PROGRAM OF THE THIRTY-THIRD MIDWINTER RESEARCH MEETING

February 6 – 10, 2010
Disneyland Hotel, Anaheim, CA
Association for Research in Otolaryngology

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Program of the Thirty-Third Annual MidWinter Research Meeting of the

Association for Research in Otolaryngology

Assistive listening devices are available. Ask for them at the registration table.

Pre-registration & Registration

Pre-registration materials were sent to attendees that registered on or before January 5, 2010. Additional pre-registration materials may be requested from the ARO office. You may also register at the meeting.

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<th>Prior to 01/05/10</th>
<th>After 01/05/10</th>
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<tr>
<td>Active Member</td>
<td>$200</td>
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<td>Associate Member</td>
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<td>Non-Member (Student)</td>
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Hotel

A special hotel rate is available at the following hotel for ARO attendees (based on availability).

Disneyland® Hotel
1150 West Magic Way
Anaheim, CA 92802
Local: 714-956-6425
Reservations: 714-520-5005
Online www.aro.org

Questions regarding the hotel should be directed to the appropriate hotel office.

Smoking and photography are not permitted in the meeting rooms or poster hall
The John Wayne/Orange County Airport is thirteen miles from the Disneyland Hotel. Other close airports include; the Long Beach Airport (20 miles from the Hotel), Los Angeles International Airport (34.5 miles) and Ontario International Airport (35.5 miles).

Transportation: Ground transportation from area airports to the hotel is available via taxis, limousines and shuttle services. Taxis are located at all airport terminals. Each company usually posts its fares or you can check with the driver about the charge per mile.

Disneyland® Resort Express: The Express provides the most convenient mode of transportation between John Wayne Airport or Los Angeles International Airport and the Disneyland® Resort Area including Anaheim Resort Hotels. Upon exiting baggage claim, proceed to the Ground Transportation Center. The Disneyland® Resort Express picks up Guests in front of the ticket booth located to the left on a regular basis. Reservations are not required, however; advance reservations made online using this link, http://graylineanaheim.com/airport_info.shtml will receive a discounted rate. Call 800-828-6699 for more information on Disneyland Resort Express.

Rental Cars: ARO has arranged a special discount for the MWM attendees with Avis. Please contact Avis at (888) 754-8878 or www.avis.com and mention the ARO MidWinter Meeting and use the Avis Worldwide Discount (AWD) number: J868807.

Sightseeing:
Finding things to do in Orange County might seem like a simple decision: a trip to the Disneyland® Resort and then off to the beach. And while those are definitely top stops to include on your itinerary, there is much more to see and do in Orange County.
If you’re interested in including arts and culture to your Orange County vacation, there are many great options to explore in the area. The Orange County Performing Art Center, South Coast Repertory and other theaters present award-winning productions all-year-round and museums such as Muzeo and Bowers Museum have eclectic exhibits and host
innovative events. For active visitors, there are also excellent sports and recreation activities. Orange County has more than 40 championship golf courses, including the nearby Dad Miller Golf Course, where Tiger Woods honed his golfing skills in high school. We are also Southern California’s playground for family fun. There are amazing opportunities for kids to learn and have fun while doing it. The Discovery Science Center, Aquarium of the Pacific and many others feature great interactive exhibits. While in Anaheim, visit The Shops at Anaheim GardenWalk, it is Orange County’s newest oasis of outdoor shopping, dining and entertainment.

A Special Note for the Disabled: ARO wishes to take steps that are required to ensure that no individual with a disability is excluded, denied services, segregated or otherwise treated differently than other individuals because of the absence of auxiliary aids and services. If you need any auxiliary aids or services identified in the American with Disabilities Act, or any assistance in registering for this course please contact ARO Meetings Department at meetings@aro.org, via telephone at 856-423-0041, option 2 or write to ARO Meetings Department, 19 Mantua Road, Mt. Royal, NJ 08061.

Children’s Activities: Please contact the hotel concierge for information regarding off-site children’s activities and daycare.

Weather
The average high temperature for the month of February is approximately 69°F and the average low is 47°F. It is advisable to bring warm weather attire and a jacket for cooler evenings.

ARO Program Book
All US pre-registrants whose registration forms are received at the ARO office on or before January 5, 2010 will receive a copy of the ARO Program Book by mail in late January 2010. All other registrants will receive a copy of the Program Book on site at the meeting.
ARO Abstracts
A CD containing the abstracts of the presentations will be provided to all registered attendees at the meeting. ARO abstracts are also available on the Internet at: http://www.aro.org. Printed abstract books are available for preorder at $30.00 per book.

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(856) 423-3420 - fax
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Recording Policy
ARO does not permit audio or photographic recording of any research data presented at the meeting.

Breaks
Complimentary coffee and tea will be available in the morning and at selected breaks.
Friday, February 5, 2010

Registration
4:00 pm - 8:00 pm Disneyland Center Lounge

Saturday, February 6, 2010

Registration
7:00 am - 7:00 pm Disneyland Center Lounge

Presidential Symposium
8:00 am A Migraine: From Neurobiology to ENT Clinic and Back Disneyland Grand Ballroom
12:00 pm Travel Awards Lunch (by invitation) Sleeping Beauty Pavilion

Symposium
2:00 pm B Synaptic and Intrinsic Plasticity in the Auditory System: Mechanisms and Functional Significance Disneyland Center & North Ballroom

Podium
2:00 pm C Regeneration I Disneyland South Ballroom

Poster
1:00 pm D1 Development I Disneyland Exhibit Hall
D2 External & Middle Ear Mechanics
D3 Middle Ear: Pathophysiology
D4 Hair Cells: Stereocilia and Bundles
D5 Hair Cells: Transduction and Ion Channels
D6 Hair Cell Synapses
D7 Inner Ear: Anatomy and Physiology
D8 Inner Ear: Mechanics and Modeling I
D9 Otoacoustic Emissions I: Generation and Measurement
D10 Inner Ear: Cochlear Homeostasis I
D11 Inner Ear: Mechanisms of Inner Ear Damage
D12 Inner Ear: Damage and Protection: Prevention and Treatment Strategies I
D13 Inner Ear: Genetic and Clinical Pathology
D14 Auditory Nerve I: SGN Development and Survival
D15 Auditory Brainstem: Cochlear Nucleus Normal Structure and Function
D16 Auditory Brainstem: Cochlear Nucleus: Genetic and Environmental Manipulation
D17 Auditory Brainstem: ABR and Other Functional Assessments
D18 Auditory Midbrain: Inputs and Information Processing
D19 Auditory Cortex and Thalamus: Circuits, Development and Plasticity
D20 Auditory Pathways: Cortex and Thalamus: Physiology I
D21 Sound Localization: Spatial Perception
D22 Aging I: Psychoacoustics, Speech Perception and Clinical Studies
D23 Psychophysics: Perceptual Measures of Peripheral Processes
D24 Psychophysics: Spectrotemporal Perception in Normal Hearing
D25 Auditory Prosthesis: Central and Peripheral Physiology
D26 Auditory Prosthesis: Acoustic Simulations and Models
D27 Auditory Prosthesis: Signal Processing
D28 Vestibular: From Molecules to Behavior
D29 Vestibular: Clinical
D30 Clinical Otolaryngology
D31 Clinical Audiology I
D32 Speech

5:00 pm **spARO Town Hall**
Magic Kingdom Ballroom West

5:00 pm **Welcome Get Together**
Disneyland Exhibit Hall

**NIDCD Workshops**

6:00 pm E1 NIDCD Workshop: Trainees and Career Development
Disneyland South Ballroom

6:00 pm E2 NIDCD Workshop: Early Stage/New Investigators
Magic Kingdom Ballroom West

7:30 pm **Student Social**

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**Sunday, February 7, 2010**

**Registration**
7:30 am - 6:00 pm Disneyland Center Lounge

**Symposium**

8:00 am F Human Otopathology and Basic Science: Partners in Translational Research
Disneyland Center & North Ballroom

**Podium**

8:00 am G Development II
Disneyland South Ballroom

**ARO Diversity and Minority Affairs Workshop**

12:00 pm H Providing Mentorship to Women and Individuals from Diverse Backgrounds
Disneyland South Ballroom

**Symposium**

2:00 pm I Auditory Stream Segregation and Selection
Disneyland Center & North Ballroom
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Location</th>
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<tbody>
<tr>
<td>2:00 pm</td>
<td>Hair Cells: Molecules, Mechanisms and Models</td>
<td>Disneyland South Ballroom</td>
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<td>6:00 pm</td>
<td><strong>ARO Business Meeting</strong></td>
<td>Disneyland South Ballroom</td>
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<td>7:00 pm</td>
<td><strong>Patient Advocacy Workshop</strong></td>
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<td></td>
<td>Tinnitus Research and Treatment: The Next Frontier</td>
<td>Disneyland Center &amp; North Ballroom</td>
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<td><strong>Monday, February 8, 2010</strong></td>
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<tr>
<td>7:30 am - 6:00 pm</td>
<td><strong>Registration</strong></td>
<td>Disneyland Center Lounge</td>
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<td>8:00 am</td>
<td><strong>Symposium</strong></td>
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<td>L</td>
<td>New Developments in Understanding Hair-Cell Transduction</td>
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<td>8:00 am</td>
<td><strong>Podium</strong></td>
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<td>M</td>
<td>Auditory Pathway: Cortex and Thalamus - Complex Sound Processing and Behavioral Modulation in Auditory Cortex: Where Are We Now?</td>
<td>Disneyland South Ballroom</td>
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<td>12:00 pm</td>
<td><strong>ARO Media Relations Workshop</strong></td>
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<td>N</td>
<td>Why Most Scientists Would Rather Go to the Dentist than Talk to a TV Reporter</td>
<td>Disneyland South Ballroom</td>
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<td>2:00 pm</td>
<td><strong>Podium</strong></td>
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<td>O</td>
<td>Development III</td>
<td>Disneyland South Ballroom</td>
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<td>2:00 pm</td>
<td><strong>Symposium</strong></td>
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<td>P</td>
<td>Signal Processing in First and Second Order Vestibular Neurons</td>
<td>Magic Kingdom Ballroom West</td>
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<td>1:00 pm</td>
<td><strong>Poster</strong></td>
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<td>Q1</td>
<td>Development IV</td>
<td>Disneyland Exhibit Hall</td>
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<td>Q2</td>
<td>Otitis Media</td>
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<td>Q4</td>
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<td>Q5</td>
<td>Regeneration II</td>
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<td>Q6</td>
<td>Genetics I</td>
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<td>Q7</td>
<td>Inner Ear: Cochlear Homeostasis II</td>
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<td>Q8</td>
<td>Inner Ear: Membranes and Fluids</td>
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<td>Q9</td>
<td>Inner Ear: Damage and Protection: Prevention and Treatment Strategies II</td>
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<td>Q10</td>
<td>Otoacoustic Emissions II: Characterizations and Efferent Effects</td>
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<td>Q11</td>
<td>Acoustic Trauma: Mechanisms</td>
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<td>Q12</td>
<td>Acoustic Trauma: Prevention</td>
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<td>Q13</td>
<td>Ototoxicity: Mechanisms</td>
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<td>Q14</td>
<td>Ototoxicity: Prevention</td>
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<td>Q15</td>
<td>Auditory Nerve II: Physiology and Modeling</td>
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<td>Q16</td>
<td>Auditory Brainstem: Superior Olivary Complex</td>
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<td>Q17</td>
<td>Auditory Brainstem: Timing and ITD Coding</td>
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<td>Q18</td>
<td>Auditory Midbrain: Tinnitus, Plasticity, and Modulation</td>
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<td>Q19</td>
<td>Auditory Pathways: Cortex and Thalamus: Physiology II</td>
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<td>Q20</td>
<td>Auditory Cortex and Thalamus: Pathophysiology</td>
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<td>Q21</td>
<td>Sound Localization: Temporal Processes in Spatial Hearing</td>
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<td>Q22</td>
<td>Sound Localization: Binaural and Spatial Coding</td>
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<td>Q23</td>
<td>Aging II: Animal Model Studies</td>
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<td>Q24</td>
<td>Psychophysics: Psychophysics in Special Human and Animal Populations</td>
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<td>Q25</td>
<td>Psychophysics: Auditory Grouping and Streaming</td>
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<td>Q26</td>
<td>Psychophysics: Cognitive Processes in Auditory Perception</td>
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<td>Q27</td>
<td>Auditory Prosthesis: Bilateral, Spatial Hearing and Pitch</td>
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<td>Q28</td>
<td>Auditory Prosthesis: Trophic and Damage Effects</td>
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<td>Q29</td>
<td>Auditory Prosthesis: Current Steering</td>
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<td>Q30</td>
<td>Auditory Prosthesis: Alternatives to Intracochlear Electrodes</td>
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<td>Q31</td>
<td>Vestibular Receptors</td>
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<td>Q32</td>
<td>Vestibular Afferents and CNS</td>
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<td>Q33</td>
<td>Clinical Audiology II</td>
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**Presidential Lecture and Awards Ceremony**

5:30 pm  
R Humming in Tune: Sex Recognition by Mosquitoes on the Wing through Acoustic Distortion

Disneyland Center & North Ballroom

7:00 pm  
**Awards and Honors Reception**

Disneyland Grand Ballroom Lounge

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**Tuesday, February 9, 2010**

**Registration**

7:30 am - 4:00 pm  
Disneyland Center Lounge

**Symposium**

8:00 am  
S Stem Cell Applications for Cochlear Repair - From Proof of Principle to Therapy

Disneyland Center & North Ballroom
Panel on Research Funding
Disneyland South Ballroom

Symposium
2:00 pm  U  Modeling Neural Responses and Perceptions of Complex Sounds
Disneyland Center & North Ballroom

Podium
2:00 pm  V  Genetics II
Disneyland South Ballroom

Hair Ball
Disneyland Center Ballroom

Wednesday, February 10, 2010

Registration
7:30 am - 12:00 pm
Disneyland Center Lounge

Podium
8:30 am  W  Ototoxicity
Disneyland North Ballroom

Podium
8:30 am  X  Inner Ear: Mechanics and Modeling II
Disneyland South Ballroom
2010 ARO MidWinter Meeting

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Steven Rauch, MD, Council Liaison (2008-2010)

Physician Research Training
Marlan R. Hansen, MD, Chair (2008-2011)
Jong Woo Chung, MD (2008-2011)
Karl Kandler, PhD (2008-2011)
Joseph Kerschner, MD (2007-2010)
Daniel Lee, MD (2009-2012)
Anh Nguyen-Huynh, MD, PhD (2009-2012)
Pamela Carol Roehm, MD, PhD (2008-2011)
Alec N. Salt, PhD (2009-2012)
Konstantina M. Stankovic, MD, PhD (2007-2010)
Ebenezer Nketia Yamoah, PhD (2007-2010)
James F. Battey, MD, PhD, NIDCD Dir ex-officio
Maureen Hannley, PhD, Exec VP Rsch, ex officio
Research Forum Co-Chairs
John S. Oghalai, MD (2005-2008)
J. Christopher Post, MD (2004-2007)

spARO Steering Committee
Jennifer Bizley, DPhil
Naomi Bramhall, AuD
Stephen David, PhD
Thomas Welch
Adrian KC Lee, ScD ex-officio
ARO Council adviser: Robin Davis, PhD
Special Events

ARO Council Meetings
Friday, February 5, 2010 8:00 am – 3:00 pm
Wonder Executive Board Room

Tuesday, February 9, 2010 12:00 noon – 3:00 pm
Wonder Executive Board Room

Presidential Symposium
Migraine: From Neurobiology to ENT Clinic and Back
Saturday, February 6, 2010, 8:00 am – 12:15 pm
Grand Ballroom

Travel Award Luncheon and Program
Saturday, February 6, 2010, 12:00 noon – 2:00 pm
Sleeping Beauty Pavilion

Welcome Get Together
Sponsored by Springer
Saturday, February 6, 2010, 5:00 pm – 6:00 pm
Disneyland Exhibit Hall

SpARO Town Hall Meeting
Saturday, February 6, 2010, 5:00 pm – 5:30 pm
Magic Kingdom Ballroom West

Workshop
NIDCD Workshops

Trainees and Early Stage
Saturday, February 6, 2010, 6:00 pm – 7:30 pm
Disneyland South Ballroom

New Investigators
Saturday, February 6, 2010, 6:00 pm – 7:30 pm
Magic Kingdom Ballroom West

Student Social
Saturday, February 6, 2010, 7:30 pm

ARO Business Meeting
Sunday, February 7, 2010, 6:00 pm – 7:00 pm
Disneyland South Ballroom
Special Events (continued)

Participants
The Royal National Institute for Deaf People (RNID)
Joanna Robinson, PhD

Research Fund of the American Otological Society (AOS)
Lloyd Minor, MD

National Institute on Deafness and Other Communication Disorders (NIDCD)
Amy Donahue, PhD

Deafness Research Foundation (DRF)
Peter Steyger, PhD

National Organization for Hearing Research (NOHR)
Geraldine Dietz Fox

Tinnitus Research Consortium (TRC)
James B. Snow, Jr., MD

American Hearing Research Foundation (AHRF)
Sharon Parmet
Presidential Lecture and Awards Ceremony

*Humming in Tune: Sex Recognition by Mosquitoes on the Wing Through Acoustic Distortion*
Monday, February 8, 2010, 5:30 pm – 7:00 pm
Disneyland Center and North Ballroom

**Award of Merit**
Professor Ian Russell

**Awards and Honors Reception**
Monday, February 8, 2010, 7:00 pm – 8:30 pm
Disneyland Grand Ballroom Lounge

**Panel on Research Funding**
Tuesday, February 9, 2010, 12:00 pm – 1:45 pm
Disneyland South Ballroom

**Hair Ball**
Tuesday, February 9, 2010, 8:00 pm - midnight
Disneyland Center Ballroom
ARO Committee Meetings

Education Committee
Saturday, February 6, 2010 12:00 pm – 2:00 pm
Adventure A

Patient Advocacy Group Committee
Saturday, February 6, 2010 12:00 pm – 2:00 pm
Adventure B

Publications Committee
Saturday, February 6, 2010 12:00 pm – 2:00 pm
Adventure C

Physician Research Training Committee
Saturday, February 6, 2010 4:00 pm – 5:00 pm
Adventure A

Media Relations Committee
Sunday, February 7, 2010 8:00 am – 9:00 am
Adventure A

ARO Award of Merit Committee
Sunday, February 7, 2010 12:00 pm – 2:00 pm
Adventure A

Long Range Planning Committee
Sunday, February 7, 2010 12:00 pm – 2:00 pm
Adventure B

Government Relations Committee
Monday, February 8, 2010 11:00 am – 12:00 pm
Adventure A

International Committee
Monday, February 8, 2010 12:00 pm – 2:00 pm
Adventure B

Program Committee
Monday, February 8, 2010 12:00 pm – 2:00 pm
Adventure C

Animal Research Committee
Monday, February 8, 2010 12:00 pm – 1:00 pm
Fantasy A

Diversity and Minority Affairs Committee
Monday, February 8, 2010 12:00 pm – 1:00 pm
Fantasy B

* Lunches to be provided for Committee Members only
Program Organization

Posters will be displayed for a 2-day period: from 1pm Saturday through noon Monday, and from 1pm Monday through noon Wednesday. Poster presenters will be available at their posters from 1pm - 3pm the first day of their session, and during another two-hour period that will be indicated on the poster. Each presentation on the following pages has been formatted as shown below.

Abstract Number

11:30 #1040
Compliance Profiles of the Basilar Membrane and the Basal-Apical Dichotomy of Sound Processing
*Anthony W. Gummer; Rolf Schmidt; Mario Fleischer

Presenter marked by an *
Acknowledgements

The ARO MidWinter Meeting is supported partially by a grant from the National Institute on Deafness and Other Communication Disorders of the National Institutes of Health.


The ARO gratefully acknowledges the support of Springer for the Welcome Reception on Saturday evening.

