Hearing Thresholds: Implications for Meniere’s Disease Treatment</td>
<td>Fitzakerley JL, Gilbert JS, Trachte GJ (USA)</td>
</tr>
<tr>
<td>11:00</td>
<td>O4-4</td>
<td>Delivery of Brain Derived Neurotrophic Factor to the Cochlea Improves Hearing</td>
<td>Sly DJ, Hampson AJ, Minter RL, Li J, Millard RE, Winata L, Heffer LF, O’Leary SJ (Australia)</td>
</tr>
<tr>
<td>11:15-11:30</td>
<td>Break</td>
<td></td>
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<tr>
<td>11:30</td>
<td>O4-5</td>
<td>Insulin-like Growth Factor1 Protects Cochlea Hair Cells against Aminoglycoside via the Phosphatidylinositol 3-kinase/Akt Pathway</td>
<td>Hayashi Y, Yamamoto N, Nakagawa T, Ito J (Japan)</td>
</tr>
<tr>
<td>11:45</td>
<td>O4-6</td>
<td>Identifying the Intra-cochlear Route of Aminoglycosides to Hair Cells</td>
<td>Li H, Steyger PS (USA)</td>
</tr>
<tr>
<td>12:00</td>
<td>O4-7</td>
<td>Effect of Neurotrophins on Auditory Nerve Function after Deafness</td>
<td>Sly DJ, Heffer LF, Minter RL, Ng M, Zhang J, Winata L, Shepherd RK, O’Leary SJ (Australia)</td>
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### Luncheon Seminar 3  Room B-1

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<thead>
<tr>
<th>Time</th>
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<th>Authors</th>
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<tbody>
<tr>
<td>12:45-13:45</td>
<td>LS3</td>
<td>Long Term Results after Retrosigmoid Vestibular Neurotomy</td>
<td>Magnan J (France)</td>
</tr>
</tbody>
</table>
Podium 5: Analysis of Gene Expression in Inner Ear  Room B-2

Chairpersons: Oh SH (Korea)
Minoda R (Japan)

10:15- O5-1 The Expression Pattern and the Function of Septins in the Mouse Cochlea
Yoshida A, Yamamoto N, Nakagawa T, Ito J (Japan)

10:30- O5-2 Tsukushi Gene Expression in the Mouse Cochlea
Minoda R, Hayashida M, Miwa T, Yumoto E (Japan)

10:45- O5-3 Comprehensive Analysis of Gene Expression Patterns in Mouse Cochlear Lateral Walls
Nishimura K, Yamamoto N, Nakagawa T, Ito J (Japan)

11:00- O5-4 Gene Expression of the Endolymphatic Sac
Friis M, Bertelsen T, Winther O, Henao R, Sørensen MS, Friis-Hansen L, Qvortrup K (Denmark)

11:15- O5-5 Microarray Analysis of Plasticity in Rat Primary Auditory Cortex
Song JJ, An YH, Yoo JC, Lee JH, Chang SO, Kim CS, Oh SH (Korea)

11:30-11:45 Coffee Break

Podium 6: BPPV  Room B-2

Chairperson: Yamanaka T (Japan)

11:45- O6-1 Length of Common Crus in Patients with Posterior Canal Type of Benign Paroxysmal Positional Vertigo
Aoki S, Arai Y, Suzuki K, Masukawa A, Takei Y (Japan)

12:00- O6-2 Secondary Benign Paroxysmal Positional Vertigo
Lee N-H, Ban JH, Kim SM (Korea)

12:15- O6-3 The Evaluation of the Effects of Betahistine in Addition to the Epley Maneuver on the Symptoms and Quality of Life Indices in Posterior Canal Benign Paroxysmal Positional Vertigo of the Canalithiasis Type
Güneri EA, Kuştutan Ö (Turkey)
Podium 7: Novel Treatment of Inner Ear Diseases

Chairpersons: Ernst A (Germany)
Nakayama M (Japan)

10:15- O7-1 From the Endolymphatic Sac to the Scala Media in Humans: An Objective Demonstration with Local Gadolinium Administration
Colletti L, Mandalà M (Italy)

