

## Sessions-At-A-Glance

### Symposium S01, Autonomic Regulation Wednesday July 7, 1100–1300

- O001 Vestibular Function Revisited: Influence on Physiological Homeostasis.** C. A. Fuller
- O002 The Role of the Vestibular System in Respiratory Regulation.** B. J. Yates, I. Billig, L. Cotter, A. Anker, T. Shin-tani, K. Wilkinson
- O003 Vestibular Effects on Cerebral Blood Flow Regulation.** J. M. Serrador
- O004 Labyrinthectomy Decreases Bone Mineral Density in the Femoral Metaphysis in Rats.** P. Denise, O. Etard, J. Sabatier, J. Corvisier, C. Potrel-Burgot, A. Réber, R. Levasseur
- O005 Clinical Implications of the Vestibulo-Autonomic Interaction.** A. M. Bronstein
- O006 Effect of Aging on Vestibular Regulation of Sympathetic and Respiratory Responses.** C. A. Ray

### Symposium S02, Clinical and Research Aspects of Vestibular and Balance Prostheses Wednesday July 7, 1100–1300

- O007 Vestibulo-Ocular Reflex of Chinchilla During Head Rotation and Functional Electrical Stimulation.** C. C. Della Santina, A. A. Migliaccio, L. B. Minor
- O008 Vestibular Adaptation Studied with a Prosthetic Semicircular Canal.** R. F. Lewis, C. Haburcakova, W. Gong, D. M. Merfeld
- O009 Auditory Feedback Prosthesis for Improving Balance Control During Stance and Gait Tasks.** J. H. J. Allum, J. Hegeman, L. Oude Nijhuis
- O010 Vibrotactile Sensory Substitution Approach to Restoration of Balance: Transition for Standing to Walking.** C. Wall

### Oral Communications C01, Wednesday July 7, 1100–1300

- O011 Characterizing Dizziness After Head Trauma.** M. E. Hoffer, K. R. Gottshall, R. Moore, B. J. Balough, D. C. Wester
- O012 Role of SSRIs in the Treatment of Dizziness.** A. Horii, K. Mitani, T. Kitahara, A. Uno, N. Takeda, T. Kubo
- O013 Head Impulse Sign in Cerebellar, Medullary and Labyrinthine Stroke.** J. C. Kattah, D. Z. Wang, M. T. Zagardo, K. R. Pyle
- O014 Advances in 3-Dimensional Imaging and Data Exploration of the Structures of the Middle and Inner Ear.** J. Magnussen
- O015 Microvascular 8th Nerve Compression Can Cause Vertigo and Tinnitus.** J. Hornibrook, M. Mac Farlane, J. Gourley, S. Wells
- O016 Analysis of Trunk Sway in Patients with Spinocerebellar Ataxia.** B. P. C. Van de Warrenburg, J. H. J. Allum, M. Bakker, H. P. H. Kremer, B. R. Bloem
- O017 Vestibular Vertigo in the General Population: Prevalence and Health-Care Utilization.** H. K. Neuhauser, A. H. Radtke, M. Von Brevern, F. Lezius, M. Feldmann, T. Ziese, T. Lempert
- O018 Vertigo with Vertical Nystagmus.** N. Shimizu, M. Suzuki, K. Wakayama, S. Ono, A. Komatsuzaki
- O019 Postural Strategy Under Vibratory Proprioceptive Stimulation in Phobic Postural Vertigo.** J. Holmberg, M. Magnusson, M. Karlberg, P. Fransson
- O020 Time Course Analysis of Angular Control of the Body and Head While Rising from a Chair.** T. Tsutsumi, M. Nozawa, A. Ishida, Y. Fukuoka, H. Inaoka, K. Kitamura
- O021 Why the Feeling of Vertigo Happens in the Patients of the Neurotic Stress-Related and Somatoform Disorders and in the Depression? Pharmacological Approach .** T. Tsuzuku, T. Komiya

- O022 Serotonergic Effects on Vestibular Function: Evidence from Treatment Trials for Chronic Dizziness.** J. P. Staab, M. J. Ruckenstein, J. D. Amsterdam

**Symposium S03, Inner Ear Pressure  
Wednesday July 7, 1400–1600**

- O023 Pressure in the Inner Ear Compartments and Its Regulation.** V. Couloigner, M. Teixeira, D. Butlen, O. Sterkers, E. Ferrary
- O024 Flows of the Inner Ear Fluids.** A. N. Salt
- O025 Role of Endolymphatic Duct and Sac in Meniere's Disease and Inner Ear Homeostasis.** H. Rask-Andersen
- O026 Local Overpressure Treatment of Meniere's Disease.** M. Anniko

**Symposium S04, Locomotion  
Wednesday July 7, 1400–1600**

- O027 What Visual Information is Used to Regulate Adaptive Human Locomotion?** A. E. Patla
- O028 Underlying Mechanisms of Gaze Stabilization During Continuous Circular Locomotion.** T. Raphan, T. Imai, B. Cohen
- O029 Gait Analysis in Patients with Vestibular System Disorders by the Use of Tactile Sensor.** K. Ishikawa, Y. Wang, Y. Shibata, W. Wong, T. Saitoh, Y. Saitoh
- O030 Generation of Locomotor Trajectories: Influence of the Geometry of the Path on the Anticipatory Head Direction.** H. Hicheur, S. Vieilledent, A. Berthoz
- O031 Multiple Brain Regions Are Involved in the Elaboration of Bipedal Locomotion in *M. Fuscata*: A Pet Study.** F. Mori, K. Nakajima, H. Tsukada, S. Mori
- O032 Head Stabilization Mechanisms During Quadrupedal Locomotion.** B. Cohen, P. John, M. Kunin, S. Yakushin, Y. Xiang, T. Raphan

**Oral Communications C02, Wednesday July 7, 1400–1600**

- O033 Qualitatively Different Strategies Are Used to Elicit Reflexive and Cognitive Responses.** D. M. Merfeld, S. Park, C. Gianna-Poulin, F. O. Black, S. Wood
- O034 Influence of Neck Muscle Vibration in Self Motion Perception.** V. E. Pettorossi, D. Bambagioni, R. Panichi, F. M. Botti
- O035 Hippocampal Theta Activity Results from Dynamic but not Static Vestibular Stimulation.** S. K. McPhedran, I. S. Curthoys
- O036 Role of Tactile Situation Awareness System on Visually Evoked Vection.** O. I. Kolev, B. McGrath, A. H. Rupert
- O037 Prediction and Anticipation in the Interaural Translational VOR.** S. Ramat, D. S. Zee, D. Straumann
- O038 Suppression of Visually- and Memory-Guided Saccades Induced by Electrical Stimulation of the Monkey Frontal Eye Field.** Y. Izawa, H. Suzuki, Y. Shinoda
- O039 Vestibular-Projecting Area in the Periarculate Cortex and Its Relation to the Smooth Pursuit-Related Area in the Monkey.** Y. Sugiuchi, Y. Izawa, Y. Shinoda
- O040 Synaptic Inputs and Their Pathways from the Fixation and Saccade Areas of the Superior Colliculus to Inhibitory Burst Neurons.** M. Takahashi, Y. Sugiuchi, Y. Izawa, Y. Shinoda
- O041 Mental Transformations of Perspective During Whole-Body Roll Rotation.** F. W. Mast, T. Meissner
- O042 The Perception of Linear Self-Motion During 0-G Parabolic Flight.** A. M. Liu, K. Duda, C. M. Oman, A. Natapoff
- O043 Spatial Disorientation – How the Brain Interprets Linear Acceleration During Flight.** S. T. Moore, H. G. MacDougall, J. Clark, F. Wuyts, X. Lesceu, J. Speyer, B. Cohen
- O044 Evidence for Interacting Cortical Control of Vestibular Function and Spatial Representation in Man.** J. Ventre-Dominey, N. Nighoghossian, D. Pierre