The ARO gratefully acknowledges the support of MED-EL Corporation for the Travel Awards Luncheon on Saturday afternoon.
**Friday, February 5, 2010**

**Registration**
4:00 pm - 8:00 pm, Friday, February 5, 2010

*Disneyland Center Lounge*

**Saturday, February 6, 2010**

**Registration**
7:00 am - 7:00 pm, Saturday, February 6, 2010

*Disneyland Center Lounge*

**Session A: Presidential Symposium**

**Migraine: From Neurobiology to ENT Clinic and Back**

*Moderator: Steven Rauch*

8:00 am - 12:15 pm, Saturday, February 6, 2010

*Disneyland Grand Ballroom*

8:00

Introduction

*Steven Rauch*

8:10 #1

Neurobiology of Migraine Symptoms: The Role of Dura-Sensitive Thalamic Neurons in Photophobia and Alloodynia

*Rami Burstein*

9:00 #2

A Primary Sensory Innervation Connecting Headache, Meniere’s Disease and Inner Ear Dysfunction

*Zoltán Vass; Gábor Jancsó; Alfred Nuttall*

9:45 #3

Epidemiology of Migraine, Vertigo and Vestibular Migraine

*Michael Von Brevern*

10:30 BREAK

10:45 #4

Clinical Clues About a Dizzying Headache

*Jeffrey Staab*

11:15 #5

Abnormal Motion Perception in Migraine Associated Dizziness

*Richard Lewis; Koeun Lim; Keyvan Nicoucar; Daniel Merfeld; Adrian Priesol*
11:45 #6
Migraine and the Ear: Where Do We Go from Here?
*John Carey

Travel Awards Lunch
12:00 - 2:00, Saturday, February 6, 2010
Sleeping Beauty Pavilion

Session B: Symposium
Synaptic and Intrinsic Plasticity in the Auditory System: Mechanisms and Functional Significance

Moderators: Thanos Tzounopoulos, Dan Sanes
2:00 pm - 5:10 pm, Saturday, February 6, 2010
Disneyland Center and North Ballroom

2:00
Introduction
Thanos Tzounopoulos, Dan Sanes

2:20 #7
GABA adjusted the Balance of Excitation and Inhibition in Binaural Brainstem Neurons
*Benedikt Grothe; Ursula Koch

2:50 #8
Nicotinic Regulation of Auditory Cortex: From Cells to Cognition
*Raju Metherate

3:20 BREAK

3:40 #9
Activity-Dependent Mechanisms Regulating Transmission and Integration in the Superior-Olivary Complex
*Ian D. Forsythe

4:10 #10
Altered GAP Coding and Glycinergic Neurotransmission in the DCN of an Animal Model of Tinnitus: Pathologic Plasticity
*Donald Caspary; Hongning Wang; Thomas Brozoski; Jeremy Turner; Larry Hughes

4:40 #11
Homeostatic Control of Temporal Coding by Coordinated LTP and LTD in an Auditory Circuit
*Thanos Tzounopoulos
Session C: Podium

Regeneration I

Moderators: Olivia Bermingham-McDonogh, Marcel Rivolta
2:00 pm - 5:15 pm, Saturday, February 6, 2010
Disneyland South Ballroom

2:00 #12
Insulin-Like Growth Factor-1 Protects Mouse Cochlear Hair Cells from Aminoglycoside Ex Vivo
*Yushi Hayashi; Norio Yamamoto; Takayuki Nakagawa; Juichi Ito

2:15 #13
Little Siblings with a Big Attitude: Rbl1 (P107) and Rbl2 (P130) in Inner Ear Hair Cell Regeneration
*Sonia M. Rocha-Sanchez; Laura Scheetz; Michael Weston; JoAnn McGee; Edward Walsh

2:30 #14
Evaluation of Noise Deafened Guinea Pigs Injected with siRNA Targeting P27kip1 Five Weeks After Noise Exposure
*Rende Gu; Eric Lynch; Huy Tran; Jerry Glattfelder, Jr.; James LaGasse; Jonathan Kil

2:45 #15
Changes in Sox2 and Atoh1 Protein Expression During Supporting Cell Direct Transdifferentiation and Mitosis in the Regenerating Chick Cochlea
*Christina Kaiser; Brittany Chapman; Alex Valentine; Douglas Cotanche

3:00 #16
Comprehensive Genetic Regulatory Networks During Utricle Hair Cell Regeneration
*Yuan-Chieh Ku; David Alvarado; Nicole Renaud; Rose Veile; Mark Warchol; Michael Lovett

3:15 #17
Culture and Characterisation of Cells from the Human Utricle
*Robert Marano; Sharon Redmond; Marcus Atlas

3:30 BREAK

3:45 #18
Reciprocal Effect of BMP4 on Differentiation of Hair Cells and Neurons from Inner Ear Stem Cells
*Judith Kempfle; Fuxin Shi; Albert Edge
4:00 #19
Functional Recovery Obtained by Human ESCs-Derived Otic NeuroProgenitor Cells (ONPs) Transplanted Into the Deafened Gerbil Cochlea
*Marcelo Rivolta; Nopporn Jongkamonwiwat; Wei Chun Chen

4:15 #20
Investigating Inner Ear-Derived Neural Progenitors for Hearing Regeneration
*Zhengqing Hu; Danzheng Liu

4:30 #21
Differentiation of Human CD34+ Hematopoietic Stem Cells Into Glia-Like Cells in the Injured Cochlear Nerve of a Humanized Mouse Model
*Hai nan Lang; Eishi Mishimoto; Manna Li; Juhong Zhu; Lauren Kipar t ick; Amanda LaRue; Bradley Schulte; Richard Schmiedt; Kiyoshi Ando; Makio Ogawa

4:45 #22
A New Concept for Hair Cell Regeneration: Implantation of an Artificial Sensory Epithelium
*Takatoshi Inaoka; Takayuki Nakagawa; Hirofumi Shintaku; Satoyuki Kawan o; Hitoshi Wada; Shinji Hamanishi; Yasu hiko Tabata; Kozo Kumakawa; Yasushi Naito; Juich i Ito

5:00 #23
In Vitro and in Vivo Low Level Laser Therapy in the Gentamycin Induced Ototoxicity of the Rat Cochlea
*Myung-Whan Suh; Peijie He; Jae Yun Jung; Jin-Chul Ahn; Chung-Ku Rhee

Session D1: Poster
Development I
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

#24
FGF Signaling in OTIC Morphogenesis
*Suzanne L. Mansour; C. A. Noyes; Xiaofen Wang; Ekaterina P. Hatch

#25
Mycn Partially Segregates Histogenesis from Morphogenesis in Ear Development
*Benjamin Kopecky; Bernd Fritzsch
#26
Involvement of the MIF Pathway in the Development of Zebrafish Inner Ear
*Yu-chi Shen; Katie Holmes; Matthew Wyatt; Deborah L. Thompson; Stephanie Linn; Kate Barald

#27
Cytokine Macrophage Migration Inhibitory Factor (MIF) Is an Essential Bioactive Component for Inner Ear Neuronal Development
*Fumi Ebisu; Lisa M. Gerlach-Bank; Elizabeth C. Smiley; Dov Lerman-Sinkoff; Yu-chi Shen; Poornapriya Ramamurthy; Deborah L. Thompson; Christine R. Beck; Matthew Flynn; Ryan S. Teller; Luming Feng; G. Nicholas Llewellyn; Stephanie A. Linn; Andrew P. Chervenak; David F. Dolan; Jennifer Benson; Ariane Kanicki; Richard A. Altschuler; Alicia E. Koch; Ethan M. Jewett; John A. Germiller; Lynne M. Bianchi; Kate F. Barald

#28
The Role of Zic1 and Zic2 in Cell Fate Specification During Inner Ear Development
*Andrew Chervenak; Lisa M. Gerlach-Bank; Kate Barald

#29
Transgenic Rescued-GATA3 Mutant Mice Unveiled the Essential Function of GATA3 in Normal Morphogenesis of Inner Ear
*Tomofumi Hoshino; Keiji Tabuchi; Takashi Moriguchi; Kentaro Hayashi; Tsumoru Terunuma; Masayuki Yamamoto; Akira Hara

#30
Transcription Factor GATA3 Is Necessary for Normal Inner Ear Neurosensory Development and Associated Morphogenesis
*Jeremy Duncan; Bernd Fritzsch

#31
A Dysmorphic Basal Cochlea Is Associated with a Failure of Canonical Wnt Signaling in Lmx1a (DreherJ) Mutant Mice
*David Nichols; Kirk Beisel; Bernd Fritzsch

#32
Smad4 Gene Plays Important Role on Inner Ear Development in Mice
*Shi-Ming Yang; Zhao-Hui Hou; Guan Yang; Ji-Shuai Zhang; Wei-Wei Guo; Jian-He Sun; Wie-Yen Young; David He; Xiao Yang
#33
Pou3f4 Is Required for Normal Development of the Spiral Ligament and Stria Vascularis of the Cochlea
*Ling Wu; Mee Hyung Song; Soo-Young Choi; Se-Kyoung Oh; Hee Kewn Lee; Dae-Bo Shim; Jae Young Choi; Un-Kyung Kim; Jinwoong Bok

#34
Neural Crest Contributions to the Mammalian Inner Ear
*Dong-Jin Lee; Kyoung-Ah Kong; Jinwoong Bok

#35
Differences in Right and Left SCC Diameters May Account for Circling Behavior in EphB Deficient Mice
*James Lee; Constance Zhou; Dongmei Shao; Mark Henkemeyer; Kenneth Lee

#36
Kir4.1 (KCNJ10) Gene Is Not Down-Regulated in the Cochlea in the Cx30 Knockout Mice
*Shuang Liang; Hong-Bo Zhao

#37
The Mouse Model of SLC26A4-Related Syndromic and Non-Syndromic Deafness Develops Cochlear Bone Malformations and an Enlarged Vestibular Aqueduct
*Xiangming Li; Philine Wangemann

#38
Bone Marrow Cell Migration in Early Postnatal Cochlea in a Mouse Model of SLC26A4-Related Syndromic and Non-Syndromic Deafness
*Takayuki Kudo; Xiangming Li; Philine Wangemann

#39
Enlargement of the Membranous Labyrinth in Slc26a4−/− Mice Coincides with the Onset of Pendrin Protein Expression in Slc26a4+/− Mice During Development
*Hyoung-Mi Kim; Philine Wangemann
Session D2: Poster

External & Middle Ear Mechanics
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

#40
A Critical Test of Alternate Stimulus Level Measures for the Human Ear
*Natalie Souza; Sumitrajit Dhar; Jonathan Siegel

#41
Quantification of Human Middle-Ear Function with High-Frequency Bone Conduction Measures
*Gerald Popelka; Goutham Telukuntla; Sunil Puria

#42
Relationships Between Passive Middle-Ear Properties as Measured by Wideband Middle Ear Power Analysis (MEPA) and Distortion-Product Otoacoustic Emission (DPOAE) Response Properties in Healthy Newborns
*Lisa Hunter; Pat Jeng; Judi Lapsley-Miller; Patrick Feeney

#43
Effect of Middle Ear Fluid on Sound Transmission and Auditory Brainstem Response in Guinea Pigs
*Rong Gan; Xiying Guan; Wei Li

#44
Sound Energy Transmission Simulated in 3D Finite Element Model of the Human Ear
*Rong Gan; Xiangming Zhang

#45
Middle Ear Disease and Conductive Hearing Loss in Mice
*Suh-Kyung Lee; Melissa Wood; John Rosowski

#46
Anatomical Survey of the Ear of a Retinoic Acid Receptor Alpha Knockout Mouse
*Melissa Wood; John Rosowski

#47
Wave Motion on the Surface of the Tympanic Membrane from Stroboscopic Holograph and Its Clinical Application
*Jeffrey Cheng; Mohamad Hamade; Michael Ravicz; Ellery Harrington; Cosme Furlong; Saunil Merchant; John Rosowski
Simulating Large Deformations of the Gerbil Pars Flaccida to Determine Its Material Properties
*Willem Decraemer; Joris J.J. Dirckx; Nima Maftoon; Robert Funnell

Reverse Transmission Along the Ossicular Chain in Gerbil
*Wei Dong; Willem Decraemer; Ombeline De La Rochefoucauld; Elizabeth Olson

Estimation of the Quasi-Static Young’s Modulus of the Rat Eardrum Using Fourier Transform Profilometry and Inverse Finite-Element Analysis
*Hanif M. Ladak; Nastaran Ghadarghadar; Sumit K. Agrawal; Abbas Samani

Specialisation for Underwater Hearing in the Red-Eared Slider Turtle, Trachemys Scripta Elegans
*Jakob Christensen-Dalsgaard; Catherine E. Carr; Peter T. Madsen; Christian Brandt; Katie Willis; Darlene R. Ketten; Peggy Edds-Walton; Richard R. Fay

Postnatal Development of the Middle Ear in New Zealand White Rabbits
*Yael Marcusohn; Amos Ar; Joris J.J. Dirckx

Abnormal Auditory Ossicles and Hearing Loss in Osteopetrotic Mice
*Sho Kanzaki; Yasunari Takada; Kaoru Ogawa; Koichi Matsuo

Usefulness of the Transplantation of Isolated Middle Ear Mucosal Epithelial Cells Mixed with Hydrogel for the Promotion of Mucosal Regeneration in the Middle Ear of Wistar Rat
*Naotaro Akiyama; Tomomi Yamamoto-Fukuda; Yoshitaka Hishikawa; Koji Takehiko; Haruo Takahashi
#55
Effect of in Vivo Over-Expression of KGF by Electroporatively Transfected KGF CDNA on the Histology of External Auditory Canal in a SD Rat
*Tomomi Yamamoto-Fukuda; Mariko Terakado; Yoshitaka Hishikawa; Takehiko Koji; Haruo Takahashi

#56
In Vitro Properties of Osteoblasts Cultured from Stapes of Patients with Otosclerosis: A Preliminary Report
*Kourosh Parham; Yvonne Richardson; Jonathan Romak; Gloria Gronowicz

#57
Angiotensine 2 Effect on Inflammation Signaling Pathways in Otosclerosis
*Alexis Bozorg Grayeli; Milan Rudic; Christine Nguyen; Yann Nguyen; Michael Rodriguez; Yutaka Imauchi; Evelyne Ferrary; Olivier Sterkers

#58
Histopathologic Study on the Obliteration of the Temporal Dorsal Bullae in Guinea Pig Using Calcium Phosphate
*Yeong Kyu Park; Yong Ho Park

#59
The Healing Processes of the Tympanic Membrane
*Magnus Von Unge

#60
Histopathological Incidence of the Facial Canal Dehiscence in Otosclerosis
*Shin Kariya; Shigenobu Nomiya; Sebahattin Cureoglu; Patricia Schachern; Norimasa Morita; Rie Nomiya; Kazunori Nishizaki; Michael Paparella

#61
Post-Operative Hearing of the Reconstructed Ear with Soft Posterior Meatal Wall
*Takefumi Sakaguchi; Hiroshi Hosoi

#62
Taste Disorders in Middle Ear Disease and After Middle Ear Surgery – Evaluation of Study Methods
*Katarina Berling; Magnus Von Unge
Session D4: Poster

Hair Cells: Stereocilia and Bundles
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

#63 Inner Ear Hair Bundle Proteomics: Identification of Novel Stereocilia Proteins
*Anthony Peng; Patrick Hsu; Stefan Heller

#64 Molecular Constituents of the Tip-Link Complex in Hair Cells
*Ulrich Mueller

#65 Immunolocalization of Hair Bundle Proteins During Tip Link Regeneration
*Kateri Spinelli; Peter G. Gillespie

#66 Asymmetric Distribution of Protocadherin15 and Cadherin23 in the Kinociliary Links of Chick Vestibular Hair Cells
*Andrew Forge; Richard Goodyear; Kevin Legan; Guy Richardson

#67 HCN1 Channel Binding to Stereociliary Tip-Link Protein Protocadherin 15 CD3
*Neeliyath Ramakrishnan; Marian Drescher; Dennis Drescher

#68 Harmonin B: Cochlear Isoforms and Interactions with Cadherin 23 and F-Actin
*Lili Zheng; Donna S. Whitlon; James Bartles

#69 Do Regenerating Stereocilia Links Climb Toward the Tips of Stereocilia?
*Artur Indzhykulian; Gregory I. Frolenkov

#70 Membrane Components of the Avian Mechanosensitive Hair Bundle
*Clive Morgan; James Pagana; Peter G. Gillespie
Actin-Bundling Protein Fascin 2b Is a Constituent of Stereocilia in Zebrafish
*Brian McDermott; Shih-wei Chou; Philsang Hwang; Carol Fernando; Megan West; Jennifer Lin-Jones; Beth Burnside

Dynamic State and Compressive Nonlinearity of Coupled Hair Cells in the Frog Sacculus
*Clark Elliott Strimbu; Damien Ramunno-Johnson; Lea Fredrickson; Albert Kao; Dolores Bozovic

Mechanical Loading of Spontaneously Oscillating Hair Cells from the Bullfrog Sacculus
*Lea Fredrickson; Damien Ramunno-Johnson; Clark Elliott Strimbu; Albert Kao; Dolores Bozovic

Session D5: Poster

Hair Cells: Transduction and Ion Channels
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

Functional Analysis of Cochlear BK Channel-Associated Proteins Using RNA Interference
*Thandavarayan Kathiresan; Bernd Sokolowski

Transduction in the Mammalian Saccule
*Jocelyn Songer; Ruth Anne Eatock

Slo Interacting Proteins and Electrical Tuning in the Chick
*Jun-Ping Bai; Alexei Surguchev; Dhasakumar Navaratnam

Outer Hair Cell Receptor Currents and Potentials with Bundles Exposed to Endolymph
*Robert Fettiplace; Maryline Beurg

Changes of Mechano-Electrical Transduction After Intense Mechanical Stimulation: A First Event in Noise-Induced Hearing Loss?
*Ruben Stepanyan; Gregory I. Frolenkov
#79
Characterization of Zebrafish trpn1 Mutants
*Greta Glover; Katie Kindt; Josef Trapani; Cecilia Moens; Teresa Nicolson

#80
HCN Channels Are Not Required for Mechanotransduction in Sensory Hair Cells of the Mouse Inner Ear
*Geoffrey C. Horwitz; Andrea Lelli; Gwenaelle S. G. Geleoc; Jeffrey Holt

#81
The Outer Hair Cell Potassium Current I_{K,n} Requires PIP_2 and Is Inhibited by Poly-D-Lysine and Neomycin
*Michael G. Leitner; Christian R. Halaszovich; Dominik Oliver

#82
Cyclic Nucleotide-Gated (CNG) Ion Channels in Saccular Hair Cells
*Dakshnamurthy Selvakumar; Marian Drescher; Dennis Drescher

#83
Exploring the Electrical Resonance's Affect on the Mechanical Oscillations of Hair Cells in the Bullfrog Sacculus
*Damien Ramunno-Johnson; Clark Elliott Strimbu; Lea Fredrickson; Albert Kao; Dolores Bozovic

#84
Trans-Epithelial Electrical Stimulus on Coupled Hair Cells in Bullfrog Sacculus
*Albert Kao; Clark Elliot Strimbu; Damien Ramunno-Johnson; Lea Fredrickson; Dolores Bozovic

#85
Osmotic Properties of Auditory Hair Cells in the Leopard Frog: Evidence for Water-Permeable Channels
*Nasser Farahbakhsh; Jaime Zelaya; Peter Narins

#86
Characterizing the Inner Face of the Mechanotransducer Channel
*Bifeng Pan; Jessica Waguespack; Christopher LeBlanc; Michael Schnee; Anthony Ricci
Hearing Requires Otoferlin-Dependent Synaptic Vesicle Replenishment in Inner Hair Cells
*Tina Pangršic; Livia Lasarow; Kirsten Reuter; Martin Schwander; Hideki Takago; Dietmar Riedel; Thomas Frank; Lisa Tarantino; Janice Bailey; Nicola Strenze; Nils Brose; Ulrichi Mueller; Ellen Reisinger; Tobias Moser