10:30- O7-2 Cervical Specific Protocol and Results for 300 Meniere’s Patients
Burcon MT (USA)

10:45- O7-3 A New Therapy of Meniere’s Disease: Betterment of Lifestyle and Aerobic Exercise
Takahashi M (Japan)

11:00- O7-4 Neurofeedback-Based, Vestibular Rehabilitation in Meniere’s Disease
Ernst A, Basta D (Germany)

11:15-11:30 Coffee Break

Podium 8: Clinical Test of Inner Ear Diseases

Chairpersons: Bozorg Grayeli A (France)
Yabe T (Japan)

11:30- O8-1 Capacity of the Rectified VEMP in Correcting Asymmetric Muscle Contraction Power
Suh M-W, Kim KW, Rhee CK, Jung JY (Korea)

11:45- O8-2 Value of Tilt Suppression Test in Assessing the Otolithic Function
Toupet M¹, Van Nechel C¹,², Heuschen S², Bernardeschi D¹, Bozorg Grayeli A¹
(¹ France, ² Belgium)

12:00- O8-3 Comparison of Dizziness Handicap Inventory Results in Different Vestibular Pathologies
Mutlu B, Serbetcioglu B, Mungan S, Durgut M (Turkey)

12:15- O8-4 Handedness and Audiospatial Perception of Sound
Olusesi AD, Ojetoyinbo O (Nigeria)
### Symposium 5: Recent Topics in Ménière’s Disease Treatment

**Room A**

**Chairpersons:** Koizuka I (Japan)  
Salt AN (USA)

<table>
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<tr>
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<th>Session</th>
<th>Topic</th>
<th>Authors</th>
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<tbody>
<tr>
<td>14:45</td>
<td>S5-1</td>
<td>Image Evaluation of Endolymphatic Space in Patients with Ménière’s Disease</td>
<td>Nakashima T, Naganawa S, Sone M, Teranishi M (Japan)</td>
</tr>
<tr>
<td>15:10</td>
<td>S5-2</td>
<td>OTO-104: A Sustained Release Dexamethasone Hydrogel Formulation for the Treatment of Ménière’s Disease</td>
<td>Piu F (USA)</td>
</tr>
<tr>
<td>15:35</td>
<td>S5-3</td>
<td>Aquaporins as Potentials Drug Targets for Ménière’s Disease and Its Related Diseases</td>
<td>Takeda T, Kakigi A (Japan)</td>
</tr>
<tr>
<td>16:00-16:10</td>
<td></td>
<td>Break</td>
<td></td>
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<tr>
<td>16:10</td>
<td>S5-4</td>
<td>Long-term Effects of the Meniett Device in Japanese Patients with Ménière’s Disease or Delayed Endolymphatic Hydrops</td>
<td>Shojaku H, Watanabe Y, Mineta H, Aoki M, Tsubota M, Watanabe K, Goto F, Shigeno K (Japan)</td>
</tr>
<tr>
<td>16:35</td>
<td>S5-5</td>
<td>Meniett Treatment in the Therapeutical Algorithm for Ménière’s Disease</td>
<td>Barbara M, Monini S (Italy)</td>
</tr>
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</table>
Podium 9: Molecular Analysis of Clinical Samples

Chairpersons: Lopez-Escamez JA (Spain)
            Noguchi Y (Japan)

14:45- O9-1  Proteomic Analysis of the Endolymphatic Sac Luminal Fluid in Patients with
            Enlarged Vestibular Aqueduct (EVA)
            Kim SH, Choi EY, Yang WS, Son EJ, Choi JY (Korea)

15:00- O9-2  Variable Expressivity of FGF3 Mutations Associated with Inner Ear Agenesis in
            Humans
            Choi BY¹,², Riazuddin S², Ahmed Z², Hegde R², Riazuddin S¹, Griffith AJ², Friedman TB²
            (¹Korea, ²USA, ³Pakistan)

15:15- O9-3  Detection of Cytomegalovirus DNA in the Perilymphatic Fluid
            Ogawa H, Matsui T, Baba Y, Suzutani T, Omori K (Japan)