**Symposium S05, Vestibular Compensation: From cellular events to clinical recovery**  
**Wednesday July 7, 1630–1830**

- O045** **Differential Expression of Immediate-Early Genes (Fos and Zif268) in the Vestibular Nuclei and Related-Structures After Unilateral Vestibular Loss in the Cat.** S. I. Gustave Dit Duflo, B. Tighilet, A. Plavis, C. Gaubert, M. Lacour
- O046** **Spatial Characteristics of Central Vestibular Neurons Before and After Lateral Canal Nerve Section.** S. B. Yakushin, T. Raphan, B. Cohen
- O047** **Plastic Changes of the Cervico-Ocular Reflex After Short-Term Optokinetic Stimulation or Pursuit Eye Movements.** D. Mandellos, D. Anastasopoulos, W. Becker
- O048** **Influence of Optokinetic Nystagmus on Postural Sway in Vestibular Deficits.** E. Martin, R. Barona
- O049** **Evaluating Vestibular Compensation.** A. Katsarkas, H. Galiana, H. Smith, W. Chan
- O050** **Vestibular Compensation and Psychological Adaptation.** J. P. Guyot, C. Degive

**Symposium S06, Brain basis of vestibular influences for spatial orientation**  
**Wednesday July 7, 1630–1830**

- O051** **Contributions of the Vestibular System to the Head Direction Cell Signal.** J. S. Taube, G. M. Muir, L. B. Minor, J. P. Carey, T. P. Hirvonen
- O052** **Vestibular Influences on Hippocampal Place Representations.** S. I. Wiener
- O053** **Vestibular Stimulation and Orienting of Attention: Studies in Normal Subjects and Neglect Patients.** F. Doricchi
- O054** **How Is Internal Spatial Representation Impaired in Patients with Unilateral Vestibular Loss.** L. Borel, P. Péruich, J. Magnan, M. Lacour

**Oral Communications C03, Wednesday July 7, 1630–1830**

- O055** **Eye Torsion During Pitch Rotation.** C. H. Markham, S. G. Diamond, A. H. Clarke
- O056** **Vibration-Induced Eye Movements After Unilateral Vestibular Deafferentation.** M. Karlberg, S. T. Aw, R. A. Black, M. J. Todd, H. G. MacDougall, M. Halmagyi
- O057** **Direct Electrical Stimulation of the Inferior Vestibular Nerve in Humans.** A. Ernst, D. Basta, I. Todt
- O058** **Human Heave Linear Vestibulo-Ocular Reflex (LVOR) Initiation and Cancellation After Unilateral Vestibular Deafferentation (UVD).** B. T. Crane, J. Tian, J. L. Demer
- O059** **Comparison Between Stabilometry With and Without Head Tilts in a Roll Plane.** K. Inukai, I. Koizuka, S. Takahashi
- O060** **Vestibular-Evoked Peri-Ocular Potentials (VEPP) Produced by Bone-Conducted Stimulation.** S. M. Rosengren, N. P. M. Todd, J. G. Colebatch
- O061** **Vestibular Evoked Ocular Responses to Air- (AC) and Bone-Conducted (BC) Sound I: Eye Movements and Timing in Relation to Vestibular Evoked Peri-Ocular Potentials (VEPP).** N. P. M. Todd, I. S. Curthoys, S. T. Aw, M. J. Todd, L. A. McGarvie, S. M. Rosengren, J. G. Colebatch, G. M. Halmagyi
- O062** **The Contribution of Semicircular Canal Pathways to Static Cyclotorsion in Vestibular Patients.** E. Schneider, S. Glasauer, M. Dieterich, R. Kalla, T. Brandt
- O063** **Clinical Assessment and Validation of the Cranial Vibratory Test. Implication in the Vestibular High Frequency Analysis.** G. Dumas, P. Perrin, S. Schmerber
- O064** **Effect of Cervical Injury on Vestibular Evoked Myogenic Potentials.** C. Wu, Y. Young
- O065** **Sensory Organization of Balance: Correlation Between Equitest and Balance Quest.** E. C. Ionescu, C. Dubreuil, C. Ferber Viart, P. Froehlich
- O066** **Spectral Analysis of Head-Based Stabilogram in Normal and Bilateral Vestibular Dysfunction Subjects.** Y. P. Danilov, M. E. Tyler, P. Bach-y-Rita

**Symposium S07, 3D pathology of gaze and posture****Thursday July 8, 0900–1100**

- O067** **The Relationship Between Three Dimensional Labyrinth Anatomy and Three Dimensional Eye Rotations.** I. S. Curthoys, S. T. Aw, M. J. Todd, A. Bradshaw, M. Halmagyi
- O068** **Basic Properties of Angular and Linear VOR in 3D.** N. Dieringer
- O069** **3-D Control of Posture: From Animal Models to Patients.** P. P. Vidal, K. Cullen, P. Tran Ba Huy, C. De Waele
- O070** **Vestibular Disorders: Perceptual, Ocular Motor and Postural Link in Roll Plane.** K. Jahn, M. Strupp, M. Dieterich, S. Glasauer, T. Brandt
- O071** **Superior Semicircular Canal Dehiscence Syndrome.** L. B. Minor

**Symposium S08, Vestibular system development****Thursday July 8, 0900–1100**

- O072** **The Labyrinths of Vertebrates: Trends in Evolution.** J. S. Sipla
- O073** **Vertebrate Inner Ear Development.** R. Baker
- O074** **Central Vestibular Compensation in Infants and Children with Congenital Vestibular Loss.** K. Kaga
- O075** **Changes in the Responses to Vestibular Stimulation in Children: Vestibular Evaluation as a Function of Age .** S. R. Wiener-Vacher
- O076** **Locomotor Development and the Acquisition of Head Stabilization in Toddlers.** A. Ledebt