Structure of Otoferlin C2A and Biochemical Analysis of Otoferlin C2 Domains
*Kirsten Reuter; Sarah Helfmann; Piotr Neumann; Martin Schwander; Dirk Fasshauer; Nils Brose; Reinhard Jahn; Ulrich Maller; Kai Tittmann; Ralf Ficner; Tobias Moser; Ellen Reisinger

Synaptotagmin-1 Cannot Functionally Replace Otoferlin, and Vice Versa
*Ellen Reisinger; John Brigande; JeongSeop Rhee; Manuel Koch; Ramya Nair; Sebastian Kügler; Nils Brose; Tobias Moser

Candidate Function of Otoferlin
*Marlies Knipper; Christoph Franz; Paulina Heidrych; Stephanie Kuhn; Ulrike Zimmermann; Jutta Engel; Susanne Duncker; Carsten M. Pusch; Peter Ruth; Markus Pfister; Walter Marcotti; Nikolaus Blin

Direct Interaction of Phosphatidylinositol 4,5-Bisphosphate with Otoferlin C2F Domain
*Neeliyath Ramakrishnan; Marian Drescher; Dennis Drescher

A Presynaptic Role for Harmonin in Regulating Ca,1.3 Channels in Mouse Inner Hair Cells
*Frederick Gregory; Harold Couchoux; Tina Pangršic; Irina Calin-Jageman; Tobias Moser; Amy Lee
#93
Myosin VI Is Required for the Proper Maturation and Function of Inner Hair Cell Ribbon Synapses
*Saaid Safieddine; Isabelle Roux; Suzanne Hosie; Stuart Johnson; Amel Bahloul; Nadège Cayet Cayet; Sylvie Nouaille; Cornelis Kros; Christine Petit

#94
Calcium Store Agonists in Cochlear Hair Cells Enhance Transmitter Release from Efferent Terminals
*Jee-Hyun Kong; Paul A. Fuchs

#95
Properties of the Olivocochlear-Outer Hair Cell Synapse in the Mouse Cochlea
*Jimena Ballestero; Javier Zorrilla De San Martin; Paul A. Fuchs; Ana Belén Elgoyhen; Eleonora Katz

#96
ACh Release at the Efferent-IHC Synapse Is Modulated by Presynaptic GABA_B Receptors
*Carolina Wedemeyer; Jimena Ballestero; Javier Zorrilla de San Martin; Ana Belén Elgoyhen; Eleonora Katz

#97
Synapse Quantification in Rodent Utricular Hair Cells
*Patricia M. Quinones; David R. Sultemeier; Cindy Luu; Larry F. Hoffman; Felix E. Schweizer

#98
Micromechanical Compressive Nonlinearity and Efferent Control in the Semicircular Canals
*Richard Rabbitt; Richard Boyle; Stephen M. Highstein

#99
Multiple Kinetic Components of Release at the Hair Cell Afferent Fiber Synapse Implicate Calcium-Dependent Vesicle Trafficking
*Michael Schnee; Joseph Santos-Sacchi; Anthony Ricci

#100
Synaptic Exocytosis Associated with T-Type and L-Type Ca2+ Channels in Developing Chicken Hair Cells
*Snezana Levic; Didier Dulon
Session D7: Poster

Inner Ear: Anatomy and Physiology
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

#101
3D Anatomical Atlas of the Cochlea of the CBA/J Mouse
*Peter Santi; Shane Johnson; Heather Schmitz; Kandan Ramakrishnan

#102
Saccular-Specific Hair Cell Addition During the Breeding Season of a Vocal Teleost Fish: Do More Hair Cells Equal Increased Auditory Sensitivity?
*Allison Coffin; Joseph Sisneros

#103
Labeling Patterns in the Inner Ear of the Transgenic thy1-YFP-H Mouse
*Robstein Chidavaenzi; Anna Lysakowski

#104
Imaging of the Mouse Cochlea by Frequency Domain Optical Coherence Tomography
*Tao Yuan; Ryan Shelton; Brian Applegate; Simon Gao; John Oghalai

#105
Detailed Anatomical Investigation of the Basilar Papilla of the Northern Leopard Frog
*Richard Schoffelen; Johannes Segenhout; Pim Van Dijk

#106
The Changes of Hearing and Related Histology in Vitamin a Deficient Mice
*Dae-Bo Shim; Sang Chul Kim; Hyun Joo Kim; Jin Woong Bok; Jae Young Choi

#107
How Do Hair Cell Currents Shape Afferent Responses in the Frog Vestibular Organs?
*Rita Mansi; Paola Perin

#108
Spontaneous Depolarizing Activities Displayed by Supporting Cells in the Organ of Corti Are Initiated by a Calcium-Dependent Chloride Conductance
*Qing Chang; Emillie Hoang Dinh; Xi Lin
#109
Synaptic Activity and Stimulation of Type II Cochlear Afferents
*Catherine Weisz; Elisabeth Glowatzki; Paul A. Fuchs

#110
Expression and Regulation of NMDA Receptors at Inner Hair Cell-Auditory Nerve Ribbon Synapses
*Michel Eybalin; Rim Bendris; Jean-Luc Puel

#111
Auditory Attention and the Detection of a Signal in Noise: Effects on Human Medial Olivocochlear Efferent Activity
*Nikolas Francis; John J. Guinan Jr.

#112
Infrasound-Induced Cochlear Microphonics in Scala Media Include a Component from Non Hair-Cell Sources
*Alec N. Salt; Ruth M. Gill; Jared J. Hartsock

#113
Hysteresis in the Cochlear Microphonic Potential in Gerbil
*Sebastiaan W. F. Meenderink; Corstiaen P. C. Versteegh; Marcel Van Der Heijden

#114
Ultrastructural Localization of Cochlin in the Rat Cochlear Duct
*Seiji Hosokawa; Kunihiro Mizuta; Hiroshi Nakanishi; Yasuyuki Hashimoto; Maki Arai; Hiroyuki Mineta; Susumu Shindo; Tetsuo Ikezono

#115
Expression of Integrins in the Adult Mouse Vestibular System
*Nicole Stanley; Sally Dawson; Andrew Forge; Ruth Taylor

#116
Gene Expression Differences Along the Tonotopic Axis of the Chick Basilar Papilla
*Corey Frucht; Joseph Santos-Sacchi; Dhasakumar Navaratnam
Session D8: Poster

Inner Ear: Mechanics and Modeling I
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

#117
Assessing Stapes Surgery Results by Round Window Motion Measurements
*Jae Hoon Sim; Michail Chatzimichalis; Christof Röösli; Alexander Huber

#118
Measurement of Electrically Evoked Basilar Membrane Vibration at Two Longitudinal Locations
*Wenxuan He; Tianying Ren

#119
Displacements of Footplate, Round Window Membrane and Basilar Membrane in Human Temporal Bones
*David Mullin; Xianxi Ge; Ronald Jackson; Ben Balough

#120
Efferent Inhibition of the Apical Cochlea’s Mechanical Responses to Sound
*John J. Guinan Jr.; Nigel P. Cooper

#121
The Effects of Intense Sound Stimulation on the Inner Ear
*Cecilia Johansson; Anders Fridberger

#122
Effects of Cholesterol Content on Viscoelastic Properties of Plasma Membrane
*Nima Khatibzadeh; Sharad Gupta; George Durm; William Brownell; Bahman Anvari

#123
On the Origins of the Compressive Nonlinearity of Hearing
*Robert Szalai; Daibhid Ó. Maoiléidigh; Alan R. Champneys; Nigel P. Cooper; Helen Kennedy; Martin Homer

#124
Consequences of Threshold Microstructure - A Modeling Approach
*Bastian Epp; Manfred D. Mauermann; Jesko L. Verhey
#125
Endocochlear Potential (EP)-Dependent K⁺ Circulation Model Represents the Electrochemical Dynamics of the Cochlear Amplification System
*Fumiaki Nin; Hiroshi Hibino; Shingo Murakami; Katsumi Doi; Toshihiro Suzuki; Yasuo Hisa; Yoshihisa Kurachi

#126
Bone Conduction Analyses in a Finite Element Model of the Human Middle Ear and Cochlea
*Namkeun Kim; Kenji Homma; Charles Steele; Sunil Puria

#127
Responses to Multi-Tone Stimuli in a Nonlinear Model of Human Cochlear Mechanics
*Yi-Wen Liu; Stephen T. Neely

#128
Two-Tone Suppression in a Model of Specific Loudness
*Stephen T. Neely; Joyce Rodriguez; Yi-Wen Liu; Walt Jesteadt; Michael Gorga

#129
Inter-Species Comparison of Cochlear Tuning with a Feed-Forward and Feed-Backward Organ of Corti Model
*Yongjin Yoon; Charles Steele; Sunil Puria

#130
The Real Part of the Axial Impedance of Isolated OHCs Is Governed by Shear Losses in the Basolateral Wall
*Mario Fleischer; Thomas Zahnert; Csaba Harasztosi; Manuela Nowotny; Johannes Baumgart; Anthony W. Gummer

#131
Simulating Interactions Between Hair Bundle Tuning and Electrical Resonance in Turtle Auditory Hair Cells
*Gregg Wells; Anthony Ricci

#132
Linearization of a Physiological Nonlinear Model of Mammalian Hair Bundle Motility
*Julien Meaud; Karl Grosh
Session D9: Poster

Otoacoustic Emissions I: Generation and Measurement
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

#134
Probing the Source of Stimulus-Frequency Otoacoustic Emissions Using Low-Frequency Biasing
*Jeffery Lichtenhan; John J. Guinan Jr.; Christopher A. Shera

#135
Exploring the Interrelationship Between Spontaneous and Low-Level Stimulus-Frequency Otoacoustic Emissions
*Susan Richmond; Analydia Gonzales; Christopher Bergevin; David Velenovsky; Benjamin Smith; Jungmee Lee

#136
Transiently Evoked Otoacoustic Emissions Decomposed Into Asymmetric Waveforms
*Wiktor Jedrzejczak; Konrad Kwaskiewicz; Katarzyna Blinowska; Krzysztof Kochanek; Henryk Skarzynski

#137
Temporal Adaptation of the Click-Evoked Otoacoustic Emission Level-Curve Reveals Dynamic Properties of Human Cochlear Processing
*Sarah Verhulst; James M. Harte; Christopher A. Shera; Torsten Dau

#138
Characterizing Frequency Dependence of Human Cochlear Nonlinearity Using Distortion Product Otoacoustic Emission Input Output Function
*Hwa Jung Son; Sumitrajit Dhar

#139
Towards Designing a Clinical Method for Estimating Basilar Response Input/output Response Characteristics in Listeners with Normal and Impaired Hearing
*Enrique A. Lopez-Poveda; Peter T. Johannesen
#140
Interference Patterns in Distortion Otoacoustic Emissions at High Frequencies in Humans
*Evan Grolley; Sumitrajit Dhar; Jonathan Siegel

#141
Analysis of DPOAE (2f1-F2) Phase and Individual DPOAE Components in Human Newborns
*Carolina Abdala; Sumitrajit Dhar

#142
Stimulus Frequency Otoacoustic Emission Amplitude and Latency Estimates Using Time Domain Methods: Effects of Stimulus Level, Hearing Threshold and Aging
*Peter Jacobs; Garnett McMillan; Serena Dann; Daniel McDermott; Eric Wan; Dawn Konrad-Martin

#143
Spontaneous Otoacoustic Emissions at Various Postures and Ear Canal Pressures
*Bert Maat; Emile De Kleine; Pim Van Dijk

#144
Distortion Product Otoacoustic Emissions Suppressed by Bone-Conducted Ultrasound in Humans
*Benjamin Sheffield; Jennifer Martin-Roff; Gary Sokolich; Laura Dreisbach; Fan-Gang Zeng

#145
Distortion Product Otoacoustic Emissions Evoked by Amplitude Modulated Tones in Humans
*Shixiong Chen; Lin Bian

#146
Continuously Swept Tone Paradigm for DPOAE Measurements
*Carrick Talmadge; Glenis Long

#147
Comparison of Two Methods of Recording DPOAEs Over a Wide Frequency Range in a Large Population
*Sumitrajit Dhar; Rebekah Abel; Jungmee Lee; Renee Banakis; Jonathan Siegel

#148
Mirror, Mirror in the Ear, Scarcely a Reflection Here? Characterizing DPOAE Components in Four Species
*Glen K. Martin; Barden B. Stagner; You Sun Chung; Laurence Fechter; Brenda Lonsbury-Martin
#149
DPOAE in Japanese Quail (Coturnix Coturnix Japonica): Defining Optimal Frequency Ratios and Characterizing Reflection and Distortion Source Responses
*Kate Belzner; Brenda Ryals; Carrick Talmadge

#150
Otoacoustic Emission Temperature Dependence Across the Lacertilia
*Christopher Bergevin; David Velenovsky; Kevin E. Bonine

Session D10: Poster

Inner Ear: Cochlear Homeostasis I
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

#151
Weak Inward Rectifier Channels in Root Cells Mediate Cochlear Potassium Recirculation
*Daniel Jagger; Graham Nevill; Andrew Forge

#152
CIC-2 Chloride Channel in Reissner's Membrane
*Kyunghee X. Kim; Daniel C. Marcus

#153
The Fibrocyte-Vascular Coupling in Control of Cochlear Blood Flow
*Xiaorui Shi; Min Dai; Jacqueline DeGagne; Yue Yang; RuiJuan Xiu; Alfred Nuttall

#154
Lactate Dilates Pre-Capillaries of the Spiral Ligament Via Type V Fibrocyte-Pericyte Coupling
*Min Dai; Yue Yang; Reid Fletcher; RuiJuan Xiu; Alfred Nuttall; Xiaorui Shi

#155
Structure and Function of the Blood Labyrinth Barrier in the Developing Mouse Cochlea
*Yue Yang; Min Dai; RuiJuan Xiu; Alfred Nuttall; Xiaorui Shi

#156
Gap Junctional Intercellular Coupling in Lateral Wall Fibrocytes of the Developing Cochlea
*John Kelly; Andrew Forge; Daniel Jagger
#157
Characterization and Analysis of the Cochlear Strial Vasculature Proteome and the Role of Na\(^{+}\), K\(^{-}\)-ATPase in the Blood Labyrinth Barrier
*Yue Yang; Min Dai; RuiJuan Xiu; John Mitchell; Alfred Nuttall; Xiaorui Shi

#158
The Proteome of Human Perilymph
*Andrew Lysaght; Shyan-Yuan Kao; Joao Paulo; Jose N. Fayad; Saumil Merchant; Hanno Steen; Konstantina Stankovic

#159
Proteomic Analysis of Endolymphatic Sac Luminal Fluid in Patients with an Enlarged Vestibular Aqueduct (EVA) Associated with SLC26A4 (PDS) Mutations
*Sung Huhn Kim; Won Sun Yang; Eun Jin Son; Sang Cheol Kim; Jae Young Choi

#160
Loss of Slc26a7 in Reissner’s Membrane Leads to Hearing Loss in Mice
*Kyunghee X. Kim; Joel D. Sanneman; Hyoun-Mi Kim; Donald G. Harbridge; Jie Xu; Daniel C. Marcus; Manoocher Soleimani; Philine Wangemann

#161
Determination of Molecular and Functional Properties of Voltage-Gated K\(^{+}\) Channel, Kv1 in Spiral Ganglion Neurons
*Hyo Jeong Kim; Ping Lv; Bruce Tempel; Ebenezer Yamoah

Session D11: Poster

Inner Ear: Mechanisms of Inner Ear Damage
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

#162
What’s with All the JNK in the Cochlea?
*Patrick Atkinson; Ramon Galindo; Marlan R. Hansen; Christopher Stipp; Steven H. Green
#163
Signalling Mechanisms Involved in Hearing Loss Associated to Insulin-Like Growth Factor I Deficit
*Isabel Varela-Nieto; Silvia Murillo-Cuesta; Guadalupe Camarero; Patricia Lorenzo-Garcia; Marta Magariños; Lourdes Rodriguez de la Rosa; Hortensia Sanchez-Calderon; Maria Rodriguez-Aburto; Raquel Martinez-Vega; Raquel Riquelme; Jose Manuel Zubeldia; Julio Rafael Cediel; Pedro Cobo

#164
Cell Death Pathways in Acquired Hearing Loss
*Su-Hua Sha; Fu-Quan Chen; Jochen Schacht

#165
Neurotrophic and Apoptotic Signaling in Spiral Ganglion Neurons After Hair Cell Loss
*Catherine Kane; Erin Bailey; Steven H. Green

#166
Cre/lox Mediated in Vivo Mosaic Cell Ablation to Investigate Early Stages of Degenerative Disease: Generating a Model for the “Onset” of Gradual Hearing Impairment
*Masato Fujioka; Albert Edge

#167
Inner Hair Cells Are Not Required for Survival of Spiral Ganglion Neurons in the Adult Cochlea
*Gabriel Corfas; Yael Zilberstein; M. Charles Liberman

#168
Spiral Ganglion Neuron (SGN) to Organ of Corti (OC) Projections After Hair Cell (HC) Loss and Their Relationship to Apoptotic Signaling
*Erin Bailey; Jennifer Becker; Steven H. Green

#169
Re-Organisation of the Organ of Corti Following Hair Cell Loss
*Ruth Taylor; Andrew Forge

#170
Role of IL-10 in Inner Ear Inflammation Secondary to Otitis Media
*Sung Moon; Jeong-Im Woo; Huiqi Pan; David Lim

#171
SLF-Derived MCP-1/CCL2 Is Involved in Inner Ear Inflammation Secondary to NTHI-Induced Otitis Media
*Sung Moon; Jeong-Im Woo; Huiqi Pan; David Lim
Effect of Vestibular Labyrinth Destruction on Endocochlear Potential and Potassium Concentration of the Cochlea
*Ryoukichi Ikeda; Kazuhiro Nakaya; Muneharu Yamazaki; Takeshi Oshima; Tetsuaki Kawase; Toshimitsu Kobayashi

The Effect of the Insertion Speed of Cochlear Implant Electrodes on the Insertion Forces
*Georgios Kontorinis; Gerrit Paasche; Thomas Lenarz; Timo Stoever

Systemic Dexamethasone as a Hearing-Protection Strategy in Experimental Cochlear Implantation
*Stephen O'Leary; Tim Connelly; Hayden Eastwood; Gordana Kel; Elisha Thomas; Rachael Richardson

Cochlear Implant Electrode Array-Eluted Dexamethasone (DXMb) Conserves Hearing and Hair Cells in an Animal Model of Electrode Insertion Trauma Induced Hearing and Hair Cell Losses: Mechanisms
*Thomas Van De Water; Christine Dinh; Ralph Abi Hachem; Simon Angeli; Fred Telischi; Thomas Balkany; Adrien Eshraghi

Protection of Spiral Ganglion Cells in Vivo After Implantation of Model Electrodes Coated with BDNF-Producing Cells
*Timo Stöver; Susanne Sasse; Verena Scheper; Kirsten Wissel; Gentiana Wenzel; Thomas Lenarz; Athanasia Warnecke

Inhibition of JNK Pathway Protects Hair Cells and Prevent Inner Ear Trauma Induced Hearing Loss
*Adrien Eshraghi; Gia Hossein; Chhavi Gupta; Mina Elnemr; Ralph Abi Hachem; Fred Telischi; Thomas Balkany; Thomas Van De Water
#178
Delayed Treatment of Tumor Necrosis Factor Alpha Challenged Organ of Corti Explants with Dexamethasone Base Prevents Apoptosis of the Auditory Hair Cells
*Ralph Abi Hachem; Christine Dinh; Sherry Chan; Adrien Eshraghi; Thomas Van De Water

#179
Improvement in Acoustic Thresholds Following Administration of a Phosphodiesterase (PDE) Inhibitor in Mice
*Janet Fitzakerley; Nina Holz; George Trachte

#180
Constitutively Active Forms of Mouse Hsf1: A Potential Model for Protecting the Cochlea
*Margaret Lomax; Nancy Bachman; Tzy-wen Gong; Catherine Martin; David Kohrman

#181
Pharmacological Protection Against Endolymphatic Hydrops-Linked Hearing Loss in the Phex Mutant Mouse
*Sami Melki; Chris Heddon; Alexander Levitt; Jonathan Frankel; Ralph O'Brien; Kumar Alagramam; Cliff Megerian

#182
Transplantation of Neural Differentiated Human Mesenchymal Stem Cells(HMSCs) Into the Cochlea of an Auditory-Neuropathy Guinea Pig Model
*Hyong-Ho Cho; Yong-Bum Cho

#183
Geranylgeranlyacetone Ameliorates Acute Cochlear Damage by 3-Nitropropionic Acid
*Young Ho Kim; Jae-Jin Song; Kyung Tae Park; Jun Ho Lee; Seung Ha Oh; Sun O. Chang

#184
The Effect of Intracochlear Electrical Stimulation on Intracellular Apoptosis Signaling in Spiral Ganglion Neurons After Deafening in Vivo
*Jonathan Kopelovich; Alain Cagaanan; Steven H. Green

#185
Enhanced Inner Ear Ion Homeostasis Gene Expression with Intratympanic Steroid Delivery
*Frances Hausman; Beth Kempton; Carol MacArthur; Dennis Trune
Session D13: Poster

Inner Ear: Genetic and Clinical Pathology
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

#186
Sjogren’s Syndrome Histopathology in the Human Inner Ear
*Ivan A. Lopez; Gail Ishiyama; Akira Ishiyama

#187
The Vestibular Arch: Its Anatomy, Development, Physiology and Pathology as Pathways Towards an Understanding of Ménière’s Disease
*Sava Soucek; Leslie Michaels

#188
Deregulation of PDGFR Signaling in Vestibular Schwannomas
*Carrie Maiorana-Brown; Zana Ahmad; Akira Noda; Weg Ongkeko; Allen F. Ryan; Joni Doherty

#189
Cochlea Spiral Ganglion Cells Degeneration and Hearing Loss as a Consequence of Schwann Cells Death in the Saposin B KO Mice
*Omar Akil; Ying Sun; Gregory Grabowski; Laurence R. Lustig

#190
Parkin Deficiency Causes Progressive Hearing Loss in Mice
*Kiyomi Hamaguchi; Norio Yamamoto; Ryusuke Hori; Takayuki Nakagawa; Juichi Ito

#191
Histogenesis of Otosclerosis and Its Relation to the Osteogenic Activity of the Fissula Ante Fenestram
*Leslie Michaels; Sava Soucek; Fred H. Linthicum Jr.