15:30- O9-4  Newborn Genetic Screening for Hearing Impairment: A Preliminary Study in a
            Tertiary Center
            Lin YT, Wu CC, Hung CC, Lin SY, Hsieh WS, Tsao PN, Su YN, Hsu CJ (Taiwan)

15:45-16:00  Break

16:00- O9-5  Significance of Serotonin Transporter Gene Polymorphism in Tinnitus
            Bayazit YA, Deniz M, Menevse A (Turkey)

16:15- O9-6  A CCTTT-repeat at the Promoter of NOS2A Gene is Associated with Meniere’s
            Disease in European Caucasian Population
            Lopez-Escamez JA, Moreno A, Gazquez I, Aran I, Soto-Varela A, Santos S,
            Perez-Garrigues H, Lopez-Nevot A, Lopez-Nevot MA (Spain)

16:30- O9-7  MICA Polymorphisms and Meniere’s Disease in European Caucasian Population
            Gazquez I, Lopez-Escamez JA, Moreno A, Perez-Garrigues H, Santos S,
            Soto-Varela A, Aran I, Lopez-Nevot MA (Spain)

16:45- O9-8  Genetically Determined Ionic Transporters Dysfunction as a Predisposing Factor for
            Meniere’s Disease: The Role of α-Adducin Mutation and Endogenous Ouabain
            Teggi R, Zagato L, Delli Carpini S, Casamassima N, Manunta P, Bussi M (Italy)
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Speakers</th>
</tr>
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<tbody>
<tr>
<td>14:45</td>
<td>O10-1</td>
<td>Current Day Prevalence of Meniere’s Syndrome</td>
<td>Harris JP, Alexander TH (USA)</td>
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<tr>
<td>15:00</td>
<td>O10-2</td>
<td>Analysis of Clinical Characteristics in Meniere’s Disease</td>
<td>Jang JH, Yoo JC, An YH, Kim YH, Oh SH, Chang SO, Lee JH (Korea)</td>
</tr>
<tr>
<td>15:15</td>
<td>O10-3</td>
<td>Diagnosis of Meniere’s Disease: Results of a Survey in South Korea</td>
<td>Cho SY, Lim HW, Choi SW, Chang JW, Choi J, Jung HH, Chae SW (Korea)</td>
</tr>
<tr>
<td>15:30</td>
<td>O10-4</td>
<td>Treatment Strategy for Meniere Disease</td>
<td>Ishikawa K, Omi E, Saito T, Koizumi K, Koizumi T, Angunsri N (Japan)</td>
</tr>
<tr>
<td>15:45</td>
<td>O10-5</td>
<td>Our Clinical Experience of Vertigo in Childhood and Adolescents</td>
<td>Taekuchi K, Sakaida H, Ogihara H, Takeo T, Yuta A, Miyahara M (Japan)</td>
</tr>
</tbody>
</table>
Podium 11: Stem Cell Biology of Inner Ear  Room C-2

Chairpersons: Löwenheim H (Germany)
Taura A (Japan)

14:45- O11-1  Mouse Embryonic Stem Cells Differentiated into Schwann Cell-like Cells that Produce Macrophage Migration Inhibitory Factor (MIF) are Capable of Attracting Spiral Ganglion Neurons (SGN) to a Cochlear Prosthesis
Ramamurthy P¹, Ebisu F¹, Roth T¹, Barald K¹ (¹USA, ²Japan)

15:00- O11-2  Characterization of the Human ES Cell Line Secreting Osmotically Active Substances
Moon SK¹, Woo JI¹, Cha K¹, Oh SJ¹, Folayan G¹, Rask-Andersen H², Lim DJ¹ (¹USA, ²Sweden)

15:15- O11-3  Notch Signaling Determines Sensory or Neuronal Fate of Inner Ear Stem Cells
Fujisaka M¹, Jeon S-J¹, Ogawa K², Edge ASB¹ (¹USA, ²Japan)