**Oral Communications C04, Thursday July 8, 0900–1100**

- O077** **Surgery of the Inner Ear with Hearing Preservation: Experimental Studies and Therapeutic Implications.** E. E. Smouha
- O078** **Multiple Isoforms of the Ryanodine and IP3 Receptors Are Expressed in Rat Inner Ear Ganglia and Endorgans.** A. Lysakowski, P. Cameron, D. Modi, S. Gaboyard, S. D. Price
- O079** **Usefulness of the Inner Ear Model Created Using Rapid Prototyping.** S. Mamoru, A. Hagiwara, Y. Ogawa, H. Ono
- O080** **Investigation of Vestibular Adaptation to Changing Gravity Levels on Earth.** S. A. E. Nooy, J. E. Bos, W. J. Ockels
- O081** **Novel Means for Artificial Neural Network Classification of Otoneurological Data.** M. Juhola, M. Siemala, J. Laurikkala, K. Iltanen, E. Kentala, I. Pyykkö
- O082** **Bayesian Modeling of Vestibular Illusions.** J. Laurens, J. Droulez
- O083** **Head Rotation Axes in Three Dimensions and Their Relationship to Orientation of the Dens in Different Head Positions.** T. Raphan, M. Kunin, B. Delman, B. Cohen
- O084** **Caloric Stimulation Model.** A. Gentine, C. Debry, J. L. Eichhorn, A. Charpiot
- O085** **Does Vestibular Adaptation to Coriolis Cross-Coupled Stimuli Transfer Across Planes?** I. Garrick-Bethell, T. Jarchow, H. Hecht, L. R. Young
- O086** **Multi-Segmental Coordination and the Presence of the Vestibulo-Ocular Reflex During Voluntary Turning in Humans.** D. Anastasopoulos, N. Ziavra, M. Hollands, A. Bronstein
- O087** **Model and Experimental Data for the Utricular Medial and Lateral Partitions Based on the Unilateral Centrifugation Test.** F. L. Wuyts, B. Ogunjimi
- O088** **Translational (TVOR) and Angular (AVOR) Vestibulo-Ocular Reflexes Share Vestibular Pathways.** W. King, W. Zhou

**Symposium S09, Vestibular evoked myogenic potentials  
Thursday July 8, 1400–1600**

- O089** Opening Remarks and Overview of the VEMP. J. G. Colebatch
- O090** The Physiological Basis of VEMPs - The Response of Guinea Pig Primary Vestibular Neurons to Air-Conducted and Bone-Conducted Sounds. I. S. Curthoys
- O091** Neural Connectivity of the Otolith-Collic Reflex. Y. Uchino
- O092** Vestibular Evoked Myogenic Potentials in Meniere's Disease. Y. Young, T. Huang, P. Cheng
- O093** VEMPs Induced by High Levels Sounds and Galvanic Currents: Its Interest in Clinical Otoneurology. C. De Waele
- O094** Vestibular Evoked Myogenic Potentials (VEMP) in Patients with Superior Canal Dehiscence Syndrome. K. Brantberg
- O095** VEMP in Vestibular Neuritis and Acoustic Neuroma. T. Murofushi

**Symposium S10, Visual mechanisms contributing to the stabilization of gaze and posture  
Thursday July 8, 1400–1600**

- O096** The Visual Stabilization of Gaze in a 3-D World. F. A. Miles
- O097** Suppression of Visual Gaze-Stabilizing Mechanisms During Voluntary Tracking. K. Kawano, Y. Kodaka, K. Miura
- O098** Evidence for Low- and High-Level Motion Processing in the Visual Stabilization of Gaze. G. S. Masson
- O099** Differential Impairment of Low- and High-Level Visual Motion Processing in Neurological Patients. L. M. Vaina

**Oral Communications C05, Thursday July 8, 1400–1600**

- O100** Vestibular Otolith Development in Spaceflight and Hypergravity. J. Dickman, A. Lysakowski, D. Huss, S. Price
- O101** Head Motion of Freely Swimming Dolphins. T. E. Hullar, M. Armand
- O102** The "Wait and Learn Strategy" of Postural Control in Children—A Fall Isn't That Bad. F. Tjernström, P. Fransson, J. Oredsson, M. Magnusson
- O103** Development of Firing Pattern in Chick Vestibular Nucleus Neurons. K. D. Peusner, M. Shao, A. Popratiloff, J. C. Hirsch, C. Giaume
- O104** Properties of Vestibulospinal Neurons Receiving Inputs from Horizontal Semicircular Canal in Cats. A. Sugita, N. Kitajima, R. Bai, H. Sato, M. Sasaki, M. Imagawa, I. Koizuka, Y. Uchino
- O105** Alterations in Human Rectus Extraocular Muscle (EOM) Actions by the Torsional Vestibulo-Ocular Reflex (VOR). J. L. Demer, R. A. Clark
- O106** Visual and Vestibular Responses of Pursuit Neurons in the Caudal Frontal Eye Fields (FEF). K. Fukushima, T. Akao, S. Kurkin, J. Fukushima
- O107** Multiple Reference Frames for Motion in Primate Cerebellum. A. G. Shaikh, H. Meng, D. E. Angelaki
- O108** Spatio-Temporal Characteristics of Saccades, Vergence and Combined Movements in Children with Vertigo. M. Bucci, Z. Kapoula, Q. Yang, S. Wiener-Vacher, D. Brémond-Gignac
- O109** Latency of Saccades and Vergence in Children, in Adults and in Old Subjects With or Without Falling History. Z. Kapoula, Q. Yang, M. Bucci, N. Pouvreau, L. Ferrufino, M. Samson, C. Orssaud
- O110** Suppression of Saccades Controlled by the Monkey Frontal Eye Field (FEF) and Visual Fixation. Y. Shinoda, Y. Sugiuchi, Y. Izawa, M. Takahashi, H. Suzuki
- O111** Changes in Firing Behavior of Saccadic Burst Neurons Induced by Iontophoretic Application of Strychnine in Alert Cats. K. Yoshida, H. Kaneko, R. Kato, Y. Iwamoto, H. Shimazu

**Symposium S11, Cortical function in unilateral and bilateral vestibular failure  
Thursday July 8, 1630–1830**

- O112 Spatial Memory Deficits and Hippocampal Atrophy in NF2 Patients with Bilateral Vestibular Failure.** T. Brandt, F. Schautzer, D. Hamilton, R. Brüning, H. Markowitsch, R. Kalla, M. Strupp
- O113 The Superior Temporal Gyrus, the Retrosplenial Cortex, and the Hippocampal Formation: A Fundamental Network for Vestibular Induced Spatial Orientation and Disorientation and for Compensation of Vestibular Deficits.** A. Berthoz
- O114 Brain Activation Studies in Patients with Vestibular Neuritis and Bilateral Vestibular Failure.** S. Bense, P. Bartenstein, M. Schwaiger, P. Schlindwein, T. Stephan, T. Brandt, M. Dieterich

**Symposium S12, Gentamicin therapy and Ménière's disease  
Thursday July 8, 1630–1830**

- O115 Arguments for Conservative Intratympanic Gentamicin Regimens: Human and Animal Data.** J. P. Carey, I. W. Anderson, T. P. Hirvonen, A. A. Migliaccio, F. R. Lin, H. Park, L. B. Minor
- O116 Intratympanic Gentamicin Injections in Patients Suffering from an Intractable Meniere's Disease: Vestibular Hair Cell Impairment and Regeneration.** C. De Waele, R. Meguenni, G. Freyss, F. Zamith, N. Bellalimat, P. P. Vidal, P. Tran Ba Huy
- O117 Potential Stem Cells in Adult Mammalian Inner Ear.** E. Scarfone
- O118 Dispersal Characteristics of Drugs in the Inner Ear.** A. N. Salt, S. Plonkte
- O119 Auditory Function After Intratympanic Gentamicin.** N. Perez, M. Boleas