#192
The Skylab Mutation in Danio Rerio Affects Hair-Cell Function
*Rachel Clemens Grisham; Katie Kindt; Josef Trapani; Teresa Nicolson
Deficiency of the Ribosomal Protein L38 (RpL38) Causes Hearing Impairment in the Tail-Short (Ts) Mouse
*Harold Neely; Barden B. Stagner; Glen K. Martin; Konrad Noben-Trauth

Structure-Function Analysis of Grxcr1, the Gene Affected in the Mouse Deafness Mutant Pirouette
*Matthew Avenarius; Kristina Hunker; David Kohnrnan

BLEV-1: A Transgenic Mouse Model for BDNF Live Exon Viewing
*Wibke Singer; Rama Panford-Walsh; Hyun-Soon Geisler; Eleonora Passeri; Marlies Knipper

Auditory Function and Sensitivity in Chromosome 7 Disorders
*Jeffrey A. Marler; Carolyn B. Mervis; Doris J. Kistler; Frederic L. Wightman; Zsolt Urban

CLRN1 Mutant Mice Display Aberrant Cochlear Maturation
*Joseph Rutledge; Marisa Zallocchi; Grady Phillips; Dominic Cosgrove; Michael Anne Gratton

Mitochondrial Deafness Alleles Confer Misreading of the Genetic Code
*E. Böttger; D. Shcherbakov; S. N. Hobbie; S. K. Kalapala; M. Kulstrunk; R. Akbergenov

Screening Connexin Mutations in the Long-Term Storage of Human Temporal Bone Sections to Explore the Pathology of Connexin Mutation Induced Hearing Loss
*Liang Zong; Shakeel Mir; Xiao-Hui Wang; Fred H. Linthicum Jr.; David Lim; Hong-Bo Zhao

Unique and Essential Functions Played by Connexin26 in the Cochlea
*Xi Lin; Wenxue Tang; Shoeb Ahmad; Binfei Zhou; Qing Chang; Yunfeng Wang
#201
Changes in Formation of Cochlear Gap-Junction Plaques in Dominant-Negative Connexin26 Transgenic Mice
*Kazusaku Kamiya; Katsuhisa Ikeda

#202
Correlating the Audiometric and Genotypic Profile of Connexin 26, Connexin 30 and A1555G Hearing Loss in Singapore
*Lynne Lim; Gang Hua Zhu; Li Qing Xu; Evelyn Koay; Denise Goh

#203
Is the Loss of Endocochlear Potential Solely Responsible for Causing Hearing Impairment in the Connexin30 Null Mice?
*Shoeb Ahmad; Wenxue Tang; Qing Chang; Yunfeng Wang; Binfei Zhou; Xi Lin

#204
mRNA Sample Size for Gene Expression Profiling of Mouse Inner Ears - How Low Can You Go?
*Ronna Hertzano; Rani Elkon; Siaw-Lin Chan; Scott Strome

#205
Identification of MicroRNA Targets in the Inner Ear Using an Integrative Approach
*Karen B. Avraham; Tal Elkan; Ronna Hertzano; Igor Ulitsky; Rani Elkon; Martin Irmler; Ron Shamir; Johannes Beckers

Session D14: Poster

Auditory Nerve I: SGN Development and Survival
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

#206
Cochlear Hair Cell Micro-Isolates Regulate the Soma Size of Spiral Ganglion Neurons
*Felicia L. Smith; Robin L. Davis

#207
Influence of Central and Peripheral Glia on Spiral Ganglion Neurite Growth
*Eun-ju Jeon; Ningyong Xu; Marlan R. Hansen
Surface Protein Patterning for Schwann Cell Alignment and Cochlear Spiral Ganglion Axon Guidance
*Shaden Khalifa; Eric Scarfone; Per Björk; Tommy Schönberg; Christian Vieider; Mats Ulfendahl

Purification and Transfection of Schwann Cells from Postnatal Mouse Cochlea
*Donna S. Whitlon; Mary Grover

Expression of Wnt Receptors in Adult Spiral Ganglion Neurons: Frizzled 9 Localization at Growth Cones of Regenerating Neurites
*Richard Kollmar; Samit Shah; Young-Jin Kang; Barbara Christensen; Albert Feng

Expression of the Transcription Factor Sox2 in the Injured Cochlear Nerve of the Adult Mice
*Manna Li; Vinu Jyothi; Lauren Kilpatrick; Juhong Zhu; Ashley Smith; Liya Liu; Richard Schmiedt; Hainan Lang

Aggregation of Type I Unmyelinated Spiral Ganglion Neurons in Congenic Ly5.1 Mice
*Vinu Jyothi; Manna Li; Lauren Kilpatrick; Nancy Smythe; Ju Zhu; LaRue Amanda; Daohong Zhou; Bradley Schulte; Richard Schmiedt; Hainan Lang

Role of SDF-1 Expression and Hematopoietic Stem Cells in the Injured Auditory Nerve
*Lauren Kilpatrick; Manna Li; Vinu Jyothi; Juhong Zhu; John Goddard; Hainan Lang

Can Cell Substitution Therapy Be Used for Regeneration of Sensory Cranial Nerves?
*Petri Olivius; Aleksandra Glavaski; Pookie Siratirakun; Björn Palmgren; Andreas Kaiser; Charoensri Thonabulsombat

Intra-Auditory Nerve Trunk Delivery Approach Preserves Rat Auditory Function
*Björn Palmgren; Zhe Jin; Petri Olivius
Pyridoxine Preferentially Induces Auditory Neuropathy Through Mitochondrial Dysfunction
*Channy Park; Jeong-Han Lee; Sun-Ok Kim; Ah-Ra Ryu; Hey-Min Ji; Bin-Na Hong; Tong-Ho Kang; Hong-Seob So; Raekil Park

Session D15: Poster
Auditory Brainstem: Cochlear Nucleus Normal Structure and Function
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

Is the Projection from the Locus Coeruleus to the Cochlear Root Neurons Involved in the Mediation of the Acoustic Startle Reflex?
*Dolores E. López; Jose Anchieta C. Horta-Junior; Sebastián Hormigo; Ricardo Gómez-Nieto; Consuelo Sancho; Orlando Castellano; M. Javier Herrero-Turrión; Juan Carro

New Insights of the Ionotropic Glutamate Receptor Subunits Composition in Cochlear Nuclei. A SDS-Freeze Fracture Immunogold Labeling Study
*Maria Rubio; Naomi Kamasawa; Yugo Fukazawa; Elke Molnar; Makoto Itakura; Masami Takahashi; Masahiko Watanabe; Kenji Sakimura; Ryuichi Shigemoto

Excitatory Inputs to Bushy Cells
*Xiao-Jie Cao; Donata Oertel

The Endbulb of Held as a Model Synapse to Study Synaptic Transmission and Integration in Vivo
*Marei Typlt; Martin D. Haustein; Beatrice Dietz; Joern R. Steinert; Mirko Witte; Bernhard Englitz; Ivan Milenkovic; Cornelia Kopp-Scheinpflug; Ian D. Forsythe; Rudolf Rübsamen

In Vivo Study of AVCN Principal Neurons: Input Convergence and Synaptic Plasticity
*Thomas Kuenzel; Gerard Borst; Marcel Van Der Heijden
A Model of Activity-Dependent Recovery from Synaptic Depression in the Avian Cochlear Nucleus Without Residual Calcium
*Katrina MacLeod; Timothy Horiuchi

The Effects of Delayed Release on Firing in the Cochlear Nucleus
*Matthew Xu-Friedman; Hua Yang

Glycinergic Inhibitory Input Onto Bushy Cells in the Cochlear Nucleus
*Sharon Oleskevich; Ana Mastilo; Jeremy Sullivan; David Ryugo

Dopaminergic Modulation of Action Potential Initiation in Auditory Brainstem Interneurons
*Kevin Bender; Laurence Trussell

P2 Receptors in the Cochlear Nuclues Neurons - In Vitro and in Vivo Study in Gerbil and Mice
*Ivan Milenkovic; Beatrice Dietz; Sasa Jovanovic; Mandy Sonntag; Ute Krügel; Rudolf Rübsamen

Laser Photostimulation Mapping of Local Circuits in Rat Dorsal Cochlear Nucleus
*Paul Manis; Luke Campagnola; Patrick Kanold

Comparison of Tone-Evoked Responses Measured Optically Using a Voltage-Sensitive Dye with Electrophysiological Responses Based on Multiunit Recordings
*Frank Licari; James Kaltenbach

Exploring Multisensory Integration Using a Three-Dimensional Silicon Microelectrode Array for Simultaneous Ventral and Dorsal Cochlear Nucleus Recording and Stimulation
*Susanne Dehmel; Sister Mary Elizabeth Merriam; Onnop Srivannavit; Seth Koehler; Kensall D. Wise; Susan E. Shore
Sp5 Stimulation Leads to Prolonged Excitation in AVCN, and Inhibition in Deep DCN Neurons
*Shashwati Pradhan; Susanne Dehmel; Susan E. Shore

The Effect of Reverberation on the Representation of Single Vowels, Double Vowels and Consonant-Vowel Syllables by Single Units in the Ventral Cochlear Nucleus
*Arkadiusz Stasiak; Ian Winter; Mark Sayles

Short Latency Forward Inhibition in the Ascending Auditory Pathways
*Xueguo Zhang; Hamza Malek; Jinsheng Zhang

Session D16: Poster

Auditory Brainstem: Cochlear Nucleus: Genetic and Environmental Manipulation
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

Generation and Characterization of Mouse Lines Expressing a Tamoxifen-Inducible Cre-Recombinase Under the Central Auditory-Specific KCNK15 Promoter
*Hans Gerd Nothwang; Venkata Satheesh; Oktar Güloglu; Tillmann Weber; Annalisa Zuccotti; Marlies Knipper; Dusan Bartsch

Organization of Neuronal Circuits in the Cochlear Nuclei of Mice That Lack Otoferlin
*Samantha Wright; Donata Oertel

Is Pax6 Required for Normal Development of the Cochlear Nucleus?
*Kathleen Yee

Anatomical Plasticity in Brainstem Auditory Nuclei Following Unilateral Cochlear Ablation in Neonatal Rat
*Eriko Shima; Miyako Hatano; Kazuya Kurita; Tomokazu Yoshizaki; Makoto Ito
#237
Changes of Glutamate Concentration in Relation to Neuron Density in the Chinchilla Anteroventral Cochlear Nucleus Following Cochlear Ablation
*Simon Crass; Donald Godfrey; Kejian Chen; Matthew Godfrey; Yacine Medhkour

#238
Inhibitory Synaptic Transmission in Bushy Cells During Age-Related Hearing Loss
*Ruili Xie; Paul Manis

#239
Altered Expression of Synaptophysin and CD45 in the Cochlea and Cochlear Nucleus After Antioxidant Treatment in Acute Acoustic Trauma
*Xiaoping Du; Kejian Chen; Weihua Cheng; Chul-Hee Choi; Jianzhong Lu; Richard D. Kopke

#240
Spontaneous Calcium Signals in the Dorsal Cochlear Nucleus After Noise Exposure in Mice
*Heather O'Donohue; Luke Campagnola; Paul Manis

#241
Effects of "Benign" Noise Overexposures on AVCN Bushy Neurons in CBA Mice
*Yong Wang; Chongyu Ren

#242
A Model for Tinnitus Generation Based in the Ventral, Not Dorsal, Cochlear Nucleus
*Jennifer Melcher

#243
Effects of Inferior Colliculus Ablation on Noise-Induced Hyperactivity in the Dorsal Cochlear Nucleus
*Frank Licari; James Kaltenbach

#244
Longitudinal Changes in Gap Detection and Prepulse Inhibition Following Noise Exposure in Adult Mice
*Jeremy Turner; Deb Larsen; Larry Hughes; Chunhua Zeng; Diederik Moechars; Susan E. Shore

#245
Differential Effects of Prolonged Sound Exposure on the Enlargement of Auditory Neurons in the Brainstem
*Hui-Pin Lu; Paul Wai-Fung Poon
Session D17: Poster

Auditory Brainstem: ABR and Other Functional Assessments
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

#246
What Squid Hear: An Evoked Potential Study of the Longfin Squid (Loligo Pealei)
*T. Aran Mooney; Roger T. Hanlon; Jakob Christensen-Dalsgaard; Peter T. Madsen; Darlene R. Ketten; Paul E. Nachtigall

#247
Auditory Processing Changes Seasonally in Gambel’s White-Crowned Sparrow
*Melissa Caras; Eliot Brenowitz; Edwin W. Rubel

#248
Serotonin Modulates Latency But Not Amplitude of Auditory Brainstem Response Waveforms
*Melissa Papesh; Laura Hurley

#249
Acoustic Masking of Noised-Induced Tinnitus in Rats
*Kelvin Kwong; Jinsheng Zhang

#250
Sustained, High Dose Treatment with Sodium Salicylate Disrupts the Rat Auditory Brainstem Response
*Alessandra D’elia

#251
Somatosensory Modulation of Tinnitus, an FMRI Study
*Emile De Kleine; Cris Lanting; Ruben Eppinga; Pim Van Dijk

#252
Auditory Evoked Potentials in People with Tinnitus: A Relationship to Sound-Level Tolerance?
*Jianwen Gu; Barbara S. Herrmann; Robert Levine; Jennifer Melcher

#253
Neural Signatures of Speech-In-Noise Perception in Older Adults
*Samira Anderson; Erika Skoe; Alexandra Parbery-Clark; Nina Kraus
#254
Application of the Auditory Brainstem Response for Scaling Impulsive and Continuous Noise
*Krzysztof Kochanek; Jan Zera; Rafal Mlynski; Edward Hojan; Piotr Skarzynski

#255
Auditory Brainstem Activity to Spectrally-Degraded Music
*Erika Skoe; Jessica Levine; Nina Kraus

#256
Context-Dependent Encoding of Speech in the Human Auditory Brainstem as a Marker of Musical Aptitude
*Dana L. Strait; Richard Ashley; Erika Skoe; Nina Kraus

#257
Brainstem Pitch Representation in Native Speakers of Mandarin Is Less Susceptible to Degradation of Stimulus Temporal Regularity
*Gavin M. Bidelman; Ananthanarayan Krishnan; Jackson T. Gandour

#258
Identifying Relationships Between Neural Responses to Speech and Reading Using Structural Equation Modeling
*Jane Hornickel; Bharath Chandrasekaran; Steven Zecker; Nina Kraus

#259
Language-Dependent Enhancement of Pitch Encoding in the Brainstem Transfers to Stimuli Beyond the Natural Voice Pitch Range
*Christopher Smalt; Ananthanarayan Krishnan; Jackson T. Gandour

#260
Neural Representation of Pitch Salience in the Human Brainstem Revealed by Psychophysical and Electrophysiological Indices
*Gavin M. Bidelman; Ananthanarayan Krishnan; Jackson T. Gandour

#261
Human Frequency Following Response: Differential Responses to Positive & Negative Gain of Iterated Rippled Noise (IRN) Stimuli
*Saradha Ananthakrishnan; Ananthanarayan Krishnan; Gavin M. Bidelman

35
Session D18: Poster

Auditory Midbrain: Inputs and Information Processing
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

#262
Afferent and Efferent Dopaminergic Projections of the Inferior Colliculus
*Avril Genene Holt; Takashi Shimano; Bozena Fyk-Kолодziej; Nicholas Lusch

#263
Origins of Glutamatergic Terminals in the Inferior Colliculus Identified by Retrograde Transport and Expression of VGLUT1 and VGLUT2 Genes
*Tetsufumi Ito; Douglas Oliver

#264
Organization of Glycinergic Inputs to the Inferior Colliculus
*Jennifer Chikar; Douglas Oliver

#265
The Precision of Spike Timing Is Enhanced by Activation of Low-Threshold T-Type Calcium Channels in Auditory Midbrain Neurons
*Shu Hui Wu; Hongyu Sun

#266
The Temporal Interaction of Excitatory and Inhibitory Synaptic Inputs Determines the Sound Response Properties of the Neurons of Inferior Colliculus
*Munenori Ono; Masatoshi Kasai; Harunori Ohmori

#267
Inferior Colliculus Cells Rely Mainly on the Number of Input Spikes Rather Than Their Precise Timing to Discriminate Auditory Spectral/Temporal Features
*Joshua Gittelman; Na Li; George Pollak

#268
Inferior Colliculus Cells Selective for the Direction of FM Sweeps Are Relatively Insensitive to the Timing of Inhibitory and Excitatory Inputs
*George Pollak; Joshua Gittelman

#269
Spectrotemporal Feature Selectivity for Conspecific Vocalizations in the Auditory Midbrain
*Sari Andoni; George Pollak
#270
Pharmacological Dissection of Mechanisms Creating Selectivity for the Rate and Direction of FM Sweeps in the Pallid Bat Inferior Colliculus
*Anthony Williams; Zoltan Fuzessery

#271
Three-Dimensional Representation of Vocalizations in the IC
*Christine Portfors; Kreg Jonson; Patrick Roberts; George Cha; Zachary Mayko

#272
Neuronal Responses to Tones in Quiet and in Noise in the Inferior Colliculus of the Awake Primate
*Christopher Rice; Margit Dylla; Ramnarayan Ramachandran

#273
Functional Transformation Between Brainstem Inputs and Target Inferior Colliculus Neurons
*Chen Chen; Monty A. Escabi