15:30- O11-4  Stem Cells from the Organ of Corti as a Drug Screening Tool

15:45- O11-5  A Transient, Afferent Input-dependent, Postnatal Niche for Neural Progenitors in the Cochlear Nucleus
Volkenstein S¹, Sinkkonen S¹, Jan T¹, Most S¹, Cheng A¹, Oshima K¹, Heller S¹ (¹USA, ²Germany)

Podium 12: Morphological Aspects of Inner Ear Diseases  Room C-2

Chairpersons: Lysakowski A (USA)
Kita T (Japan)

16:00- O12-1  A Re-examination of the Striated Organelle in Vestibular Endorgans
Lysakowski A, Vranceanu F (USA)

16:15- O12-2  Morphological Change of the Cupula and Its Effect on the Ampullary Nerve Potentials after Mechanical Rupturing of the Membranous Labyrinth
Konomi U, Suzuki M, Otsuka K, Inagaki T, Jihmura Y, Kondo T, Ogawa Y (Japan)

16:30- O12-3  Rootlet Structure of Stereocilia is Necessary for Vestibular Function
Kitajiri S¹, Belyantseva I², Friedman TB², Jones SM² (¹Japan, ²USA)

16:45- O12-4  Topographic and Quantitative Estimation of Cochlear Efferents and Afferents in Mice
Ruan QW, Wang DH, Wang ZM, Yin SK (China)
### Morning Seminar 2

Chairperson: Watanabe Y (Japan)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenters</th>
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<tbody>
<tr>
<td>8:00-9:00</td>
<td>Current Pharmacotherapy of Vertigo, Dizziness and Nystagmus</td>
<td>Strupp M, Brandt T (Germany)</td>
</tr>
</tbody>
</table>

### Plenary Lecture 3

Chairperson: Ito J (Japan)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenters</th>
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<tbody>
<tr>
<td>9:00-10:00</td>
<td>Habilitation in the 21st Century: Cellular Studies of Death, Protection and Regeneration of Hair Cells in Vestibular Epithelium and Vestibular-like Epithelium</td>
<td>Rubel EW (USA)</td>
</tr>
</tbody>
</table>

### Symposium 6: Genetics of Inner Ear Diseases

I: Short Lecture

Chairperson: Usami S (Japan)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenters</th>
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<tbody>
<tr>
<td>10:00-10:30</td>
<td>Identifying a Genetic Component to Meniere’s Disease</td>
<td>Smith RJH (USA)</td>
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</tbody>
</table>

II: Symposium: Responsible Genes for Deafness in Asian Population

Chairpersons: Usami S (Japan) Smith RJH (USA)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenters</th>
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</thead>
<tbody>
<tr>
<td>10:30-</td>
<td>Genetic Testing for Deafness: An Overview</td>
<td>Smith RJH (USA)</td>
</tr>
<tr>
<td>10:50-</td>
<td>Efficient Molecular Genetic Diagnosis of Enlarged Vestibular Aqueducts in East Asians</td>
<td>Oh SH (Korea)</td>
</tr>
<tr>
<td>11:10-</td>
<td>Clinical Applications of Genetic Diagnosis for Deafness</td>
<td>Wu CC (Taiwan)</td>
</tr>
<tr>
<td>11:30-</td>
<td>Genetic Testing for Deafness and Translational Medicine</td>
<td>Dai P (China)</td>
</tr>
<tr>
<td>11:50-</td>
<td>Comparison with the Mutation Spectrum and Screening Strategy</td>
<td>Usami S (Japan)</td>
</tr>
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</table>