**Oral Communications C06, Thursday July 8, 1630–1830**

- O120 A New Countermeasure for the Prevention of Motion Sickness and Space Motion Sickness.** M. F. Reschke, G. A. Ford, J. T. Somers, R. J. Leigh, G. Melville-Jones
- O121 Effect of an NK1 Receptor Antagonist on Motion Sickness in Rats and Its Putative Sites of Action.** A. Uno, A. Nakagawa, A. Horii, K. Mitani, N. Takeda, T. Kubo
- O122 Interaction of Alcohol and Nicotine on Postural Stability Scores and Long-Loop Motor EMG Latency Responses.** J. A. Goebel, J. W. Rohrbaugh, A. Vedeniapin, E. J. Sirevaag, T. Goldenberg, M. McGrath, C. Ryan, R. Sandy, K. Sher
- O123 Higher Visual Contribution in Balance Control Favours Risk of Falls in Adult at Work.** P. P. Perrin, G. C. Gau-chard, A. Vouriot, L. Benamghar, M. Lepori, N. Chau, J. Mur
- O124 Neurootology in Neck Trauma Patients.** L. M. Ödkvist, L. Noaksson, P. Greibe, T. Ledin
- O125 Unrestricted Arm Movement Speeds Up Balance Task Adaptation.** D. A. Green, A. M. Bronstein
- O126 The Effect of Inaccurate Modulation of Arm and Knee Movements on the Roll Instability of Vestibular Loss Subjects.** J. H. J. Allum, M. G. Carpenter, L. Oude Nijhuis
- O127 Vibration to the Posterior Neck Evokes Fast EMG Responses of the Lower Leg, but Mastoid Vibration Does Not.** M. Magnusson, G. Andersson, A. Mårtensson, P. Fransson, M. Karlberg, S. Gomez
- O128 The Flocculus in Hereditary Ataxia Syndromes.** S. H. Ying, S. Choi, M. Lee, S. L. Perlman, J. C. Jen, R. W. Baloh, A. W. Toga, D. S. Zee
- O129 Vection Induced Neural Activity in Insular Cortex.** E. S. Viirre, M. Sereno
- O130 Otoneurological Findings in Patients with Fabry Disease.** D. Vibert, B. Blaser, R. Häusler
- O131 The Location and Capability of CPG Revealed with Spinal Electrical Stimulation in Human Paraplegics.** E. Y. Shapkova

**Symposium S13, Central disorders and balance****Friday July 8, 0900–1100**

- O132 Gait Disorders in Patients with Parkinsonian Syndromes: Defective Braking of the Fall.** M. L. Welter, M. Cuong Do, F. Tornay, N. Chastan, U. Rodriguez Ortiz, O. Messouak, Y. Agid
- O133 Cerebellar Control and Adaptation of Human Locomotion.** A. Bastian
- O134 Verticality Misrepresentation And Postural Disorders In Stroke Patients.** D. Pérennou, A. Bronstein
- O135 Postural Instability in Amyotrophic Lateral Sclerosis.** V. Meininger, G. Bruneteau

**Symposium S14, Eye-head-hand coordination****Friday July 8, 0900–1100**

- O136 Vestibular Signals and Self-Motion Perception: Discrimination between Active and Passive Movement.** W. Graf
- O137 Posterior Parietal Cortex Neurons Encode Target Motion in World-Centered Coordinates.** U. Ilg
- O138 The Primate Pontine Nuclei Contribute to Visually Guided Eye as Well as Hand Movements.** P. Thier
- O139 Neural Substrates of Coordinated Eye-Head Gaze Shifts.** E. G. Freedman
- O140 Cortical And Cerebellar Network Processing of Eye-Hand Coordination.** W. Heide
- O141 The Role of the Ventral Premotor Cortex in Choosing Targets for Gaze Shifts and Hand Movements.** M. H. Schieber

**Oral Communications C07, Friday July 9, 0900–1100**

- O142 Correlation of VEMP and Vestibular Test Battery Results in Meniere's Disease.** S. D. Rauch, M. Silveira, J. J. Guinan, G. Zhou, S. J. Kujawa, C. Wall, III, B. S. Herrmann
- O143 Meniere's Disease Without Deafness.** M. Halmagyi
- O144 Clinical Figures of Delayed Endolymphatic Hydrops.** S. Suzuki, T. Okuno, Y. Hata, Y. Ishibashi, Y. Yamazaki, K. Kaga
- O145 The Endolymphatic Sac Potential in Human.** H. Kumagami, R. Oku, F. Tanaka, K. Shigeno, S. Nakashima, H. Takahashi
- O146 Pressure Treatment in Menière's Disease.** L. M. Ödkvist, E. Billermark, K. Sass, J. Thomsen
- O147 Effect of Betahistine on Spatiotemporal Response Properties of Vestibular Nuclear Neurons to the Labyrinthine Input.** D. Manzoni, M. Barresi, L. Bruschini, G. Li Volsi
- O148 The Effects of Antioxidant on the Peripheral Vestibular Disorder Induced by AMPA or Streptomycin.** H. Shimogori, K. Sugahara, T. Takemoto, T. Okuda, H. Yamashita
- O149 The Effect of Promethazine on the Human Vestibulo-Ocular Motor System.** M. S. Gizzi, P. D. Kramer, M. L. Rosenberg, R. Clark
- O150 Vestibular Rehabilitation: Effects on Migraine Associated Dizziness.** K. R. Gottshall, R. J. Moore, M. E. Hoffer
- O151 The Influence of Unilateral Canal Plugging or Gentamicin Treatment on VOR Recovery After Subsequent Unilateral Labyrinthectomy.** S. D. Newlands, S. S. Reddy, L. P. Elikan, S. M. Dent, G. A. Leonard, R. B. Leonard, G. D. Kaufman
- O152 Asymmetric Short-Term Adaptation of the Vertical Vestibulo-Ocular Reflex in Humans.** D. Straumann, C. J. Bockisch, S. Marti
- O153 Vertical Skew as a Function of Gravity: A Possible Consequence of Otolith Asymmetry.** F. Karmali, S. Ramat, M. Shelhamer