#274
Modulation Tuning Characteristics Scale in the Inferior Colliculus: A Mechanism for Equalizing Natural Sounds
*Monty A. Escabi; Francisco Rodriguez; Chen Chen; Heather Read

#275
Cortical Responses to a New Double-Shank Auditory Midbrain Implant in the Guinea Pig
*Roger Calixto; Minoo Lenarz; Anke Neuheiser; Thomas Lenarz; Hubert Lim

#276
Binaural Processing in EI Neurons in the Inferior Colliculus Revealed with In-Vivo Whole Cell Recordings
*Na Li; Josh Gittel; George Pollak

#277
An Improved Inferior Colliculus Cell Model for Interaural Time Difference Analysis
*Todd Jennings; H. Steven Colburn

#278
Sensitivity to the Alignment of Sound Localization Cues in the Inferior Colliculus
*Sean Slee; Eric Young

37
Coding of Amplitude Envelope in Reverberation in the Inferior Colliculus of Awake Rabbit: Evidence for Mechanisms Compensating for the Acoustic Degradation
*Michaël Slama; Bertrand Delgutte

Session D19: Poster
Auditory Cortex and Thalamus: Circuits, Development and Plasticity
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

#280
A Comparison of Electrophysiological (Acoustic Change Complex) and Psychophysical Measures of Auditory Discrimination in Adults and Children
*Shuman He; John Grose; Craig Buchman

#281
Modulation of Subplate Neuron Activity by 5HT
*Patrick O. Kanold; Julien Azimzadeh

#282
Null Mutations in EphB2 Decrease Sharpness of Frequency Tuning in Primary Auditory Cortex
*Irakli Intskirveli; Mark Henkemeyer; Raju Metherate; Karina Cramer

#283
Organization and Experience-Dependent Modification of the Mouse Auditory Thalamocortical Circuit: Structure, Function and Behavior
*Daniel Polley; Barbara O’Brien; Troy Hackett; Vivek Khatri; Kellianne Kleeman; Michelle Young

#284
Development of Intrinsic Cortical Circuitry in Mouse Primary Auditory Cortex
*Barak Shechter; Ye Sun; Patrick O. Kanold

#285
Developmental Changes in the Timing Properties of Auditory Cortical Synaptic Inputs
*Kexin Yuan; Robert Fromeke; Christoph Schreiner

#286
In Vitro and In Vivo Studies of GABA_A Mediated Inhibition in Rat Medial Geniculate Body
*Ben Richardson; Donald Caspary
Spatial Receptive Fields in the Auditory Thalamus of Awake Marmosets
*Marcus Jeschke; Frank W. Ohl; Xiaoqin Wang

Temporal Response Properties in Auditory Cortex Are Depth-Dependent
*G. Bjorn Christianson; Maneesh Sahani; Jennifer F. Linden

Expression of SMI-32 Neurofilament Protein in the Central Auditory System of the Rat
*Ladislav Ouda; Rastislav Druga; Josef Syka

Afferent and Intrinsic Input Systems Defining Spectral Frequency Integration in Primary Auditory Cortex
*Max Happel; Marcus Jeschke; Frank W. Ohl

Evoked Potentials in the Macaque Auditory Cortex After Electrical Stimulation of the Midbrain
*Judith Mylius; Alexander Gorkin; Mikhail Babanin; Henning Scheich; Michael Brosch

Differential Effects of Cortical Inactivation on the Ipsilateral and Contralateral Cochlear Potentials
*Darren Edwards; Alan R. Palmer

Comparison Between Task Related Plasticity in Primary and Secondary Auditory Cortex
*Serin Atiani; Jonathan B. Fritz; Shihab A. Shamma

Sound Discrimination of the Guinea Pig Using a Non-Aversive Classical Conditioning Paradigm
*Hisayuki Ojima; Miki Taoka; Michio Tanaka; Atsushi Iriki

Anatomical and Functional Connectivity from Prefrontal Cortex to the Auditory Cortex in the Mouse
*Daniel Winkowski; Sharba Bandyopadhyay; Shihab A. Shamma; Patrick O. Kanold
Session D20: Poster

Auditory Pathways: Cortex and Thalamus: Physiology I
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

#296
Early Auditory Novelty Processing in Humans: Auditory Brainstem and Middle-Latency Responses
*Lavinia Slabu; Sabine Grimm; Jordi Costa-Faidella; Carles Escera

#297
Mismatch Negativity-Like Effect Observed in Epidural Evoked Potentials of Rat Auditory Cortex
*Yasuhiro X. Kato; Katuhiro Maki; Makio Kashino; Shigeto Furukawa

#298
Stimulus-Specific Adaptation to Frequency and Intensity in the Mouse Auditory Thalamus
*Jennifer F. Linden; Lucy A. Anderson; G. Bjorn Christianson

#299
Frequency Response Maps in the Auditory Thalamus of Rat and Its Relation with Surprise Detection
*Flora M. Antunes; Manuel S. Malmierca

#300
Assessing Tonotopy in Human Audition During a Change Detection Task – a Multi-Voxel Pattern Analysis Approach
*Annik Linke; Rhodri Cusack

#301
Electrophysiological Study of Responses to Amplitude-Modulated Noise Within Human Lateral Superior Temporal Gyrus
*Kirill Nourski; John Brugge; Richard Reale; Hiroyuki Oya; Hiroto Kawasaki; Matthew Howard

#302
Effects of Stimulus Repetition on the Individual Generators of the N1 Peak of the Late Auditory Evoked Potential
*Fawen Zhang; Jing Xiang; Caitlin Dohlen
#303
Does the Inter-Stimulus Interval Affect Hemispheric Asymmetry of the Late Auditory Evoked Potential?
*Fawen Zhang; Jing Xiang; Caitlain Cohlen; JiHyе Han

#304
MEG Measurement of Cortical Responses to Sound in Guinea Pig and Mouse
*Alain De Cheveigné; Jennifer F. Linden; Maria Chait; Bjorn Christianson; Benjamin Robinson; David McAlpine; Gen Uehara; Yoshiaki Adachi; Jun Kawai; Masakazu Miyamoto; Hisashi Kado

#305
Modification of Auditory Cortical Evoked Potentials by Irradiation of Near-Infrared Laser to Cortical SubRegions
*Katuhiro Maki; Shigeto Furukawa; Makio Kashino; Yasuhiro X. Kato

Session D21: Poster

Sound Localization: Spatial Perception
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

#306
Spatial Stream Segregation Tested with Rhythmic Masking Release
*John C. Middlebrooks; Zekiye Onsan

#307
Inharmonicity Affects the Detection of Signals in Maskers at Different Spatial Locations
*Astrid Klinge; Georg M. Klump

#308
Head Saccade Precision and Latency to Sound Pairs Having Different Durations in the Barn Owl
*Brian Nelson; Terry Takahashi

#309
Dynamic Sound Localization in the Cat During Rapid Eye-Head Gaze Shifts
*Janet Ruhland; Amy Hong; Tom C. T. Yin

#310
Free-Field Sound Localization During Passive Whole-Body Rotation
*Denise C.P.B.M. Van Barneveld; Floor Binkhorst; A. John Van Opstal
#311
Sound Localization Acuity in the CBA/CaJ Mouse (Mus Musculus)
*Kristie June; Kelly E. Radziwon; Matthew Xu-Friedman; Richard Salvi; Micheal L. Dent

#312
Lateralization of Acoustic Stimuli by Budgerigars (Melopsittacus Undulatus)
*Thomas E. Welch; Micheal L. Dent

#313
Acoustic Source Distance Discrimination in Rabbit
*Laurel Carney; Kelly-Jo Koch; Kristina Abrams; Fabio Idrobo

#314
Identification of Auditory Distance Cues by Zebra Finches (Taeniopygia Guttata) and Budgerigars (Melopsittacus Undulatus)
*Kelly E. Radziwon; Thomas E. Welch; Jarrod P. Cone; Micheal L. Dent

#315
Psychophysical Examination of the Accuracy and Precision of Sound Localization with Respect to Sound Source Diameter
*Nathaniel Greene; William O’Neill; Gary Paige

#316
Validation of a Virtual Conductive Hearing Loss Technique in an Animal Model
*Jennifer Thornton; Kanthaiah Koka; J. Eric Lupo; Heath Jones; Daniel J. Tollin

Session D22: Poster

Aging I: Psychoacoustics, Speech Perception and Clinical Studies
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

#317
Estrogen Effect on Age-Related Hearing Loss
*Kim SungHee

#318
Polymorphic Analysis of Mitochondrial Genome Sequence in Patients with Presbycusis
*Hisashi Ohtsuka; Kiritomo Shimamoto; Nori Nakayashiki; Masaru Tateda; Ken Ishijima; Hiroaki Sato

42
Recovery from Forward Masking in Elderly Cochlear Implant Users
*Edward Lee; Christina Runge-Samuelson; David Friedland

Aging Alters the Neural Representation of Simple and Complex Sounds: Evidence from Human FFR Recordings
*Christopher Clinard; Kelly L. Tremblay

The Influence of Aging on Human Sound Localization
*Emily Clark; Marina Dobreva; Paul Allen; William O’Neill; Gary Paige

Human Evoked Cortical Activity to Silent Gaps in Noise: Relation to Gap Detection and Processing Speed
*Kelly Harris; Mark Eckert; Judy R. Dubno

Age-Related Changes in Auditory Perceptual Learning
*Nicole Marrone; Rebecca Hu; Beverly A. Wright

Session D23: Poster

Psychophysics: Perceptual Measures of Peripheral Processes
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

The Shape of Monaural Temporal Window in School-Aged Children and Adults
*Shuman He; Emily Buss; Joseph Hall

Spectral and Temporal Masking Release in the Low-Frequency Range for Normal-Hearing and Hearing-Impaired Listeners
*Agnès Léger; Brian C.J. Moore; Stéphane Garnier; Marie Guillet; Christian Lorenzi

Contribution of Non-Simultaneous Masking in Masking Period Patterns of Ramped and Damped Noises
*Yi Shen; Jennifer Lentz
The Time Course of the Temporal Effect and Its Relationship to an Efferent Mechanism
*Elin Roverud; Elizabeth Strickland

The Role of the Temporal Effect in the Measurement of Temporal Masking Curves
*Elizabeth Strickland

Constraining the Derivation of Auditory Filter Shape with Temporal Masking Curves
*Toshio Irino; Hiroki Takahashi; Hideki Kahwaha; Roy Patterson

Auditory Filter Bandwidths in Behaving Ferrets Estimated with Notched-Noise
*Ana Alves-Pinto; Christian J. Sumner

Detection of Tones in Reproducible Noises: Combining Information Across Epochs and Across Cues
*Junwen Mao; Laurel Carney

Backward Masking with Reproducible Noise Samples as a Function of Stimulus-Masker Interval
*Ted Meyer; Andrew Ahn

Session D24: Poster
Psychophysics: Spectrotemporal Perception in Normal Hearing
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

Discrimination of Frequency Ratios
*Christophe Stoelinga; Robert Lutfi

Do “F0 Difference Limens” Measure Residue-Pitch Discrimination?
*Christophe Micheyl; Kristin Divis; David M. Wrobeski; Andrew J. Oxenham

Insensitivity to Pitch-Change Direction with Fixed-And Roved-Frequency Tones
*Samuel R. Mathias; Christophe Micheyl; Peter J. Bailey
#336
The Low Pitch of High-Frequency Complex Tones Relies on Temporal Fine Structure Information
*Sébastien Santurette; Torsten Dau

#337
Relative Effects of Increment and Pedestal Duration on the Detection of Intensity Increments
*Walt Jesteadt; Harisadhan Patra; Daniel Valente

#338
An Order Effect in Monaural-To-Binaural Loudness Judgments
*Ville Sivonen; Pavel Zahorik

#339
An Efferent Hypothesis May Explain Why Long Duration Vowels Enhance Spectral Contrast in Vowel Masking Patterns
*Skyler Jennings; Elizabeth Strickland; Alexander Francis

#340
Amplitude-Modulation Detection Over Sonic and Ultrasonic
*Takuya Hotehama; Seiji Nakagawa

#341
Psychophysical Reverse Correlation with Multiple Stimulus-Response Alternatives
*Huanping Dai; Christophe Micheyl

Session D25: Poster

Auditory Prosthesis: Central and Peripheral Physiology
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

#342
Effects of Long-Term Deafness and Delayed Chronic Intracochlear Electrical Stimulation on the Primary Auditory Cortex
*James Fallon; Dexter Irvine; Alison Evans; Thomas Landry; Robert Shepherd

#343
Development of a Novel Rodent Model for Examining Central Auditory Plasticity with Cochlear Implant Use
*David Perry; James Fallon; Hugh McDermott; Robert Shepherd
#344
Perception of Pulse Trains in the Electrically Stimulated Cochlea: Effects of Preserving Acoustic Hearing
*Bryan E. Pfingst; Deborah J. Colesa; Gina L. Su; John C. Middlebrooks; Yehoash Raphael

#345
Cochlear-Implant Modulation Detection Interference in the Auditory Cortex
*Michael German; Alana Kirby; John C. Middlebrooks

#346
Central Component of Forward Masking Observed in Cortical Responses to Cochlear Implant Stimulation
*Alana Kirby; John C. Middlebrooks

#347
Effect of Short-Term Adaptation on Discriminability of Neural Responses to Psychophysical Stimuli
*Nikita S. Imennov; Jay T. Rubinstein

#348
Bilateral Effects of Unilateral Intra-Cochlear Electrical Stimulation on the Central Auditory Pathway
*Dietmar Basta; Moritz Groeschel; Romy Goetze; Patrick Boyle; Arne Ernst

#349
Behaviorally Relevant Auditory Experience Improves Temporal Processing in Primary Auditory Cortex (AI) But Not in Inferior Colliculus (ICC) in Deaf Cats
*Maike Vollmer; Ralph E. Beitel

#350
Role of the Dorsal Cochlear Nucleus in Electrical Hearing
*Hamza Malek; Xueguo Zhang; Jonathan Dunford; Thomas Willis; Jinsheng Zhang

#351
Amplitude Modulation Increases Tonotopic Spread of Inferior Colliculus Activation and Cochlear Implant Channel Interaction
*Matthew Schoenecker; Olga Stakhovskaya; Russel Snyder; Patricia Leake; Ben Bonham
#352
Temporal Properties of Responses Measured in the Central Nucleus of the Inferior Colliculus (ICC) of Cats Chronically Stimulated with a High Pulse Rate
*Olga Stakhovskaya; Ben Bonham; Matthew Schoenecker; Patricia Leake

#353
Evaluation of Integration Effects on ECAP-Based Measures of Channel Interaction
*Ning Hu; Charles A. Miller; Paul J. Abbas; JiHwan Woo; Barbara K. Robinson

#354
Estimating ECAP Threshold from the Variability of the Response
*Stephen Holmes; David M. Landsberger; Robert Morse

#355
Audiovisual Integration in Cochlear Implant Users Measured by H2O15-PET
*Jae-Jin Song; Hyo Jeong Lee; Jeong-Hoon Jang; Jun Ho Lee; Sun O. Chang; Seung Ha Oh

Session D26: Poster

Auditory Prosthesis: Acoustic Simulations and Models
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

#356
Cooperating Speech Processing Strategy and Pitch Mismatch in Bilateral Cochlear Implants: Predictions from an Acoustic Model
*Sara I. Duran; Patrick K. Wang; Amanda K. Anderson; Philip R. Brown; Chandra S. Throckmorton; Debara L. Tucci; Leslie M. Collins

#357
Adding Adaptation to Cochlear Implant Processing
*Robert Smith; Stephen Decker; Karen Doherty; Benjamin Milczarski

#358
Effects of Spectral Shift on Speech Recognition in Background Noise
*Tianhao Li; Qian-Jie Fu
#359
Effects of Duration and Fundamental Frequency Manipulation on Chinese Tone Recognition with Spectrally Degraded Speech
*Xin Luo

#360
Phonemic Restoration with Simulations of Cochlear Implants and Electric-Acoustic Stimulation
*Deniz Baskent

#361
Contribution of Low-Frequency Acoustic Cues to Talker Identification Training with Spectrally Degraded Speech
*Vidya Krull; Xin Luo; Karen Kirk

#362
Effects of Channel Interactions on Sensitivity to Interaural Timing Differences in Filtered Click Trains
*Gary Jones; Ruth Y. Litovsky

Session D27: Poster

Auditory Prosthesis: Signal Processing
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

#363
Auditory Training in Adult Cochlear Implant Listeners Using Spectrally-Rippled Noise Stimuli in an Adaptive, Single-Interval Paradigm
*Kathleen F. Faulkner; Kelly L. Tremblay; Jay T. Rubinstein; Lynne A. Werner; Kaibao Nie

#364
The Effect of the Number of Channels on Spectral-Ripple, Schroeder-Phase Discrimination, and Modulation Detection in Cochlear Implant Users
*Jong Ho Won; Ward Drennan; Kyu Hwan Jung; Elyse Jameyson; Kaibao Nie; Jay T. Rubinstein

#365
Customized Selection of Frequency Maps for Postlingually Deaf Cochlear Implant Users
*Mario Svirsky; Chin-Tuan Tan; Matthew Fitzgerald; Daniel Jethanamest
#366
Speech Quality and Intelligibility in Cochlear Implants with MP/BP Combined Mode MAPs
*Bomjun Kwon; Trevor Perry; Vauna Olmstead

#367
Speech Enhancement Based on Partial Masking Effect
*Yuyong Jeon; Daniel J. Choi; Young-Rok Song; Kyu-Sung Kim; Sung-Hwa Hong; Sangmin Lee

#368
SPARSE, an Enhanced Speech Processing Algorithm for Cochlear Implants
*Guoping Li; Mark E. Lutman

#369
Influence of Source Talker F0 on Voice Conversion Algorithms for Cochlear Implant Users
*Eric Wilkinson; John Galvin; Hui Jiang; Qian-Jie Fu

#370
Improved Discrimination of Interaural Time Differences in Speech with an Asynchronous Cochlear Implant Sound Coding Strategy
*Zachary Smith

#371
Regenerating Harmonics for Improved Intelligibility of Telephone Speech for Electric and Acoustic Stimulation and Cochlear Implants
*Yi Hu; Philipos C. Loizou

#372
The Effect of Reducing Pulse Number Independent of Pulse Rate
*Chandra S. Throckmorton; Stacy Tantum; Leslie M. Collins

#373
Stream Segregation on a Single Electrode as a Function of Stimulation Rate in Cochlear Implant Listeners
*Sara I. Duran; Joshua Stohl; Chandra S. Throckmorton; Leslie M. Collins

#374
Gap Detection for Pulsatile Electrical Stimulation: Effect of Carrier Rate and Stimulus Level
*Soha Garadat; Catherine Thompson; Bryan E. Pfingst
#375
Toward a Novel Method for Evaluation of Cochlear Implant Signal Processing Strategies
*Daniel Aguiar; Thomas Talavage; Brandon Laflen

#376
A Model of Auditory Spiral Ganglion Neurons for Acoustic and Electrical Excitation
*Werner Hemmert; Michele Nicoletti; Paul Wilhelm Bade; Marek Rudnicki; Michael Isik

#377
Are Slow K+ Channels Responsible for Sub-Threshold Masking?: A Computational Model Approach
*Jihwan Woo; Charles A. Miller; Paul J. Abbas

Session D28: Poster

Vestibular: From Molecules to Behavior
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

#378
The Role of BK Channels in Vestibulo-Ocular Reflex Performance and Plasticity in Mice
*Michael Faulstich; Andrea Meredith; Richard Aldrich; Sascha Du Lac

#379
A Device for Quantifying Vestibular-Induced Eye Movements in Zebrafish Larvae
*Fangyi Chen; Weike Mo; Alex Nechiporuk; Teresa Nicolson

#380
Effects of Stimulus Pulse Parameters on Eye Movement Responses to Stimulation Delivered by a Vestibular Prosthesis
*Natan Davidovics; Gene Fridman; Bryce Chiang; Charles Della Santina