### Luncheon Seminar 4

Chairperson: Ito J (Japan)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Presenters</th>
</tr>
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<tbody>
<tr>
<td>12:30-13:30</td>
<td>A Vestibular Implant for the Treatment of Meniere’s Disease</td>
<td>Rubinstein JT, Phillips JO, Nie K, Bierer S, Ling L (USA)</td>
</tr>
<tr>
<td>Time</td>
<td>Session</td>
<td>Title</td>
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</tr>
<tr>
<td>10:15</td>
<td>O13-1</td>
<td>Impaired Quality of Sleep in Meniere’s Disease Patients</td>
</tr>
<tr>
<td>10:30</td>
<td>O13-2</td>
<td>Eustachian Tube Function in Patients with Clinical Meniere’s Syndrome</td>
</tr>
<tr>
<td>10:45</td>
<td>O13-3</td>
<td>Outer Hair Cell Function is Unstable in Meniere Ears near an Attack</td>
</tr>
<tr>
<td>11:15-11:30</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>11:30</td>
<td>O13-5</td>
<td>Meniere’s Disease Patients Show Enhanced Eye Velocity and Altered VOR Dynamics in Response to High Acceleration Head Rotations</td>
</tr>
<tr>
<td>11:45</td>
<td>O13-6</td>
<td>Ocular and Cervical Vestibular-Evoked Myogenic Potentials (oVEMPs and cVEMPs) to Bone Conducted Vibration (BCV) in Meniere’s Disease during Quiescence vs during Acute Attacks</td>
</tr>
<tr>
<td>12:00</td>
<td>O13-7</td>
<td>Are Attacks of Vertigo during Meniere’s Disease due to a Sudden Increase in Endolymph Volume within the Vestibular Portion of the Labyrinth?</td>
</tr>
</tbody>
</table>
Podium 14: Imaging of Inner Ear Diseases  Room B-2

Chairpersons: Franco Vidal V (France)
Tanigawa T (Japan)

10:15- O14-1  Intraoperative Observation of the Endolymphatic Sac by Narrow Band Imaging
Kumagami H, Sainoo Y, Hara M, Akiyama N, Murata A, Fujiyama D, Takasaki K, Takahashi H (Japan)

10:30- O14-2  Visualisation of Inner Ear Disorders with MRI in vivo: From Animal Models to Human Application
Pyykkö I, Zou J, Poe D (Finland)

10:45- O14-3  Visualization of Endolymphatic Hydrops and the Correlations with Functional Tests in Patients with Meniere's Disease
Seo YJ, Park DY, Kim J, Lee WS (Korea)

11:00- O14-4  Endolymphatic Hydrops in Meniere’s Disease and Sudden Deafness Detected by MRI after Intratympanic Administration of Gadolinium
Horii A, Osaki Y, Kitahara, Imai T, Uno A, Nishiike S, Fujita N, Inohara H (Japan)

11:15-11:30  Break

11:30- O14-5  Blockage of Endolymph by Saccular Otoconia in Meniere’s Disease
Yamane H¹, Takayama M¹, Sunami K¹, Sakamoto H¹, Imoto T¹, Anniko M² (¹Japan , ²Sweden)

11:45- O14-6  Detection of Perilymphatic Fistulae by Virtual Endoscopy of Middle Ear on CT-Scan Combined to Variation of Reconstruction Thresholds: Clinical Application
Bensimon JL, Toupet M, Delquinies E, Ferrary E, Sterkers O, Bozorg Graveli A (France)

12:00- O14-7  Anatomo-radiological Study of the Superior Semicircular Canal Dehiscence of 41 Cadaver Temporal Bones
Franco Vidal V, Mondina M, Darrouzet V (France)
Symposium 7: Development and Regeneration of Inner Ear
Room A

Chairpersons: Heller S (USA)
Kelley MW (USA)

13:45 - S7-1 Development and Regeneration of the Inner Ear: Coordinating Cell Cycle and Differentiation – Constraining Notch Signaling
Segil N, Doetzlhofer A, White P, Abdolazimi Y, Hoa M, Kwan T, Stojanova Z, Groves AK (USA)

14:10 - S7-2 Rbpj is Required for Development of Prosensory Cells in the Mammalian Inner Ear
Yamamoto N1,2, Chang W1, Kelley MW1 (1USA, 2Japan)

14:35 - S7-3 The Distinct Roles of FGF Signaling on the Development of the Mammalian Cochlea
Hayashi T1, Bermingham-McDonogh O2 (1Japan, 2USA)

15:00-15:20 Break

15:20 - S7-4 A Role for FGF Signalling in Hair Cell Morphogenesis
Kita T, Honda A, Muta Y, Ladher RK (Japan)