**Symposium S15, Positional vertigo****Friday July 8, 1400–1600****O154 Labyrinthine Lithiasis (BPPV & Variants).** J. M. Epley, A. Semont, F. Black, M. Nakayama**Symposium S16, Self-motion perception****Friday July 8, 1400–1600****O155 Otolith-Driven Heading Perception in Humans.** L. S. Stone, S. T. Smith, G. A. Bush**O156 Visual Self-Motion Perception (vection) in Humans: Results from PET and fMRI.** M. Dieterich, A. Deutschländer, S. Bense, P. Schlindwein, T. Stephan, M. Schwaiger, P. Bartenstein, T. Brandt**O157 Visual and Vestibular Contributions to 3D Heading Selectivity in Area MST.** D. E. Angelaki, Y. Gu, G. C. DeAngelis**O158 Do the Eyes Move the Body?** M. Strupp, S. Glasauer, K. Jahn, E. Schneider, S. Krafczyk, T. Brandt**Oral Communications C08, Friday July 9, 1400–1600****O159 Human Surge Linear Vestibulo-Ocular Reflex (LVOR) During Horizontally Eccentric Target Fixation: Value as Lateralizing Otolith Test?** J. Tian, J. L. Demer**O160 A Videoculocephalographic (VOCG) Device Dedicated to the Halmagyi's Head Impulse Test: Description and First Results.** E. Ulmer**O161 Torsional Eye Movement Evoked by Vertical Translation: The Influence of Physically and Visually Defined Gravity, and of Eccentric Gaze.** M. Barnett-Cowan, R. Dyde, L. R. Harris**O162 Clinical Application of Galvanic Nystagmus by Video-Oculography Analysis.** T. Komiya, T. Tsuzuku**O163 Differential Diagnosis of Unilateral Otolith Function.** A. H. Clarke, K. Lewandowitz, U. Schoenfeld**O164 Utricular versus the Horizontal Semicircular Canal Function in Healthy Subjects and Vertigo Patients - A Comparison.** F. L. Wuyts, K. Van der Kelen, R. Vanspauwen, M. Hoppenbrouwers, G. Pauwels, P. Van de Heyning**O165 Vestibular-Evoked Postural Responses to Bone Conducted Sound.** M. S. Welgampola, B. L. Day**O166 Vestibular Impairment in Children with Sensorineural Hearing Loss.** D. Antolini, C. Medard, S. R. Wiener-Vacher**O167 The Use of Vestibular Reafference in the Control of Voluntary Movement.** B. L. Day, R. F. Reynolds**O168 Galvanic-Induced Body Sway in Vestibular Schwannoma-Patients.** H. Kingma, S. Balter, M. Castelijns, R. Stokroos**O169 Enhancing the Use of Clinical Romberg Testing.** N. S. Longridge, A. I. Mallinson**O170 Influence of Gait Speed on Tandem Walking.** A. I. Mallinson, N. S. Longridge**Symposium S17, Vertigo and migraine****Friday July 8, 1630–1830****O171 Genetic Causes of Episodic Vertigo and Imbalance.** J. C. Jen, R. W. Baloh**O172 Pathophysiology of Migraine-Associated Dizziness.** J. M. Furman**O173 Epidemiology and Clinical Aspects of Migraine-Associated Dizziness.** T. Lempert, H. Neuhauser**O174 Vertigo and Migraine in Children.** S. R. Wiener-Vacher



## **Symposium S18, Next steps in space neurovestibular research: Preparing for missions to the moon and Mars**

### **Friday July 8, 1630–1830**

- O175** Next Steps in Space Neurovestibular Research: Preparing for Missions to the Moon and Mars. C. M. Oman, F. Black
- O176** Neuro-Vestibular and Sensory-Motor Challenges Associated with NASA Mission Architectures for Moon and Mars. W. H. Paloski
- O177** Neurovestibular Risks of Spaceflight. J. B. Clark
- O178** NASA/NSBRI Countermeasure Research. C. M. Oman
- O179** Recent Aspects of Neurovestibular Research in the ESA Microgravity Program. A. H. Clarke
- O180** Russian Countermeasure Research Strategies. I. B. Kozlovskaya
- O181** Short Radius Artificial Gravity Concepts and Countermeasure Development. L. R. Young
- O182** Postflight Neurological Assessment and Terrestrial Applications of Space Neurovestibular Research. F. O. Black

### **Oral Communications C09, Friday July 9, 1630–1830**

- O183** Anterior Canal Variant of Benign Paroxysmal Positional Vertigo. J. A. Lopez-Escamez, M. I. Molina, M. J. Gamiz
- O184** Atypical Positional Nystagmus in Benign Paroxysmal Positional Vertigo: 3D Study of 40 Patients. S. T. Aw, M. J. Todd, G. E. Aw, L. A. McGarvie, G. M. Halmagyi
- O185** Horizontal Semicircular Canal Benign Positional Vertigo. J. A. White
- O186** Horizontal Canal Benign Positional Vertigo. J. Hornibrook
- O187** Treatment of the Apogotropic Variant of Horizontal Canalolithiasis. M. Gagliardi, G. Magliulo, G. Ciniglio Appiani, G. Cuiuli, A. Celebrini, D. Parrotto, R. D'Amico
- O188** Vertical Nystagmus Revealed in BPPV Patients. M. Nakayama, T. Ikeda, J. M. Epley
- O189** Effectiveness of Nurse-Delivered Vestibular Rehabilitation for Dizziness in Primary Care: Randomized Controlled Trial. L. Yardley, M. Donovan-Hall, H. E. Smith, B. Walsh, A. M. Bronstein
- O190** Factors Influencing Adherence to Vestibular Rehabilitation. M. K. Donovan-Hall, L. Yardley
- O191** Postural Deficiencies Treatment in Patients with Peripheral Vestibulopathy. N. Perez, M. Santandreu, J. Benitez
- O192** Retinal Image Stabilization (RIS) During Caloric Nystagmus Reduces Vertigo. S. Hegemann
- O193** Effects of Electrotactile Head-Based Feedback on Subjects with Bilateral Vestibular Dysfunction. Y. P. Danilov, M. E. Tyler, P. Bach-y-Rita
- O194** Evaluation of Rotatory Chair Velocity Step Test in Patients with Peripheral Vestibular Disorder. S. T. Mohamed Aly, A. A. Shalabi

### **Poster Display P01, Wednesday July 7 full day and Thursday morning July 8, 2004**

- P001** An Experimental Study on Correlation Between Cochlear Morphological Changes and Endolymphatic Sac Responses in Guinea Pigs Exposed to Blast Waves. L. Zhaohua, L. Chaojun, Z. Lijun, X. Weiheng
- P002** Single L-Type Calcium Currents in Chick Embryo Vestibular Type I and Type II Hair Cells. V. Zampini, P. Valli, S. Masetto
- P003** A Comparison of the Negatively Activating Potassium Conductances of Mammalian Cochlear and Vestibular Hair Cells. W. H. Wong, K. M. Hurley, R. A. Eatock, K. Ishikawa
- P004** Membrane and Discharge Properties of Medial Vestibular Nucleus Neurons in Transgenic KCNE1 (-/-) Mice Lacking Functional Inner Ears. D. Eugène, P. Vidal, L. E. Moore
- P005** M Current in Vestibular Afferent Neurons from the Rat. E. Soto, C. Pérez, A. Limón, H. Chávez, R. Vega