#381
Multichannel Vestibular Prosthesis Using Linear Coordinate Axis Transformation Stabilizes Eyes for Head Rotation About Any Axis
*Gene Fridman; Natan Davidovics; Chenkai Dai; Americo Migliaccio; Charles Della Santina
#382
3D Angular VOR Adaptation to Chronic Motion-Modulated Multi-Channel Prosthetic Stimulation of Semicircular Canal Ampullary Nerves
*Chenkai Dai; Gene Fridman; Bryce Chiang; Natan Davidovics; Charles Della Santina

#383
Effects of Vestibular Electrode Implantation and Prosthetic Stimulation on Hearing in Rhesus Monkeys
*Chenkai Dai; Gene Fridman; Charles Della Santina

#384
A Micromachined Cupula: Toward a Low-Power Biomimetic Angular Velocity Sensor for a Vestibular Prosthesis
*Prashanth Challa; Pamela Bhatti

#385
Blood Pressure and Heart Rate Changes from Labyrinthine Stimulation in the Anesthetized Rat
*Bernard Cohen; Sergei Yakushin; Giorgio P. Martinelli; Dmitri Ogorodnikov; Rowena Flores; Gay R. Holstein

#386
Low Level Blast Overpressure Exposures Initiate Brain Microvascular Remodeling and Repair
*Carey Balaban; Ronald Jackson; Michael Hoffer; Ben Balough

#387
A Compensatory Mechanism Mitigates the Detrimental Effects of Otoconin-90 Deletion on Otoconia Formation
*Yunxia (Yesha) Lundberg; Hui Zhang; Yinfang Xu; Hua Yang; Xing Zhao

#388
Cooption of Secretory Phospholipase (SPLA2) for Different Aspects of Gravity Receptor-Associated Mineralization in Vertebrate Phylogeny
*Ruediger Thalmann; David M. Ornitz; Wenfu Lu

#389
Significance of Tertiary Structure in CaCO3 Modulators
*Wenfu Lu; Isolde Thalmann; David M. Ornitz; Ruediger Thalmann
Session D29: Poster

Vestibular: Clinical
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

#390
Quantitative Analysis of Nystagmus by Image Analysis Technique
*Makoto Hashimoto; Kazuma Sugahara; Takuo Ikeda; Yoshinobu Hirose; Hiroaki Shimogori; Hiroshi Yamshita

#391
Posterior Semicircular Canal Dehiscence and Bony Findings of Posterior Semicircular Canal in Human Temporal Bone
*Aya Murai; Shigenobu Nomiya; Sebahattin Cureoglu; Norimasa Morita; Shin Kariya; Rie Nomiya; Kazunori Nishizaki; Michael Paparella

#392
Multi-Slice CT Overestimates Superior Canal Dehiscence Size
*Tanya Tavassolie; Richard Penninger; Lloyd Minor; John Carey

#393
Comparison of Cone-Beam and Multislice CT for Temporal Bone Evaluation
*Richard Penninger; John Carey

#394
Lessons from Follow-Up Examinations in Patients with Vestibular Neuritis: How to Interpret VFT Findings at a Compensated Stage
*Hong Ju Park; Jung Eun Shin

#395
Sinusoidal Off-Vertical Axis Rotation Test as a Clinical Otolith Function Test
*Izumi Koizuka; Akemi Sugita-Kitajima

#396
Translational Vestibulo-Ocular Reflexes During Off-Vertical Axis Rotation
*Scott Wood; Gilles Clément

#397
VEMPs Can Be Measured Even with Moderate and Varying-Intensity Contractions
*S. R. Prakash; John J. Guinan Jr.; Barbara S. Herrmann; Steven D. Rauch
#398
Outcome Analysis of Vestibular Evoked Myogenic Potentials in Children with Enlarged Vestibular Aqueduct: Clinical Value and Implication
*Guangwei Zhou; Quinton Gopen

#399
An Implementation of the Subjective Visual Horizontal Static Bias Vestibular Test for IPhone OS-Based Mobile Devices
*David Perry; Hayden Eastwood; Joanne Enticott

#400
Accelerometry as a Measure of Vestibulospinal Function: Test-Retest Reliability and Relationship to Computerized Dynamic Posturography
*Susan Whitney; Mark Redfern; Daniel Steed; James Chia-Cheng; Jennica Roche; Gregory Marchetti; Gabe Furman; Mark Musolino

#401
Portable Quantitative Assessment of the Horizontal Vestibulo-Ocular Reflex
*Osarenoma Olomu; Joel Goebel; Timothy Hullar

#402
Frequency and Velocity Dependence of Vestibular Psychometric Thresholds
*Timothy Hullar; Osarenoma Olomu; Brittany Nguyen; Robert Mallery

#403
Path Integration and Vestibular Impairments at Different Speeds
*Helen Cohen

#404
Motor and Perceptual Inhibition in Patients with Vestibular Disorders
*Maha Mohammad; Susan Whitney; Patrick Sparto; J. Richard Jennings

#405
Ocular Pursuit and Visual Suppression of the VOR Interfere with Auditory Information Processing Task Performance in Older Persons
*Joseph Furman; Mark Redfern; J. Richard Jennings
#406
Simple Inverted Pendulum Feedback Control Model for Posture
*Lara Thompson; David Balkwill; Richard Lewis; Conrad Wall III

#407
Comorbidity of Vestibular and Neuropsychiatric Disorders: The Search for Causality
*Karen B. Avraham; Shachar Shefer; Reut Avni; Tal Elkan; Amiel A. Dror; David Eilam; Matti Mintz

#408
Preliminary Results Using Sensory Substitution for Balance Disorders
*Melissa Stegner-Wilson; Ben Balough; Michael Hoffer; Kim Gottshall

Session D30: Poster

Clinical Otolaryngology
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

#409
Analysis of Mechanism of Malignancy Enhanced by Epithelial-Mesenchimal Transition in Squamous Cell Carcinoma of the Temporal Bone
*Hisashi Sugimoto; Makoto Ito; Tomokazu Yoshizaki

#410
Incidence Trends for HPV-Related and Unrelated Squamous Cell Carcinoma of the Head and Neck in New Mexico, 1981-2006
*Brianna Crawley; Garth Olson; Charles Wiggins; Julie Bauman

#411
Imaging Mass Spectrometry for the Analysis of Head and Neck Tumor
*Ichiro Tateya; Satoshi Ohno; Tsuyoshi Kojima; Yo Kishimoto; Yoshiharu Kitani; Yoshinori Takizawa; Takahiro Hayasaka; Seiji Ishikawa; Morimasa Kitamura; Shigeru Hirano; Mitsutoshi Seto; Juichi Ito

#412
Ototoxicity and Bacteriostatic Activity of Methylrosaniline Chloride (Gentian Violet) in the Guinea Pig
*Hitomi Higuchi; Takafumi Yamano; Mayumi Sugamura; Tetsuko Ueno; Takashi Nakagawa; Tetsuo Morizono
Effect of Burow Solution on the Basement Membrane Anionic Sites in the Stria Vascularis
*Mitsuya Suzuki; Hitoshi Iwamura; Takashi Sakamoto; Akinori Kashio

A Pre and Postoperative Bacteriological Study of Chronic Suppurative Otitis Media; a Multicenter Study
*Hyunjoon Shim; Seung Geun Yeo

Evaluation of a Prototype Robot for the Microsurgery of the Middle Ear in Human Temporal Bone Specimens
*Alexis Bozorg Grayeli; Mathieu Miroir; Yann Nguyen; Stéphane Mazalaigue; Jérôme Szewczyck; Evelyne Ferrary; Olivier Sterkers

Assessment of Mental Representation of Mastoidectomy by a Computer-Based Drawing Tool
*Alexis Bozorg Grayeli; Guy Sonji; Daniele Bernardeschi; Olivier Sterkers; Evelyne Ferrary

Canalostomy as a Surgical Approach for Cochlear Gene Therapy in the Rat
*Davina Gassner; Thomas Imig; Dianne Durham; Mark Praetorius; Peter-Karl Plinkert; Hinrich Staecker

The Ultrasonic Approach to Cochleostomy: Inner Ear Effects of Otic Capsule Drilling in the Rat
*Karen Pawlowski; Elena Koulich; Domenico Cuda; Charles Wright; Elisa Stabilini; Peter Roland

Effect of DC Current on Biofilm Formation on Platinum/Iridium Electrodes
*Elena Koulich; Pavithra Raghavan; Shelby Zimmerman; Karen Pawlowski

A Case of Intracochlear Schwannoma with Progressive Hearing Loss
*Tadashi Nishimura; Hiroshi Hosoi
#421
Repetitive Transcranial Magnetic Stimulation for Tinnitus Treatment: Identification of Clinical Predictors for Treatment Response
*Tobias Kleinjungh; Gabriele Frank; Veronika Vielsmeier; Julia Burger; Elmar Frank; Berthold Langguth

#422
Neuroimaging of Deaf Children Following Cochlear Implantation: Speech-Evoked Activity in the Auditory Cortex
*Alexander Sevy; Heather Bortfeld; Theodore Huppert; Michael Beauchamp; Audrey Nath; Ross Tonini; John Oghalai

#423
In Vivo Determination of Olfactory Mucus Cation Concentrations in Normal and Inflammatory States
*Senthil Selvaraj; Alan Robinson; Victoria Epstein; Claus-Peter Richter

Session D31: Poster

Clinical Audiology I
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

#424
Cortical Electrophysiology of Infant Hearing for Tones and Speech
*Barbara Cone; Richard Whitaker

#425
Ten-Year Follow-Up of a Universal Newborn Hearing Screening Programme Based on Multiple Transient-Evoked Otoacoustic Emissions and Clinical Brainstem Response Audiometry
*Erik Berninger; Birgitta Westling

#426
The History of Screening for Hearing Ability - Part 1 - Pediatrics
*Robert Ruben

#427
The Dichotomy in Hearing of Cystic Fibrosis (CF) Children Following High Exposure to Aminoglycosides: A Study Using DPOAEs and Extended High-Frequency Audiometry
*Ghada Al-Malky; Sally Dawson; Tony Sirimanna; Ranjan Suri
#428
Influence of Age Upon Hearing Function in Patients with Fabry Disease
*Hiroshi Yamamoto; Kazuya Tsuboi; Tsutomu Nakashima

#429
Measuring Reliability of a Subjective Rating of Listening Effort
*Mini Shrivastav

#430
Development and Evaluation of a Method for Deriving Initial Fittings of Extended-Bandwidth Hearing Aids with Multi-Channel Compression: CAMEQ2-HF
*Brian C.J. Moore; Christian Füllgrabe; Brian Glasberg; Thomas Baer; Michael Stone

#431
Closed-Set Intelligibility Tests for a Multilingual Society: A New Spanish Digit Triplet and Sentence Speech Test
*Sabine Hochmuth; Melanie Zokoll; Thomas Brand; Birger Kollmeier

#432
Improvement of Speech Intelligibility in Noise of the Hearing Impaired with Cochlear Representation Algorithm
*Chava Muchnik; Nir Fink; Miriam Furst

#433
Pure Tone Auditory Thresholds Can Change According to Tone Duration in Functional Hearing Loss Patients
*Naoki Oishi; Yasuhiro Inoue; Akemi Hori; Reiko Yakushima; Naoyuki Kohno; Kaoru Ogawa

#434
A User-Operated Two-Alternative Forced Choice Audiometry System for Use in Monitoring Hearing in Professional Musicians
*Jesper Hvass Schmidt; Christian Brandt; Jakob Christensen-Dalsgaard; Ture Andersen; Jesper Bælum

#435
Auditory Thresholds in Quiet and Background Noise During a Visuo-Spatial Task
*Vishakha Rawool
#436
Contribution of Temporal Envelop and Fine Structure in Mandarin Lexical Tone Perception for Sensorineural Hearing-Impaired Listeners
*Shuo Wang; Li Xu; Robert Mannell

Session D32: Poster

Speech
1:00 pm, Saturday, February 6, 2010 (48 hours)
Disneyland Exhibit Hall

#437
Relative Fundamental Frequency in Patients with Vocal Hyperfunction
*Gabrielle R. Merchant; Cara E. Stepp; James T. Heaton; Robert E. Hillman

#438
Semantic Ambiguity as a Factor Influencing Speech Comprehension in Noise
*Ingrid Johnsrude; Matt Davis; Jenni Rodd; Hélène Hakyemez; Stephen Lee; Aileen Chau

#439
Temporal Aspects of Sine-Wave Speech
*Li Xu; Ning Zhou; Heather Schultz; Bethany Mendez

#440
Breakdown of Speech Intelligibility Enhancement in Reverberant Rooms
*Pavel Zahorik; Eugene Brandewie

#441
Pitch Level and Pitch Shape as Determinants of Hemisphere Dominance in Automatic Auditory Processing of Chinese Lexical Tones
*Lin Chen; Xiao-Dong Wang; Feng Gu

#442
Level Difference Cues for the Segregation of Interleaved Speech Signals
*Nandini Iyer; Douglas Brungart; Brian Simpson

#443
Discrimination of Degraded Speech Sounds by Rats: Behavior and Physiology
*Kamalini Ranasinghe; Will Vrana; Chanel Matney; Gabriel Mettalach; Tara Rosenthal; Erika Renfroe; Tara Jasti; Michael Kilgard

58
Effect of Background White Noise and Speech Shaped Noise on Speech Discrimination Performance in Primary Auditory Cortex of Rats
*Jai Shetake; Jordan Wolf; Ryan Cheung; Kinsey Ram; Will Vrana; Tara Rosenthal; Michael Kilgard

spARO Town Hall
5:00 pm - 5:30 pm
Magic Kingdom Ballroom West

Welcome Get Together
5:00 pm - 6:00 pm, Saturday, February 6, 2010
Disneyland Exhibit Hall

Session E: NIDCD Workshops

#445
NIDCD Workshops: Trainees and Early Stage/New Investigators
6:00 pm - 7:30 pm, Saturday, February 6, 2010

Trainees and Career Development
Disneyland South Ballroom
*Amy Donahue; Janet Cyr; Dan Sklare; Melissa Stick

Early Stage/New Investigators
Magic Kingdom Ballroom West
*Amy Donahue; Christine Livingston; Christopher Platt

Student Social
7:30 PM, Saturday, February 6, 2010
Session F: Symposium

Human Otopathology and Basic Science: Partners in Translational Research
Moderators: Saumil N. Merchant, Charles Liberman
8:00 am - 11:30 am, Sunday, February 7, 2010
Disneyland Center and North Ballroom

8:00
Introduction
Christopher Platt

8:10 #446
Mouse Models of Deafness; the Human Otopathology Perspective
*M. Charles Liberman; Saumil N. Merchant

8:40 #447
Supporting Cells in Organ of Corti Regeneration and Otopathology
*Neil Segil; Fred H. Linthicum Jr.; Micheal Hoa

9:10 BREAK

9:30 #448
Using Human Temporal Bones, Combined with Histological and Proteomic Methods to Study the Underlying Molecular Changes Associated with DFNA9
*Jose N. Fayad; Robert Gellibolian

9:50 #449
Molecular and Cellular Approaches to the Human Temporal Bone II
*Akira Ishiyama; Ivan A. Lopez; Gail Ishiyama

10:10 #450
Temporal Bone Surgical Simulator I: A Resource for Clinicians and Trainees – from Cardboard Models to the Visible Ear Simulator and Beyond
*Mads Solvsten Sorensen; Peter Trier; Jesper Mosegaard
Temporal Bone Surgical Simulator II: The Ohio State Experience, Towards Validation
*Gregory Wiet; Don Stredney

Technical and Educational Resources Developed by the Temporal Bone Consortium
*Saumil N. Merchant

Session G: Podium

Development II

Moderators: Angelika Doetzlhofer, Jinwoong Bok
8:00 am - 11:30 am, Sunday, February 7, 2010
Disneyland South Ballroom

Comprehensive Analysis of Gene Expression in the Otocyst
*Saku T. Sinkkonen; Veronika Starlinger; Deepa J. Galaiya; Roman D. Laske; Samuel Myllykangas; Kazuo Oshima; Stefan Heller

Discovery and Characterization of FGF-Regulated Genes Involved in Otic Placode Induction
*Suzanne L. Mansour; Lisa D. Urness; Christian N. Paxton; Xiaofen Wang; Gary C. Schoenwolf

Sprouty1 and Sprouty2 Limit the Size of the Otic Placode and Restrict Dual Fgf and Wnt Inductive Domains
*Katherine Shim; Amanda Mahoney Rogers

Role of Wnt and Hedgehog Signaling in Axial Patterning of the Developing Inner Ear
*Andres Collazo; Aldo Castillo; Caryl Forristall

SoxE Genes in Mouse Inner Ear Development
*Bernhard Saeger; Gerd Scherer; Michael Wegner; Ulla Pirvola; Annette Neubueser

Characterization of Jab1, a Major Downstream Effector of the Cytokine MIF, in Zebrafish Inner Ear Development
*Stephanie Linn; Sarah Tomkovich; Kate Barald
9:30 #459
Inner Ear Neural Stem Cell Development and Morphogenesis Are Positively Regulated by the Chromatin Remodeling Protein CHD7 Via Effects on Proneural and Otocyst Gene Expression
*Elizabeth Hurd; Heather Poucher; Yehoash Raphael; Donna Martin

9:45 BREAK

10:00 #460
Bmp2 Is Essential for the Formation of Semicircular Canals in the Mouse Inner Ear
*Chan Ho Hwang; Doris Wu

10:15 #461
Opening of Scala Media During Embryonic Development Depends on Local Cochlear Ion Transport
*Hyoung-Mi Kim; Philine Wangemann

10:30 #462
Fgf9 Subfamily Is Essential for Organ of Corti Development
*Sung-Ho Huh; Jennifer Jones; Benton Tong; Mark Warchol; David M. Ornitz

10:45 #463
Organ of Corti Defects in Mouse Model for DFNB8/10 TMPRSS3 Deafness
*Dennis Trune; Michael Bateschell; Sagila George; Beth Kempton

11:00 #464
Forced Activation of Canonical Wnt Signaling Blocks Cartilage Differentiation in the Otic Capsule of Chicken Embryos
*Donna M. Fekete; Ulrike J. Sienknecht; Deborah J. Biesemeier; Jeremy A. Eckes

11:15 #465
Branchial Arch Skeletal Elements Develop at Disparate Rates During the First Postnatal Week in Mice
*Donald L. Swiderski
Session H: ARO Diversity and Minority Affairs Workshop

Providing Mentorship to Women and Individuals from Diverse Backgrounds

Moderator: Vishakha Rawool
12:00 pm - 1:30 pm, Sunday, February 7, 2010
Disneyland South Ballroom

12:00 #466
The Mentorship of US Underrepresented Minorities and Women in Research-Education Integrated Environment
*Carlos Castillo-Chavez

12:40 #467
That None Shall Perish
*Kelly Mack

1:20 Questions

Session I: Symposium

Auditory Stream Segregation and Selection

Moderators: John Middlebrooks, Barbara Shinn-Cunningham
2:00 pm - 5:25 pm, Sunday, February 7, 2010
Disneyland Center and North Ballroom

2:00 Introduction
John C. Middlebrook, Barbara G. Shinn-Cunningham

2:10 #468
Segregating and Selecting Auditory Objects
*Barbara G. Shinn-Cunningham

2:45 #469
A Songbird as a Model for Understanding Auditory Streaming
*Georg M. Klump

3:20 #470
The Cocktail Party Problem: Insights from Electromagnetic Recordings
*Claude Alain

3:55 BREAK
4:15 #471
Independent Neural Populations Embody Perceptually Discrete Auditory Streams
*John C. Middlebrooks; Chen-Chung Lee; Ewan Macpherson

4:50 #472
Foreground and Background at the Cocktail Party—A Neural and Behavioral Study of Top-Down and Bottom-Up Auditory Attention
*Mounya Elhilali

Session J: Podium
Hair Cells: Molecules, Mechanisms and Models
Moderators: Jung-Bum Shin, Keith Duncan
2:00 pm - 5:30 pm, Sunday, February 7, 2010
Disneyland South Ballroom