15:45 - S7-5 The Canonical Wnt/β-Catenin Signaling Pathway Induces Prosensory Cell and Hair Cell Formation in the Mammalian Cochlea
Dabdoub A, Jacques B (USA)

16:10 - S7-6 Sensory Patterning of the Mammalian Cochlea: Roles of BMP Signaling
Ohyama T, Basch ML, Mishina Y, Lyons KM, Segil N, Groves AK (USA)

16:35-16:55 Break

16:55 - S7-7 Stem Cells for Cochlear Repair

17:20 - S7-8 Mechanosensitive Hair Cell-like Cells from Embryonic and Induced Pluripotent Stem Cells
Oshima K, Heller S (USA)

17:45 - S7-9 FGF9 Family Members Influence the Spatial Patterning of Regenerated Hair Cells
Warchol ME, Voelker CCJ (USA)

Closing Ceremony
Room A

18:15 - Closing Remarks
Ito J (Japan)
Podium 15: New Device and Drug Delivery System for Inner Ear Diseases  Room B-1

Chairpersons: Barbara M (Italy)
Shimogori H (Japan)

13:30-  O15-1  A New Device for Delivering Drugs into the Inner Ear: Otoendoscope with Catheter
Kanzaki S, Saito H, Inoue Y, Ogawa K (Japan)

13:45-  O15-2  Nanotechnology Based Drug Delivery System in the Inner Ear: The Nanoear Project
Pyykkö I, Zou J (Finland)

14:00- O15-3  Infection-mediated Vasoactive Peptides Modulate Cochlear Uptake of Fluorescent Gentamicin
Koo J-W1, Wang Qi2, Steyger PS2 (1Korea, 2USA)

14:15-  O15-4  Vestibular/Balance Prostheses for Meniere’s Disease
Wall C (USA)

14:30-  O15-5  Recording of Secondary Vestibular Neurons during Electrical Stimulation with a Vestibular Implant for the Treatment of Meniere’s Disease

14:45-  O15-6  Totally-implantable Middle Ear Device for Rehabilitation of Sensorineural Hearing Loss
Monini S, Cameli V, Tarentini S, Marrone V, Barbara M (Italy)

15:00-  O15-7  Different Inner Ear Prosthesis in Partial Deafness Treatment
Skarzynski PH, Skarżyński H, Lorens A (Poland)

15:15-15:45  Coffee Break

Podium 16: Rehabilitation of Inner Ear Diseases  Room B-1

Chairpersons: Gottshall KR (USA)
Goto F (Japan)

15:45-  O16-1  Psychological Approach to the Patients with Meniere Disease
Goto F, Tsutsumi T, Nakai K, Ogawa K (Japan)

16:00-  O16-2  The Role of Vestibular Rehabilitation in the Treatment of Meniere’s Disease Post-blast Mild Traumatic Brain Injury
Gottshall KR, Hoffer ME, Balaban C (USA)

16:15-  O16-3  Parallel, Surgical Rehabilitation of Audio-Vestibular Symptoms in Meniere’s Disease
Ernst A, Todt I (Germany)

16:30-  O16-4  Hearing Rehabilitation of Patients with Meniere's Disease
McNeill C (Australia)

16:45-  O16-5  Rehabilitation of Fluctuating Hearing Loss by Cochlear Implant
Nevoux J, Bouccara D, Bozorg-Grayeli A, Mosnier I, Borel S, Ambert-Dahan E, Ferrary E, Sterkers O (France)

17:00-17:15  Coffee Break
Chairpersons: Ceramic B (UK)
Takeuchi K (Japan)

17:15- O17-1 Meniere’s Disease and Migraine Clinical Overlap: A Grey Area
Ceranic B (UK)

17:30- O17-2 Imitator of Meniere’s Disease—Basilar Migraine
Lin JH, Lai JT (Taiwan)

17:45- O17-3 Post-traumatic Endolymphatic Hydrops after Mild Traumatic Brain Injury
Hoffer ME, Balaban CD, Gottshall KR, Balough BJ, Pfannenstiel TJ (USA)

18:00- O17-4 Interest of Audio-vestibular Workup in Chiari Malformation
Franco Vidal V, Gimbert E, Darrouzet V (France)
## Podium 18: Diagnosis of Endolymphatic Hydrops