- P006 Modulation by Extracellular pH of Voltage Activated Calcium Current of Type I Rat Vestibular Hair Cells.** R. Vega, A. Almanza, F. Mercado, E. Soto
- P007 Effects of Azithromycin and Clarithromycin on Acetylcholine-Evoked  $K^+$  Currents and Intracellular  $Ca^{2+}$  Concentrations in Guinea-Pig Outer Hair Cells.** C. Kim, Y. Cho, J. Lee, H. Cho, J. Park, H. Jeong
- P008 Depersonalization/Derealization Symptoms in Patients with Peripheral Vestibular Disease (Pilot Study).** F. Yen Pik Sang, K. Jauregui-Renaud, D. Green, A. M. Bronstein, M. A. Gresty
- P009 Depersonalization/Derealization Symptoms and Self-Orientation With Respect to the Environment in Patients with Vestibular Disease (Pilot Study).** K. Jauregui-Renaud, F. Yen Pik Sang, A. M. Bronstein, M. A. Gresty
- P010 Cognitive Demands Affects the Gain of the Torsional Optokinetic Response.** S. C. Goonetilleke, I. S. Curthoys, A. M. Burgess, H. G. MacDougall
- P011 Oculogravic Illusion and Individual Differences: Role of Spatial Expertise.** J. Carriot, V. Nougier, C. Raphel, C. Cian
- P012 Long Term Effect on Vestibuloocular Reflex and Self Motion Perception Induced by Prolonged Asymmetric Vestibular Stimulation.** V. E. Pettorossi, R. Panichi, D. Bambagioni, F. M. Botti
- P013 The Use of Non-Motion-Based Cues to Control the Direction of Smooth Pursuit Eye Movements.** G. R. Barnes, C. B. Jarrett
- P014 Impaired Spatial Learning After Hypergravity Exposure in Rats.** K. Mitani, A. Horii, T. Kubo
- P015 Quality of Life in Benign Paroxysmal Positional Vertigo with a Vestibular Deficit Associated.** E. Martin, R. Barona
- P016 Estimating the Relative Weights of Vestibular, Optokinetic, and Podokinesthetic Cues from Self Turning Perception During Discordant Sensory Stimulation.** R. Jürgens, E. Pinkhardt, W. Becker
- P017 Instability Improves Perception of Spatial Orientation.** A. Bray, A. Subanandan, M. Gresty, B. Isableu, T. Ohlmann, J. Golding
- P018 Effect of Rotation Paradigm on the Visual Subjective Vertical at Large Body Tilts.** J. A. M. Van Gisbergen, R. G. Kaptein
- P019 Internally and Externally Mediated Triggers in the Acquisition of Visual Targets.** O. I. Kolev, M. F. Reschke, A. H. Rupert
- P020 Neural Processes Underlying Perception of Roll Tilt and Ocular Torsion Are Qualitatively Different.** L. H. Zupan, D. M. Merfeld
- P021 Vestibular and Non-Vestibular Influences on the Autonomic Response to Linear Acceleration in Human Beings.** K. Jauregui-Renaud, R. Reynolds, A. M. Bronstein, M. A. Gresty
- P022 Circularvection in Patients with Dizziness.** J. Rama, N. Perez
- P023 Firing Behavior of Vestibular Sensitive Cells in the Ventral Posterior Thalamus of the Squirrel Monkey During Passive Rotation and Translation in the Horizontal Plane.** V. Marlinski, E. Gunderson, W. Gawron, R. A. McCrea
- P024 Estimation of a Linear Path Length when Blindfolded in a Wheelchair.** J. Bredin, Y. Kerlirzin, I. Israël
- P025 Visual and Non Visual Information in Perception of Passive Linear Displacement.** A. E. Priot, I. Israel
- P026 Visual and Vestibular Contributions to the Perceived Direction of “Up”.** L. R. Harris, R. T. Dyde, S. Sadr, M. Jenkin, H. L. Jenkin
- P027 Long Time Intervals Production Under Passive and Active Self-Motion.** A. Capelli, I. Israël
- P028 Role of Moving Air Stream for Creating Perception of Self-Motion.** O. I. Kolev, A. H. Rupert
- P029 Eye Movement Control by Primate Cerebellar Hemispheric Lobule VII/VIII.** M. Ohki, S. Nagao
- P030 Predictive Saccades with Different Instructions and Self-Paced Saccades in Control Subjects.** E. Isotalo, A. G. Lasker, D. S. Zee

- P031 Ultra-Short Perceptual Vestibular Time Constants and Its Association with Vestibular Navigatory Performance in the Congenitally Blind.** B. M. Seemungal, M. A. Gresty, A. M. Bronstein
- P032 Properties of Vestibulospinal Neurons Receiving Inputs from Anterior Semicircular Canal in Cats.** N. Kitajima, A. Sugita, R. Bai, H. Sato, M. Sasaki, M. Imagawa, Y. Uchino, M. Suzuki
- P033 A Model Based Approach to Latency Detection in Oculomotor Responses.** S. Ramat, G. Magenes
- P034 Coordinate Transformations and Sensory Integration in the Detection of Head Orientation and Inertial Motion.** A. M. Green, D. E. Angelaki
- P035 Three-Dimensional Reconstruction and of the Human Semicircular Canal and Measurement of Each Membranous Canal Plane Defined by Reid's Stereotaxic Coordinates.** S. Hashimoto, H. Naganuma, K. Tokumasu, A. Ito, M. Wada, M. Okamoto
- P036 Static and Dynamic Membrane Properties of Prepositus Hypoglossi Neurons in Guinea Pigs.** E. Idoux, N. Vibert, P. Vidal, M. Beraneck, L. E. Moore
- P037 Perceived Surrounding Space Determines Posture, Eye Movement, and Sensation Under 1G and Microgravity.** M. Sekine, M. Takahashi, T. Ikeda, K. Watanuki, H. Takeoka
- P038 Semicircular Canal Modeling.** A. Gentine, C. Debry, C. M. Kopp, P. Schultz
- P039 Discharge of Brainstem Burst Neurons During Combined Eye and Head Gaze Shifts in the Canal-Plugged Monkey.** J. O. Phillips, A. F. Fuchs, L. Ling
- P040 Abnormal Dynamics of Head Impulse Responses in Cerebellar Disease.** M. F. Walker, J. Tian, D. S. Zee
- P041 Investigation of the Effect of Peripheral Vestibular Stimulation upon the Smooth Pursuit System.** A. A. Tarnutzer, P. Pfeffer, D. Roberts, D. Straumann, D. S. Zee
- P042 Vestibular-Neck Interaction in the Primate Cerebellum.** J. F. Kleine, Y. Guan, U. Büttner
- P043 An Investigation of the Relative Stability of Reactive and Predictive Oculomotor Tracking.** W. M. Joiner, M. Shelhamer
- P044 Nose-Up and Nose-Down Sinusoidal Off-Vertical Axis Rotation as a Clinical Otolith Function Test.** I. Koizuka, M. Azuma, K. Suzuki, S. Watanabe
- P045 Quantitative Study of Head Thrust Test Using Infrared Video-Oculography.** M. Nozawa, T. Tsutsumi, K. Tsukui, K. Kitamura
- P046 Bone Conducted Sounds Preferentially Activate Guinea Pig Utricular and Saccular Irregular Primary Afferents.** I. S. Curthoys, S. K. McPhedran, J. Kim
- P047 3D Vestibulo-Ocular Reflex Evoked by Click-Trains in Superior Canal Dehiscence.** S. T. Aw, M. J. Todd, G. E. Aw, L. A. McGarvie, G. M. Halmagyi
- P048 Vibratory and Head Shaking Nystagmus in Peripheral Vestibular Lesioned Patients.** T. Patkó, C. De Waele, P. Tran Ba Huy, G. Freyss, F. Zamith
- P049 VEMP and SVV in Benign Paroxysmal Positional Vertigo.** N. Sanchez-Ferrandiz, N. Perez
- P050 Value of Different Horizontal Vestibulo-Ocular Reflex Parameters in Detection of Peripheral Vestibular Lesion.** R. Maire, G. van Melle
- P051 Sound-Evoked Neurogenic Responses with Short Latency of the Vestibular Origin.** T. Murofushi, S. Iwasaki, Y. Takai, H. Takegoshi
- P052 The Influence of Unilateral versus Bilateral Clicks on the Vestibular Evoked Myogenic Potentials.** P. Cheng, T. Huang, H. Su
- P053 Analysis of Gender Differences in the Vestibular Evoked Myogenic Potentials.** T. Huang, P. Cheng, H. Su
- P054 Computerized Electronystagmography in Diagnostics of Labyrinthine and Perilymph Fistulas.** S. V. Lilenko
- P055 Vestibular Evoked Ocular Responses to AC/BC Sound II: A Neuroanatomical and Physiological Interpretation of AC-OVEMPs.** N. P. M. Todd, S. M. Rosengren, J. G. Colebatch