2:00 #473
Inner Hair Cell Functional Maturation Is Impaired in Myosin VIIa Mutant Mice
*Kishani Ranatunga; Cornelis Kros

2:15 #474
Usher Syndrome IIIA Gene Clarin-1 Is Essential for Hair Cell Function and Associated Neural Activation
*Ruishuang Geng; Thomas Reh; Olivia Bermingham-McDonogh; Sherri M. Jones; Charles Wright; Sami Melki; Yoshikazu Imanishi; Krzysztof Palczewski; Kumar Alagramam

2:30 #475
TRIOBP Bundling of Actin Filaments Is Indispensable for Hearing
*Shin-Ichiro Kitajiri; Takashi Sakamoto; Inna A. Belyantseva; Richard Goodyear; Ruben Stepanyan; Ikuco Fujiwara; Jonathan Bird; Saima Riazuddin; Sheik Riazuddin; Zubair Ahmed; Jenny Hinshaw; James Sellers; James Bartles; John Hammer Guy Richardson; Andrew Griffith; Gregory I. Frolenkov; Thomas Friedman

2:45 #476
Stereocilia and Espin Haploinsufficiency: Novel Developmental Stereociliary Defects Observed in Heterozygous Jerker Mice by Scanning Electron Microscopy
*Gabriella Sekerkova; Claus-Peter Richter; James Bartles
3:00 #477
Fascin 2 Is a Major Actin Crosslinker in the Hair Bundle
*Jung-Bum Shin; Chantal Longo-Guess; Leona H. Gagnon; Kenneth R. Johnson; Peter G. Gillespie

3:15 #478
Otoferlin Function in Ca^{2+}-Dependent Exocytosis at Cochlear and Vestibular Hair Cell Ribbon Synapses
*Didier Dulon; Saaid Safieddine; Sherri M. Jones; Christine Petit

3:30 #479
Using Cameleon to Measure Zebrafish Hair-Cell Function in Vivo
*Katie Kindt; Teresa Nicolson

3:45 BREAK

4:00 #480
Hair Cell Damage in the Neonatal Mouse Cochlea Using Forced Expression of Diphtheria Toxin
*Brandon C. Cox; Anne Lenoir; LingLi Zhang; Katherine A. Steigelman; Jian Zuo

4:15 #481
What Is the Role of Release Mechanism in the Cochlear Amplifier?
*Bora Sul; Kuni Iwasa

4:30 #482
Mechanical Motility in Hair Bundles Coupled to Artificial Membranes
*Dolores Bozovic; Joshua Tokuda; Van Mai; Keita Onoue

4:45 #483
Coupling a Sensory Hair-Cell Bundle to Cyber Clones Enhances Nonlinear Amplification
*Jeremie Barral; Kai Dierkes; Benjamin Lindner; Frank Jülicher; Pascal Martin

5:00 #484
Regeneration of Stereocilia of Cochlear Hair Cells by Math1 Gene Therapy
*Shi-Ming Yang; Wei Chun Chen; Wei-Wei Guo; Jian-He Sun; Ying-Yan Hu; Shuping Jia; David He
Adaptive Functional Switch: A New Stratagem for Repopulation of Non-Renewable Inner Ear Sensory Cells
*Dongguang Wei; Snezana Levic; Wei-qiang Gao; Christine Petit; Ebenezer Yamoah

ARO Business Meeting
6:00 pm
Disneyland South Ballroom

Session K: Patient Advocacy Workshop
Tinnitus Research and Treatment: The Next Frontier
Moderators: Fan-Gang Zeng, Mario Svirsky
7:00 pm - 9:00 pm, Sunday, February 7, 2010
Disneyland Center and North Ballroom

Tinnitus Research and Treatment: The Next Frontier
*Fan-Gang Zeng; Mario Svirsky

Tinnitus: A Patient Perspective
*Mari Quigley-Miller

Neural Mechanisms of Tinnitus
*Jos J. Eggermont

Central Tinnitus as Prime Example of Thalamocortical Dysrhythmia
*Rodolfo R. Llinás

Sound Therapy and Counseling for Tinnitus
*Rich Tyler

How Do We Find a Cure for Tinnitus? Approaches and Challenges for Medical Intervention Research
*William Martin
Monday, February 8, 2010

Registration
7:30 am - 6:00 pm, Monday, February 8, 2010
Disneyland Center Lounge

Session L: Symposium

New Developments in Understanding Hair-Cell Transduction
Moderators: Peter Gillespie, David Corey
8:00 am - 11:45 am, Monday, February 8, 2010
Disneyland Center and North Ballroom

8:00 #492
Reconsidering the Conventional Model for Transduction
*David P. Corey

8:25 #493
Calcium Imaging Localizes Mechatransducer Channels to Tops of Stereocilia
*Anthony Ricci

8:50 #494
Revealing the Structure of the Stereocilia Transduction Complex Using Imaging
*Bechara Kachar

9:15 #495
Molecular Constituents of the Tip-Link Complex of Hair Cells
*Ulrich Mueller

9:40 BREAK

10:00 #496
Structural Determinants of Cadherin-23 Function in Hearing and Deafness
*Marcos Sotomayor; Wilhelm Weihofen; Rachelle Gaudet; David P. Corey

10:25 #497
Molecular Structure of the Hair Bundle
*Peter G. Gillespie; Jung-Bum Shin; Piotr Kazmierczak; Ulrich Mueller

10:50 #498
Tip Link Orientation and Mechano-Electrical Transduction
*Gregory I. Frolenkov; Ruben Stepanyan
11:15 #499
Amplification by Active Hair-Bundle Motility
*A.J. Hudspeth

Session M: Podium

Auditory Pathway: Cortex and Thalamus - Complex Sound Processing and Behavioral Modulation in Auditory Cortex: Where Are We Now?
Moderator: Xiaquin Wang
8:00 am - 12:00 pm, Monday, February 8, 2010
Disneyland South Ballroom

8:00 #500
Syllable-Evoked Activity Simultaneously Recorded from Heschl’s Gyrus and the Lateral Superior Temporal Gyrus
*Mitchell Steinschneider; Kirill Nourski; Hiroto Kawasaki; Hiroyuki Oya; Matthew Howard

8:15 #501
Spectro-Temporal Encoding of Speech by ECoG Signals in Human Auditory and Motor Cortices
*Stephen David; Brian Pasley; Nima Mesgarani; Adeen Flinker; Edward Chang; Nathan Crone; Robert Knight; Shihab A. Shamma

8:30 #502
Predicting the Selective Encoding of Phonemes in the Primary Auditory Cortex
*Nima Mesgarani; Stephen David; Jonathan B. Fritz; Shihab A. Shamma

8:45 #503
Cortical First Spikes Can Encode the Peripheral Transformation of Natural Sounds
*Robert Liu; Frank Lin

9:00 #504
Responses of Marmoset Primary Auditory Cortex Neurons to Noisy Vocalizations
*Dennis L. Barbour; Amirali M. Shanechi; Paul V. Watkins

9:15 #505
Neural Processing of Competing Sounds in Auditory Cortex
*Yi Zhou; Xiaqin Wang
9:30 #506
Moderate Hearing Loss Decreases Spike-Timing Precision But Not Averaged Firing Rate of Auditory Cortex Neurons in Response to Conspecific Vocalizations
*Jean-Marc Edeline; Maud Guedin; Chloé Huetz

9:45 #507
Is IRN Really a Well-Controlled Pitch-Evoking Stimulus?
*Daphne Garcia; Chris Plack; Deb Hall

10:00 BREAK

10:15 #508
Enhancement of Sustained Fields for Pitch and Vowels Map to Similar Sites of Human Auditory Cortex
*Alexander Gutschalk; Stefan Uppenkamp

10:30 #509
Neural Coding of Simultaneous Fast and Slow Temporal Modulations in the Human Auditory Cortex
*Nai Ding; Jonathan Z. Simon

10:45 #510
Invariant Feature Encoding Across Five Auditory Cortical Fields
*Kerry Walker; Jennifer Bizley; Andrew J King; Jan Schnupp

11:00 #511
Formation of Associations in Monkey Auditory Cortex
*Michael Brosch; Elena Selezenova; Henning Scheich

11:15 #512
Learning Strategy Determines Cortical Plasticity: Implications for Behavioral Treatments of Auditory Disorders
*Kasia M. Bieszczad; Norman M. Weinberger

11:30 #513
Arc Expression and Neuroplasticity in Primary Auditory Cortex During Initial Learning Are Inversely Related to Neural Activity
*Ezekiel Carpenter-Hyland; Thane Plummer; Almira Vazdarjanova; David Blake
Behavioral Uncertainty in a Tone-In-Noise Detection Task Reflected in Decreased Amplitude and Greater Latency of Neuronal Responses in Ferret Frontal Cortex

*Jonathan B. Fritz; Stephen David; Serin Atiani; Shihab A. Shamma

Session N: ARO Media Relations Workshop

Why Most Scientists Would Rather Go to the Dentist than Talk to a TV Reporter

Moderator: Anne Luebke
12:00 pm - 1:30 pm, Monday, February 8, 2010
Disneyland South Ballroom

Broadcast Media Training or Why Most Scientists Would Rather Go to the Dentist Than Talk to a TV Reporter

*Sylvia Wright; Paul Pfotenhauer

Session O: Podium

Development III

Moderators: Katherine Shim, Jessica Appler
2:00 pm - 5:15 pm, Monday, February 8, 2010
Disneyland South Ballroom

Modulation of Notch Signaling by Fringe Activity: Making Boundaries in the Developing Cochlea

*Martin Basch; Takahiro Ohyama; Pamela Stanely; Susan Cole; Neil Segil; Andrew Groves

BMPs Act as Morphogens to Pattern the Developing Mammalian Cochlea

*Takahiro Ohyama; Yuji Mishina; Karen Lyons; Neil Segil; Andrew Groves

Phenotypic Analysis of vangl2 Knockout Mice and Morphological Comparison to looptail

*Michael Deans; Lisa Goodrich
2:45 #519
Cell Adhesion Underlies the Role for the Vertebrate Planar Cell Polarity Signaling Pathway in Convergent Extension of the Hearing Organ
*Dong-Dong Ren; Albert B Reynolds; Fang-Lu Chi; Ping Chen

3:00 #520
Function of HES and HEY Transcriptional Repressors in the Developing Mammalian Organ of Corti
*Matthew Barton; Angelika Doetzlhofer

3:15 #521
Specific Ablation of Neonatal Cochlear Supporting Cells in Vivo by Cre-Mediated Expression of Diphtheria Toxin
*Marcia M. Mellado Lagarde; Anne Lenoir; Brandon C. Cox; Jian Zuo

3:30 BREAK

3:45 #522
Gelsolin Plays a Role in the Actin Polymerization Complex of Hair Cell Stereocilia
*Steve D.M. Brown; Philomena Mburu; Maria Rosario Romero; Helen Hilton; Andrew Parker; Stuart Townsend; Yoshiaki Kikkawa

4:00 #523
Ribeye Is Required for Correct Afferent Synapse Innervation of and CaV1.3a Channel Clustering in Zebrafish Hair Cells
*Lavinia Sheets; Josef Trapani; WeiKe Mo; Nikolaus Obholzer; Teresa Nicolson

4:15 #524
GATA3 Regulates the Timing of Neurite Extension and Targeting of Spiral Ganglion Neurons
*Jessica Appler; Cindy Lu; Edmund Koundakjian; Lisa Goodrich

4:30 #525
Permanently Impaired Axonal Projection and Synapse Formation in Hypothyroid Mice
*Mirna Mustapha; Qing Fang; R. Keith Duncan; Tzy-wen Gong; Lisa A. Beyer; David F. Dolan; Yehoash Raphael; Sally A. Camper
4:45 #526
Profiling of Auditory-Specific Gene Expression Throughout Auditory Circuit Assembly Identifies Npr2 as a Regulator of Spiral Ganglion Axon Bifurcation
*Cindy Lu; Jessica Appler; Lisa Goodrich

5:00 #527
A Spiral Ganglion Neuron-Specific Cre Mouse Line
*Zhiyong Liu; Thomas Owen; LingLi Zhang; Jian Zuo

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Symposium

Signal Processing in First and Second Order Vestibular Neurons
Moderators: Jay Goldberg, Kenna Peusner
2:00 pm - 5:25 pm, Monday, February 8, 2010
Magic Kingdom Ballroom West

2:00 #528
Introduction to the Symposium on Signal Processing in First- And Second-Order Vestibular Neurons
*Kenna D. Peusner

2:10 #529
The Organization of Signals in Mammalian Otolith Organs
*Ruth Anne Eatock; Radha Kalluri; Jocelyn Songer

2:35 #530
Membrane Proteins Define Microdomains in the Vestibular Afferent Calyx
*Anna Lysakowski

3:00 #531
Neurotransmission Between the Vestibular Type I Hair Cell and Its Calyx Ending
*Jay M. Goldberg; Shilpa Chatlani

3:25 BREAK

3:45 #532
Neurotransmitters and Modulators of Vestibulo-Sympathetic Pathways
*Gay R. Holstein; Giorgio P. Martinelli; Victor L. Friedrich Jr.
4:10 #533
Expression of Glutamate Receptors and Potassium Channels in Second-Order Chicken Vestibular Neurons During Development of Signal Processing
*Anastas Popratilof; Mei Shao; June C. Hirsch; Kenna D. Peusner

4:35 #534
Differential Dynamic Signal Processing in Frog Second-Order Vestibular Neurons
*Hans Straka

5:00 #535
Signaling and Plasticity of Vestibular Nerve Synapses Onto Functionally Distinct Vestibular Nucleus Neurons
*Sascha Du Lac; Lauren McElvain; Martha Bagnall; Kristine Kolkman; Michael Faulstich; Minyoung Shin; Takashi Kodama

Session Q1: Poster Development IV
1:00 pm, Monday, February 8, 2010 (48 hours)
Disneyland Exhibit Hall

#536
JAG1-Mediated Notch Signaling Specifies Sensory Organ Development in the Mammalian Inner Ear
*Wei Pan; Ying Jin; Ben Stanger; Amy Kiernan

#537
Cooperative Functions of Hes/Hey Genes in Auditory Hair Cell and Supporting Cell Development
*Tomoko Tateya; Itaru Imayoshi; Ichiro Tateya; Juichi Ito; Ryoichiro Kageyama

#538
The Role of Bone Morphogenetic Proteins in Cochlear Hair Cell Formation: Analyses of Noggin and Bmp2 Mutant Mice
*Chan Ho Hwang; Dayong Guo; Marie Harris; Yuji Mishina; Lin Gan; Stephen Harris; Doris Wu

#539
Analysis of the Maturation of Genotypically Atoh1-Null Hair Cells in the Cochlea of Chimeric Mice
*Kristin Hamre
#540
Morphological Development of the Reticular Lamina
*Hirofumi Sakaguchi; Tomoki Fujita; Toshihiro Suzuki; Yasuo Hisa; Shigenobu Yonemura

#541
TAK1 Expression in the Murine Cochlea: A Novel Marker for Supporting Cells
*Mark Parker; Kevin Jiang; Joe Adams; Albert Edge

#542
Expression of the IGF Signaling Pathway During Mouse Cochlear Development
*Takayuki Okano; Matthew Kelley

#543
Differential Expression of CTL2/SLC44A2 Isoforms During Development of Mouse Inner Ear
*Maria M. Galano; Lisa A. Beyer; Thankam S. Nair; Pavan K. Kommareddi; Yehoash Raphael; Thomas E. Carey

#544
MicroRNA-Associated Argonaute Protein Expression in the Mouse Inner Ear
*Garrett Soukup; Marsha Pierce; Colby Bradfield; Danielle Renner

#545
Transient Expression of PTEN in the Hair Cell and Neuronal Lineages During Mammalian Inner Ear Development
*Junko Murata; Tohru Kimura; Yoichiro Tomiyama; Suetaka Nshiike; Katsumi Doi; Hidenori Inohara; Hideyuki Okano; Toru Nakano

#546
Expression Pattern of Olig Gene Family in the Developing Inner Ears
*Norio Yamamoto; Atsuhiro Yoshida; Takayuki Nakagawa; Juichi Ito

#547
Excitatory and Inhibitory Synaptogenesis in the Cochlear Nucleus
*Jose Juiz; Joaquim Soriano; Rafael Lujan; Veronica Fuentes-Santamaria
#548
A Clarin-1/integrin α 8 Complex May Function in the Developing Hair Cell Synapses
*Marisa Zallocchi; Daniel Meehan; Duane Delimont; Dominic Cosgrove

#549
Neurod1 Regulates Neuronal Differentiation and Controls Hair Cell Differentiation by Negatively Regulating Precise Spatial and Temporal Expression of Atoh1 in the Ear
*Israt Jahan; Ning Pan; Jennifer Kersigo; Bernd Fritzsch

#550
Spiral Ganglion Neurite Outgrowth in NCAM Null Mutant Mice
*Bianca Fraederich; Anke Leichtle; Barbara Wollenberg; Sara Euteneuer

#551
Spatiotemporal Differences in Cre-Mediated Recombination May Relate to Dose-Dependent Differences of Cre Needed to Recombine Different Floxed Genes
*Ning Pan; Israt Jahan; Jennifer Kersigo; Bernd Fritzsch

#552
Transplantation of Xenopus Laevis Ears Reveals Ubiquitous Rerouting of Motor Neurons to Become Efferents
*Karen Elliott; Bernd Fritzsch

Session Q2: Poster

Otitis Media
1:00 pm, Monday, February 8, 2010 (48 hours)
Disneyland Exhibit Hall

#553
TNF Mediates Antibacterial Clearance Via CCL3-Dependent Activation in Otitis Media
*Anke Leichtle; Kenshi Yamasaki; Kwang Pak; Sara Euteneuer; Barbara Wollenberg; Stephen I. Wasserman; Allen F. Ryan

#554
Ion Homeostasis Channels in Middle Ear Epithelium
*Lisa Morris; Jacqueline DeGagne; Beth Kempton; Dennis Trune
#555
Inner Ear Inflammatory Cytokines During Acute Otitis Media in the Mouse
*Dennis Trune; Beth Kempton; Barbara Larrain; Frances Hausman; Carol MacArthur

#556
Measurement of Mouse Middle Ear Inflammatory Cytokines with Multiplex ELISA Assays
*Barbara Larrain; Frances Hausman; Beth Kempton; Carol MacArthur; Dennis Trune

#557
Impact of Middle Ear Inflammation on Ion Homeostasis Gene Expression
*Carol MacArthur; Frances Hausman; Beth Kempton; Dennis Trune

#558
Effect of Glucocorticoids on Tumor Necrosis Factor Alpha Concentration in Middle Ear Effusion from Lipopolysaccharide Induced Otitis Media with Effusion in Chinchilla
*Charles Pudrith; Biblia Kim; You Hyun Kim; Ellen Hubbell; You Sun Chung; Michael Wall; Timothy Jung

#559
S100 Protein Expression in the Middle Ear and Response to Streptococcus Pneumoniae
*Wenzhou Hong; Joseph E. Kerschner

#560
Extending the Chinchilla Middle Ear Epithelial Model for Mucin Gene Investigation
*Joseph E. Kerschner; Tina Samuels

#561
Polymicrobial Biofilms as Reservoir for Chronic Otitis Media with Effusion (COME)
*James Coticchia; Livjot Sachdeva; Jason May; Priyanka Shah

#562
Clonal Spread of Beta-Lactamase-Producing, Amoxicillin-Clavulanate-Resistant Strains of Non-Typeable Haemophilus Influenzae (BLPACR) Among Young Children Attending a Day Care Center in Japan
*Kazuya Kurita; Makoto Ito; Eriko Shima; Hisashi Sugimoto; Tomokazu Yoshizaki
Establishment of an Experimental Otitis Media Model with Bioluminescent Pneumococcus in Chinchillas
*Alan Johnson; James Sidman; Jizhen Lin