**Chairpersons:** Gibson WPR (Australia)  
Ishizaki H (Japan)

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
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<tbody>
<tr>
<td>13:45</td>
<td>O18-2</td>
<td>Development of an Objective Measure to Assess the Effectiveness of Treatments for Meniere’s Disease/Cochlear Hydrops</td>
<td>Don M (USA)</td>
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<tr>
<td>14:00</td>
<td>O18-3</td>
<td>Diagnostic Efficiency of Cochlear Hydrops Analysis Masking Procedure (CHAMP) in Meniere’s Disease</td>
<td>Choung Y-H, Lee JB, Sohn I, Chun HJ, Park K (Korea)</td>
</tr>
<tr>
<td>14:15</td>
<td>O18-4</td>
<td>The Significance of Low Frequency Hearing in Meniere’s Disease</td>
<td>Choi JS, Lee SJ, Kim KS, Choi HS (Korea)</td>
</tr>
<tr>
<td>14:30</td>
<td>O18-5</td>
<td>Objective Diagnosis of Endolymphatic Hydrops Using Biased Distortion Product Otoacoustic Emissions</td>
<td>Brown DJ¹, Gibson WPR¹, Salt AN² (¹Australia, ²USA)</td>
</tr>
<tr>
<td>14:45</td>
<td>O18-6</td>
<td>Early Detection of Meniere's Disease and Inner Ear Disorders</td>
<td>Abdi S (Iran)</td>
</tr>
<tr>
<td>15:00-15:15</td>
<td>Break</td>
<td></td>
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<tr>
<td>15:15</td>
<td>O18-7</td>
<td>Has Transtympanic Electrocochleography a Role in the Diagnosis of Meniere’s Disease?</td>
<td>Gibson WPR (Australia)</td>
</tr>
<tr>
<td>15:30</td>
<td>O18-8</td>
<td>Enhancement of Electrically-evoked Vestibulo-ocular Reflex in Meniere’s Disease</td>
<td>Aw ST¹, Todd MJ¹, Schneider E², Halmagyi GM¹ (¹Australia, ²Germany)</td>
</tr>
<tr>
<td>15:45</td>
<td>O18-9</td>
<td>Interest to Compare Caloric and Head Impulse Test Responses in Differential Diagnosis of Meniere's Disease</td>
<td>Ulmer EG (France)</td>
</tr>
<tr>
<td>16:00</td>
<td>O18-10</td>
<td>Vasopressin in 80 Patients with “Clinically Certain” Meniere’s Disease</td>
<td>Hornibrook J, George P, Gourley J (New Zealand)</td>
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<tr>
<td>16:30-16:45</td>
<td>Coffee Break</td>
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</table>
Podium 19: Surgery of Meniere’s Disease

Chairpersons: Mandalà M (Italy)  
Miyazaki H (Japan)

16:45- O19-1 Long-term Results of Endolymphatic Mastoid Shunt Surgery in Patients with Intractable Meniere’s Disease  
Lim HW, Lee KS, Chung JW (Korea)

17:00- O19-2 Endolymphatic Sac Decompression versus Endolymphatic Sac Decompression with Steroid Injection  
Mandalà M, Colletti L (Italy)

17:15- O19-3 Temporal Bone Findings in Patients with Meniere's Disease who Underwent Endolymphatic Sac Decompression  
Chung JW¹, Linthicum F², McKenna M², Merchant S² (¹Korea, ²USA)

17:30- O19-4 Vestibular Neurectomy as a Salvage Treatment in Meniere’s Disease Patients Treated with Gentamicin  
Mandalà M, Colletti L (Italy)

17:45- O19-5 Minimally Invasive Endoscope-assisted Vestibular Neurectomy for Intractable Meniere’s Disease  
Miyazaki H¹,², Moriyama H¹, Magnan J² (¹Japan, ²France)

18:00- O19-6 Retrosigmoid Vestibular Neurectomy in the Treatment of Intractable Peripheral Vertigo  
Bayazit YA, GoksU N (Turkey)