- P056 Vestibular Evoked Ocular Responses to AC/BC Sound III: A Neuroanatomical and Physiological Interpretation of BC-OVEMPs.** N. P. M. Todd, S. M. Rosengren, J. G. Colebatch
- P057 Three-Dimensional Vestibulo-Ocular Responses to Rotation and Translation in Patients with Canal and/or Otolith Defects.** J. Goumans, M. M. J. Houben, L. J. J. M. Boumans, J. Van der Steen
- P058 3-D Exploration of Otolith and Canal Function with Whole-Body Impulses.** M. M. J. Houben, J. Goumans, J. Van der Steen
- P059 The Video Impulse Test Assesses Function in All 3 Canals in Patients with Impaired Vestibular Function.** M. Magnusson, M. Sonesson, H. Ohlsson, M. Halmagyi, M. Karlberg, A. Hafstrom
- P060 Preliminary Study for Vestibular Evoked Myogenic Potential Induced by Bone Conducted Stimuli.** A. Miyamoto, T. Seo, A. Miyamoto, M. Sakagami
- P061 Far and Near Target Dynamic Visual Acuity: A Functional Assessment of Canal and Otolith Performance.** B. T. Peters, R. A. Brady, E. C. Landsness, F. O. Black, J. J. Bloomberg
- P062 A New Otolith Test: The Subjective Horizontal.** J. H. J. Allum, A. Beule, W. Hosemann
- P063 New Methods for Stimulating Otolith Organs by Linear Acceleration.** H. Naganuma, K. Tokumasu, K. Kawahara, S. Hashimoto, A. Itoh, M. Wada, K. Iho, M. Okamoto
- P064 Effect of Tone Burst Frequency on the VEMP Response Reliability.** R. Vanspauwen, P. H. Van De Heyning, F. L. Wuyts
- P065 Torsional Eye Movement Responses to Galvanic Vestibular Stimulation in Vestibular Disorders.** K. Jahn, E. Schneider, M. Strupp, T. Brandt, M. Dieterich
- P066 Adjustment for Vestibular Evoked Myogenic Potentials by Means of Normalization.** T. Seo, A. Miyamoto, M. Node, M. Sakagami
- P067 Comparison Between Bone Conducted and Air Conducted Vestibular Evoked Myogenic Potential.** S. T. MohamedAli
- P068 Habituation of Eye-Movement Responses Induced by Galvanic Vestibular Stimulation (GVS) in the Alert Guinea Pig.** J. Kim, I. S. Curthoys
- P069 Simple 'Cuff Pressure Based' Feedback Procedure for Increasing the Reliability of VEMP Response Amplitude.** R. Vanspauwen, K. Van der Kelen, I. Noemeva, P. Van de Heyning, F. L. Wuyts
- P070 Vestibular Evoked Myogenic Potentials and Caloric Tests in Profound Pre-Lingual Deafness.** S. Y. Yeh, P. W. Cheng, Y. H. Young
- P071 The Human Angular Torsional Vestibulo-Ocular Reflex: Effects of Eye Position and Head Rotation Plane.** A. A. Migliaccio, C. C. Della Santina, J. P. Carey, D. S. Zee
- P072 Vestibular Evoked Potential in Guinea Pig by Angular Acceleration.** S. J. Jeon, C. K. Rhee, J. Y. Chung
- P073 Massager Muscle EMG Responses to Loud Clicks in Healthy Humans.** F. Deriu, E. Tolu, J. C. Rothwell
- P074 A New Test to Evaluate the Vertical Canal Function.** J. P. Deroubaix, D. Rousié, F. Hamon, A. Berthoz
- P075 Comparison of Caloric and Vibratory Tests in Patients Suffering from a Unilateral Acoustic Neurinoma.** G. Freyss, C. De Waele, S. Ledjedel, F. Zamith, N. Bellalimat, P. Tran Ba Huy
- P076 Vestibular Evoked Myogenic Potentials in Children.** S. R. Wiener-Vacher, D. Antolini
- P077 Convexity of the Basilar Artery in Vertiginous Patients Due to Neurovascular Compression - Is It a Diagnostic Finding?** S. Nakashima
- P078 Effects of Cognitive Tasking on Postural Control in Early Dementia of Alzheimer's Type (DAT) Patients.** J. A. Goebel, J. W. Rohrbaugh, A. Vedeniapin, B. Lindberg, T. Goldenberg, E. J. Sirevaag, S. Beaudreau
- P079 Traumatic Perilymphatic Fistula Presenting Direction Changing Positional Nystagmus.** J. Koo, J. Kim, S. Hong
- P080 A Report of Two Cases of Unilateral Vestibulopathy After Systemic Ototoxic Treatment.** J. Rey, F. Vázquez, N. Sánchez-Ferrandiz, N. Pérez

- P081 Clinical Features of Migraine-Related Dizziness.** M. Versino, G. Sances, S. Colnaghi, C. Albizzati, G. Bono, G. Nappi, V. Cosi
- P082 Clinical Investigations of the Patients with Acute Vertigo.** A. Itoh, M. Mizuno, K. Yoshioka, F. Hiraiwa, Y. Toriyama, H. Nakada
- P083 Audio-Vestibular Involvement in Patients with Behçet's Syndrome.** Y. Choung, K. Park, S. Moon, J. Lee, E. Lee
- P084 Common Misconceptions in the Evaluation of ED Dizzy Patients Parallel Those Found in Emergency Medicine Texts.** D. E. Newman-Toker, D. S. Zee
- P085 Charted Records of Emergency Department Dizzy Patients Suggest Overemphasis on Symptom Quality May Be Associated with Diagnostic Errors.** D. E. Newman-Toker, D. S. Zee
- P086 Pulse-Synchronous Eye Oscillations Revealing Bilateral Bone Superior Canal Dehiscence.** C. Tilikete, P. Krolak-Salmon, E. Truy, A. Vighetto
- P087 Caloric Stimulation for New Treatment of Persistent Dizziness in Vestibular Neuritis.** T. Yamanaka, T. Murai, N. Fijita, H. Hosoi
- P088 Vestibulo-Ocular and Postural Deficits in Spinocerebellar Ataxia 5, 6, and 8.** J. H. Anderson, C. Yavuz, P. Christova, C. M. Gomez
- P089 Immunohistochemical Study for Monoamine Neurons in Brain of Unilateral Inner Ear Impaired Rats.** T. Kuruma, M. Nakayama, S. Inafuku, G. Feng, N. Ishikawa
- P090 Distance and Direction Deficits in a Path Integration Task After Unilateral Vestibular Loss Depend on Task Complexity.** L. Borel, P. Peruch, J. Magnan, M. Lacour
- P091 Humans Use Vestibular Signals to Update the Locations of Visual Targets in Space.** E. M. Klier, D. E. Angelaki, B. J. M. Hess
- P092 Cognitive Impairment by Spatial Disorientation.** M. A. Gresty, J. F. Golding, H. We, I. Psilogenis, K. Nightingale
- P093 Vestibular Imbalance Alters the Perception of the Heading Direction During Visually Induced Linear Vection.** J. C. Lepecq, C. De Waele, S. Mertz-Josse, P. Tran Ba Huy, C. Teyssède, P. M. Baudonnière, P. P. Vidal
- P094 Vestibular System and Spatial Orientation.** B. S. Cohen, I. Israël
- P095 Optic Field Flow Signals Update the Activity of Head Direction Cells in the Rat Anterodorsal Thalamus.** A. Arleo, C. Déjean, C. Boucheny, M. Khamassi, M. B. Zugaro, S. I. Wiener
- P096 Multisensory Information Interaction During Spatial Navigation and Memorization: Not a Mere Bottom-Up Procedure.** P. Panagiotaki, S. Lambrey, A. Berthoz
- P097 Temporal Delays During Locomotor Interactions Between Human Subjects.** T. Ducourant, S. Vieilledent, M. Freslier, A. Berthoz
- P098 Site of the Lesions in Sudden Deafness with Vertigo: Study by Click and Galvanic VEMP.** S. Iwasaki, Y. Takai, T. Murofushi
- P099 Effects of Visual Stimulation on Equilibrium; Study with a Portable System.** Y. Takai, S. Iwasaki, T. Murofushi
- P100 Patients with Unilateral Vestibular Lesion Are More Unstable in the Frontal than in the Sagittal Plane: A Dynamic Posturography Study.** F. Mbongo, T. Patko, N. Vibert, P. Vidal, P. Tran Ba Huy, C. De Waele
- P101 Multi-Segmental Measurement of Body Sway During Undisturbed Upright Stance in Normals.** A. Buizza, P. Ferraris, R. Gandolfi, R. Lombardi
- P102 A New Conceptual Framework for Investigating Human Upright Stance: 3D Time-Frequency Charts.** M. Dumitrescu, M. Lacour
- P103 Early VOR Suppression During Clinical Testing with Velocity Trapezoids.** L. A. McGarvie, R. A. Yavor, I. S. Curthoys, G. M. Halmagyi
- P104 Does Caloric Stimulation Have Influence on Vestibular Evoked Myogenic Potentials?** K. Ito, S. Karino, A. Ochiai, T. Murofushi, K. Kaga
- P105 Dynamic Changes and Analysis of Electronystagmography.** T. Chen, J. Cheng

- P106 The Interaction Between Accelerated Rotation and the Vestibular Evoked Myogenic Potentials.** S. Karino, A. Ochiai, K. Ito, T. Murofushi
- P107 Major Role for Proprioceptive Input from Neck Muscle in Controlling Equilibrium During Walking.** D. Laroche, G. Courtine, T. Pozzo
- P108 Application of Infrared CCD Camera for Detecting Nystagmus in Sudden Deafness Without Vertigo, Facial Nerve Paralysis and Acute Low Tone Hearing Loss.** T. Yabe, R. Shiroyanagi, C. Fujimoto
- P109 Frequency Dependence of Galvanic Induced Body Sway.** H. Kingma, S. Balter, C. Penners
- P110 The Latency of Fast Foot Trajectory Adjustments Are Unaffected by the Addition of a Balance Task.** R. F. Reynolds, B. L. Day
- P111 Asymmetrical Primitive Vestibular Function: A New Syndrome.** J. P. Deroubaix, D. Rousié, F. Hamon

**Poster Display P02, Thursday afternoon July 8, and Friday July 9, 2004**

- P112 Unilateral Visual Field Dependency for Patients with Vestibular Schwannoma.** A. Hafstrom, P. Fransson, M. Karlberg, M. Magnusson
- P113 Acoustic Neuroma and Hearing Preservation with Modified Translabrynthine Approach.** G. Magliulo, G. Cuiuli, G. Ralli, A. Celebrini
- P114 Responses of the Peripheral Vestibular Receptors Following Acute Hypotension in Rats.** B. Park, M. Kim, M. Lee, K. Kim, M. Choi, D. Choi
- P115 Motion Sickness and the Menstrual Cycle.** M. A. Gresty, J. F. Golding, P. Kadzere
- P116 Off Vertical Axis Rotation Modulates Respiratory Timing in Humans.** S. Marie, P. Denise, H. Normand
- P117 Motion Sickness Susceptibility Associated with Visually Induced Postural Instability and Cardiac Autonomic Responses in Healthy Subjects.** Y. Yokota, M. Aoki, B. Kuze, Y. Ito
- P118 Adaptive Changes of Vestibulospinal Reflexes Induced by Sustained Stimulation of Vestibular and Forepaw Receptors.** D. Manzoni, P. Andre, O. Pompeiano
- P121 Motor Learning in Adaptation to Altered Sensorimotor States.** H. S. Cohen, J. J. Bloomberg, A. P. Mulavara, S. L. Congdon, E. K. Murphy
- P122 Relationship Among Age, Gender, Handicap and Functional Balance in Dizzy Patients.** I. C. Tsai, S. I. Lin
- P123 Correlation Between Falls, Balance Clinical Tests and Posturographic Parameters on Healthy Old People.** M. A. Ortuño Cortés, E. Martín Sanz, V. Quinzá Valero, R. Barona De Guzmán
- P124 Sensory Influences Involved in the “Broken Escalator Phenomenon”.** K. L. Bunday, A. M. Bronstein
- P125 Disturbed Postural Reflexes in Patients with Pusher Syndrome.** L. Johannsen, D. Broetz, H. Karnath
- P126 A Human Performance Crossover Model for Balance Control with Vibrotactile Feedback.** K. H. Sienko, C. Wall, E. L. Kentala
- P127 Combined Horizontal and Posterior Canal Benign Paroxysmal Positional Vertigo in 3 Patients with Head Trauma.** P. Bertholon, L. Chelikh, S. Tringali, A. Timoshenko, C. Martin
- P128 Stapedotomy and Benign Paroxysmal Positional Vertigo.** G. Magliulo, M. Gagliardi, G. Ciniglio Appiani, G. Cuiuli, R. D'Amico, D. Parrotto
- P129 Self-Treatment of Benign Paroxysmal Positional Vertigo.** A. H. Radtke, M. Von Brevern, K. Tiel-Wilck, H. Neuhauser, A. Mainz-Perchalla, T. Lempert
- P130 Positional and Positioning Nystagmus in Healthy Subjects Under the Videonystagmoscopy.** R. Tochino, K. Sunami, T. Zushi, Y. Tokuhara, H. Yamamoto, H. Yamane
- P131 Functional Model of Benign Paroxysmal Positional Vertigo Using an Isolated Frog Utricle.** T. Inagaki, M. Suzuki, K. Otsuka, M. Furuya, Y. Ogawa, N. Kitajima, T. Takenouchi
- P132 Relationship Between Familial Osteoporosis and Recurrent BPPV: Two Case Reports.** D. Vibert, R. Häusler

- P133 Benign Paroxysmal Positional Vertigo in Germany: Prevalence and Health-Care Utilization.** M. Von Brevern, A. Radtke, F. Lezius, M. Feldmann, T. Ziese, T. Lempert, H. Neuhauser
- P134 Benign Paroxysmal Positional Vertigo Predominantly Affects the Right Labyrinth.** M. Von Brevern, T. Seelig, H. Neuhauser, T. Lempert
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