The Genetic Basis of the “Otitis-Prone” Condition: The Association of Chronic or Recurrent Otitis Media with the Loci Fbxo11 and Evi1
*Mahmood Bhutta; Martin Burton; Steve D.M. Brown

Histopathological Incidence of Facial Canal Dehiscence in Chronic Otitis Media
*Haruka Hirai; Shigenobu Nomiya; Sebahattin Cureoglu; Shin Kariya; Rie Nomiya; Norimasa Morita; Kazunori Nishizaki; Michael Paparella

Session Q3: Poster

Outer Hair Cells and Prestin
1:00 pm, Monday, February 8, 2010 (48 hours)
Disneyland Exhibit Hall

Effect of Intracellular Chloride on Pre-Pulse Sensitivity of Outer Hair Cell Electro-Motility and NLC
*Lei Song; Joseph Santos-Sacchi

Assessing Chloride Flux Across Cell Membranes of Stable Prestin Cell Lines
*Sheng Zhong; Shumin Bian; Dhasakumar Navaratnam; Joseph Santos-Sacchi

Only One Isoform of Prestin Out of Several Expressed on the Surface Is Important for NLC
*Alexei Surguchev; Jun-Ping Bai; Lei Song; Shumin Bian; Joseph Santos-Sacchi; Dhasakumar Navaratnam

Prestin Upregulation in TECTAC1509G Mice Increases Electromotility and Membrane Permeability to Propidium Iodide
*Christopher Liu; Simon Gao; Tao Yuan; John Oghalai

Electromechanical Forces in Lipid Bilayers
*Alexander Spector; Ben Harland; William Brownell; Sean Sun
Evidence That the Subsurface Cisternae Influences the Electrical Properties of the Outer Hair Cell
*Federica Farinelli; William Brownell; Brenda Farrell

Modulation of Prestin-Associated Charge Movement by an Omega-3 Fatty Acid
*Angela Sturm-O’Brien; Brian Rodgers; Brenda Farrell; Frederick Pereira; William Brownell

Voltage-Induced Molecular Movement in Prestin
*Ramsey Kamar; Ryan McGuire; Frederick Pereira; Robert Raphael

Characterization of Prestin Oligomerization and Diffusion at the Single Molecule Level
*Robert Raphael; Ramsey Kamar; Laurent Cognent

Dissecting the Mechanoelectric Coupling of Outer Hair Cell Electromotility
*Kazuaki Homma; Peter Dallos

Investigating the Relationship Between Two OHC-Specific Proteins: Prestin and Oncomodulin
*Katharine Miller; Jing Zheng

The Size of R Group Rather Than the Charge Alone Plays a Role in Voltage Sensing of Prestin
*Xiaodong Tan; Jason Pecka; Kirk Beisel; David He

Sound Transduction in the Mammalian Outer Hair Cells: Prestin Activity Is Required for Proper Deflection of the Stereocilia Bundle
*Pierre Hakizimana; Anders Fridberger

Prestin Possesses Two Voltage-Dependent Gates for Electromotility
*Hong-Bo Zhao; Yan Zhu; Ru-Qiang Liang; Rui Zhao
High Resolution Imaging by Atomic Force Microscopy of Prestin Purified and Reconstituted Into an Artificial Lipid Bilayer
*Shun Kumano; Michio Murakoshi; Hiroshi Hamana; Hiroshi Wada

Molecular Determinants of Electromotility and Anion Transport Identified by Domain Swapping Between Mammalian and Non-Mammalian Prestin
*Dominik Oliver; Thorsten Schächinger; Dmitry Gorbunov; Bernd Fakler

Effects of MβCD Are Mediated Via G Protein Related Pathway
*Takahiko Nagaki; Seiji Kakehata; Rei Kitani; Takahisa Abe; Hideichi Shinkawa

Oligomerization in the Slc26 Family
*Benjamin Currall; Richard Hallworth

Anthracene-9-Carboxylic Acid, a Chloride-Channel Blocker, Reversibly Reduces the Non-Linear Capacitance of Outer Hair Cells
*Anthony W. Gummer; Csaba Harasztosi

Prestin Undergoes Thickness Changes
*Chisako Izumi; Kuni Iwasa

Gentamicin-Induced Selective Inner Hair Cell Loss in Mouse Explant Cultures
*Daltry Dott; Tomoko Makishima

Cochlear Hair Cells Exhibit Rapid, Mitochondria-Mediated Responses to Gentamicin Treatment
*Heather Jensen-Smith; Andrew Kamien; Richard Hallworth
#588
Locating Outer Hair Cell Damage Using the Cochlear Microphonic
*Ashlee Martz; Brian Earl; Mark Chertoff

#589
Inhibition of JNK by SP600125 Protects Against TNFα-Induced Auditory Hair Cell Death by Regulating the Expression of Bax But Not Bcl-2
*Christine Dinh; Thomas Van De Water; Gia Hoosien; Shbing Chen; John Dinh; Ly Vu; Ralph Hachem; Adrien Eshraghi

#590
Hair Cell-Specific MicroRNA Depletion Affects Hair Cell Maintenance and Causes Progressive Hearing Loss
*Marsha Pierce; Michael Weston; Edward Walsh; JoAnn McGee; Megan Korte; Heather Smith; Bernd Fritzsch; Sonia M. Rocha-Sanchez; Garrett Soukup

#591
Expression of Phosphodiesterases in Hair Cells Modulating CAMP and CGMP Signaling
*Jayme Dowdall; Marian Drescher; Dennis Drescher

#592
Type XVII Collagen/the 180-KDa Bullous Pemphigoid Antigen Have a Role in Mechanosensory Hair Cell Development in Zebrafish
*In Seok Moon; Jae Young Choi

#593
A Study of Mitochondrial Populations in Vestibular Hair Cells and Implications for the Function of the Striated Organelle
*Florin Vranceanu; Anna Lysakowski; Guy Perkins

#594
Creating a Hair Cell-Specific Flp Transgenic Mouse
*Jennifer Dearman; Jian Zuo

#595
Generation of Mice That Specifically Express Inducible Cre Recombinase in Developing and Adult Outer Hair Cells
*Jie Fang; Wen-Cheng Zhang; Tetsuji Yamashita; Jiangang Gao; Min-Sheng Zhu; Jian Zuo
Dexamethasone Inhibits IL-1beta-Induced MMP-9 Expression in a Cochlear Cell Model
*Sungil Nam; Dongeun Kim; SoonHyung Park; Taeg kyu Kwon; Woo Gun Lee

Outer and Inner Hair Cells Are Metabolically Dissimilar
*Richard Hallworth; LeAnn Tiede; Michael Nichols

Characterization and Morphological Analysis of Targeted Deletion of Oncomodulin in the Inner Ear
*Dwayne Simmons; Aubrey Hawkes; Benton Tong; Yong Wang; Charlotte Liu

Oncomodulin Is Necessary for Normal Cochlear Development But Not Postnatal Function
*Dwayne Simmons; Stephane F. Maison; Hua-wei Li; Benton Tong; Aubrey Hawkes; Charlotte Liu; M. Charles Liberman

Two-way Effects of Fractalkine in the Damage or Survival of Hair Cells in the Corti’s Organ
*Shan Sun; Hua-wei Li

Depolymerization of F-Actin Produces a Pulling Force at the Plasma Membrane in Vivo
*Brenda Farrell; Feng Qian; Anatoly Kolomeisky; Bahman Anvari; William Brownell

Detection System for Transplanted Bone Marrow Stem Cells in Inner Ear by SPIO
*Daisuke Yamashita; Yukiko Watada; Sho Kanzaki; Shingo Hasegawa; Ken-ichi Nibu; Kaoru Ogawa
#603
The Examination of Monitoring the Engraftment of Transplanted SPIO Labeling Stem Cells in the Inner Ear on 1.5T-MRI
*Yukiko Watada; Nobuhiro Tanimoto; Masashi Toyoda; Daisuke Yamashita; Kaoru Ogawa; Akihiro Umezawa; Sho Kanzaki

#604
Supporting Cell Survival in Temporal Bones of Patients with Known Hearing Loss
*Michael Hoa; Fred H. Linthicum Jr.; Saumil Merchant; Neil Segil

#605
Proliferative Activity of IPS Cells After Transplantation Into the Cochlea Varies Among Cell Lines
*Koji Nishimura; Takayuki Nakagawa; Tatsunori Sakamoto; Keisuke Okita; Shinya Yamanaka; Juichi Ito

#606
Transplantation of Bone Marrow Mesenchymal Stem Cells Into Neonatal, Adult and Aged Mouse Cochlea
*Hiromi Kasagi; Kazusaku Kamiya; Hiroko Okada; Masayuki Furukawa; Takeshi Kusunoki; Katsuhisa Ikeda

#607
Intracochlear Injection of Adeno-Associate Virus Vector to a Mouse Model Created by a Conditional Knockout of Gjb2 Gene
*Takashi Iizuka; Hideki Mochizuki; Tomoko Nihira; Ayako Inoshita; Akira Minekawa; Misato Kasai; Hiroko Okada; Hiromi Kasagi; Kazusaku Kamiya; Osamu Minowa; Tetuo Noda; Katsuhisa Ikeda

#608
Differential Regulation of Connexin Expression in the Regenerating Avian Inner Ear
*Regina Nickel; Andrew Forge

#609
Gene Expression Profiling of Supporting Cells in the Chick Inner Ear
*Mitsuru Ohashi; Takahiro Wakasaki; Hiroaki Niiero; Takashi Kimitsuki; Shizuo Komune
Identification of Genetic Regulators of Transdifferentiation in Cochlear Sensory Epithelia for Hearing Restoration
*Derek Mitchell; Byron Hartman; Olivia Bermingham-McDonogh

Combinatorial Transcription Factor Coding to Enhance Transdifferentiation Into Hair Cells in the Organ of Corti
*Masatsugu Masuda; Kwang Pak; Eduardo Chavez; Alain Dabdoub; Allen F. Ryan

Guiding Neuronal Subtypes: BDNF Enhances Expression of Auditory Nerve-Associated Channels in Differentiating Neurog1-Induced Mouse ES Cells
*Jeannie Reyes; Mingjie Tong; Richard A. Altschuler; R. Keith Duncan

Inhibition of Notch Activity Promotes Hair Cell Regeneration in the Chicken Utricle
*Jennifer Stone; Nicolas Daudet; Jia Lin Shang

The Role of Growth Hormone in Zebrafish (Danio Rerio) Auditory Hair Cell Regeneration
*Huifang Sun; Julie Schuck; Michael Smith

Synaptic Ribbons in Atoh1-Induced Ectopic Hair Cells
*Mark A. Crumling; R. Keith Duncan; Yehoash Raphael

Atoh1 Mediated Recovery of Balance Function After Exposure to IDPN
*Hinrich Staecker; Christina Schlecker; Mark Praetorius; Douglas E. Brough; Robert Pressler; Chi Hsu; Peter-Karl Plinkert

Injection of Virus Vector Targeting Vestibul in Mice
*Hiroko Okada; Takashi Iizuka; Kazusaku Kamiya; Misato Kasai; Ayako Inoshita; Masayuki Furukawa; Takeshi Kusunoki; Katsuhisa Ikeda
Session Q6: Poster

Genetics I
1:00 pm, Monday, February 8, 2010 (48 hours)
Disneyland Exhibit Hall

#618
Identification of 11 Novel Mutations in USH2A Among Japanese Patients with Usher Syndrome Type 2
*Hiroshi Nakanishi; Masafumi Ohtsubo; Satoshi Iwasaki; Seiji Hosokawa; Yoshihiro Hotta; Kunihiro Mizuta; Hiroyuki Mineta; Shinsei Minoshima

#619
The Genetic Etiology of Congenital Hearing Loss in Deaf Probands from Newfoundland’s Founder Population
*Jessica Squires; Nelly Abdelfatah; Jane Gamberg; Terry-Lynn Young

#620
Discovery of a Novel 3bp Deletion Within the P-Loop Domain of KCNQ4 Causing Late-Onset Deafness in a Large Newfoundland Family
*David McComiskey; Terry-Lynn Young

#621
DFNA34 Maps to Chromosome 1q44 and May Be Allelic with Hearing Loss-Autoinflammation Syndromes Caused by Mutations in NLRP3
*Yoshiyuki Kawashima; Kiyoto Kurima; Anne Madeo; James Mueller; Hal Hoffman; Daniel Kastner; Andrew Griffith

#622
Application of Mass Spectrometric Methods to Identify and Validate the W117R Mutation in the Cochlin (COCH) Protein, Using Temporal Bone Samples from an Individual Characterized with DFNA9
*Orlando Valerino; Russell Lund; Jose N. Fayad; Fred H. Linthicum Jr.; Robert Gellibolian

#623
Pre-Implantation Genetic Diagnosis (Embryo Screening) for Enlarged Vestibular Aqueduct Due to SLC26A4 Mutation
*Shera, Yi-Tsen Lin; Chen-Chi Wu; Shin-Yu Lin; Yi-Nin Su; Mei-Ya Fang; Shee-Uan Chen; Chuan-Jen Hsu
Identification of Novel Mutation of TECTA Gene in the Korean Nonsyndromic Hearing Patients
*Bo Rum Sagong; Jeong-In Baek; Jae-Woong Bae; Un-Kyung Kim; Kyu Yup Lee; Sang Heun Lee

Pathogenetic Role of the Deafness-Related P.V37I Variant of GJB2: Evidences from a Large Clinical Cohort, Cell-Line Studies and the Knock-In Mouse Model
*Chen-Chi Wu; Ying-Chang Lu; Alyssa Yan-Zhen Liu; Wei-Shiung Yang; Tien-Chen Liu; Shu-Wha Lin; Pei-Jer Chen; Chuan-Jen Hsu

Characterization of Two Missense Mutations in the GJB2 Gene Associated with Non-Syndromic Hearing Loss
*Soo-Young Choi; Hong-Joon Park; Kyu Yup Lee; Emilie Hoang Dinh; Qing Chang; Shoeb Ahmad; Hyun-Ju Cho; Tae-Jun Kwon; Sang Heun Lee; Jinwoong Bok; Xi Lin; Un-Kyung Kim

The GJB2 and GJB6 Mutations Associated with Nonsyndromic Hearing Loss in the Korean Population
*Seung Ha Oh; Han Kyu Cho; Jeong-Hoon Jang; Moon-Woo Seong; Sung Im Cho; Byung Yoon Choi; Seong Yeon Kim; Ji Yeon Kim; Sung Sup Park

Preliminary Gene-Therapy Studies for Rescue Hearing of Conditional Connexin26 Null Mice
*Xi Lin; Yunfeng Wang; Wenxue Tang; Qing Chang; Binfei Zhou; Hua-wei Li

Auditory Characteristics in the Mucopolysaccaridosis II Mice and Therapeutic Effects of Enzyme Replacement
*Ki Ryung Kim; Hosuk Chu; Moon Hee Ko; See Youn Kwon; Chi-Hwa Kim; Dong-Kyu Jin; Sung-Hwa Hong

Mcp1 and Spns2: Two Novel Genes Implicated in Hearing Impairment, Identified Via a High-Throughput Targetted Mutagenesis Phenotyping Screen
*Neil Ingham; Selina Pearson; Jing Chen; Karen Steel
Genetic Variation Produces Multiple Hearing Phenotypes in NIH Swiss Mice
*James Keller; Konrad Noben-Trauth

Mitochondrial Haplotypes May Modulate the Phenotypic Manifestation of the Deafness-Associated 12S RRNA 1555A>G Mutation
*Min-Xin Guan

Session Q7: Poster

Inner Ear: Cochlear Homeostasis II
1:00 pm, Monday, February 8, 2010 (48 hours)
Disneyland Exhibit Hall

Control of ATP on K+ -Recycling in the Cochlear Supporting Cells
*Yan Zhu; Hong-Bo Zhao

Identification of Lateral Wall-Specific KCNQ1 Channels and KCNE Subunits in Inner Ear
*Choongryoul Sihn; Hyo Jeong Kim; Ebenezer Yamoah

Identification of Aquaporin-4 in Rana Pipiens AP Hair Cells
*Mia Miller; Arian Nasiri; Nasser Farahbakhsh; Dwayne Simmons; Peter Narins

Immunocytochemical Distribution of WARP (Von Willebrand a Domain-Related Protein) in the Human Inner Ear
*Trac Duong; Ivan A. Lopez; Gail Ishiyama; Akira Ishiyama

Immunohistochemical Localization of P2Y4 Receptor in the Inner Ear
*Jun-Ho Lee; Jeong Hun Jang; Han Kyu Cho; Sun O. Chang; Seung Ha Oh

P2X Receptor of Endothelial Cells and Pericytes of Spiral Ligament Capillaries
*Tao Wu; Xiaorui Shi; Alfred Nuttall
RNA Expression of Claudins in the Rat Endolymphatic Sac
*Ai Matsubara; Takenori Miyashita; Terushige Mori; Kosuke Akiyama; Ryuhei Inamoto; Nozomu Mori

Tumor Necrosis Factor Alpha Promotes Vasocoonstriction in Cochlear Arteries – A Novel Sphingosine-1-Phosphate Dependent Mechanism for Sudden Hearing Loss
*Elias Scherer; Jingli Yang; Karolina Ivanov; Christian Diehl; Stuart Pitson; Peter Backx; Martin Canis; Sebastian Strieth; Ulrich Pohl; Julia Voigtlaender-Bolz; Darcy Lidington; Steffen Sebastian Bolz

Diarrhea-Dehydration and Auditory Thresholds in Children
*N. Wendell Todd

Targeted Genetic Delivery of MiRNA Against Vasopressin Receptor 2 in Mouse Inner Ear
*Anh Nguyen-Huynh

Determining the Volume of the Elliptical Cone Simulating the Vestibular Aqueduct in Ménière’s Disease Using Multiplanar Reconstruction Images: A Novel Index for the Vestibular Aqueduct Evaluation
*Takenori Miyashita; Yoshihiro Toyama; Ryuhei Inamoto; Nozomu Mori

Pharmacokinetic and Toxicity Profile of OTO-104: A Sustained Release Dexamethasone Hydrogel for Inner Ear Delivery
*Xiaobo Wang; Rayne Fernandez; Anne Harrop; Luis Dellamary; Qiang Ye; Elizabeth M. Keithley; Jeffrey P. Harris; Jay Lichter; Carl LeBel; Fabrice Piu

Session Q8: Poster

Inner Ear: Membranes and Fluids
1:00 pm, Monday, February 8, 2010 (48 hours)
Disneyland Exhibit Hall
Towards Predicting Human Inner Ear Pharmacokinetics: Allometric Scaling Using Guinea Pigs and Sheep
*Fabrice Piu; Xiaobo Wang; Rayne Fernandez; Anne Harrop; Luis Dellamary; Jay Lichter; Carl LeBel; Qiang Ye

Sequential Sampling of Perilymph from the Lateral Semi-Circular Canal
*Jared J. Hartsock; Ruth M. Gill; Alec N. Salt

Perilymph Sampling from the Apex and the Basal Turn of the Cochlea Shows the Pharmacokinetic Profile of Cisplatin in Vivo
*Göran Laurell; Victoria Hellberg; Inger Wallin; Hans Ehrsson

Apical-Basal Concentration Gradients of Gentamicin in Perilymph of Scala Tympani Following Systemic Applications
*Hartmut Hahn; Alec N. Salt; Ruth M. Gill; Ulrike Schuhmacher; Stefan Plontke

Quantitative Evaluation of Magnetic Assisted Transport of PLGA Nanoparticles Through a Human Round Window Membrane Model
*Xinsheng Gao; Youdan Wang; Kejian Chen; Brian Grady; Kenneth Dormer; Richard D. Kopke

Tissue Distribution of PLGA-Magnetite Nanoparticles Targeted to the Guinea Pig Cochlea
*Satish Kuriyavar; Tiffany Varughese; Kejian Chen; Xiaoping Du; Richard D. Kopke; Wendy Galbraith; David Bourne; Kenneth Dormer

Characterization of Reciprocating Flow Parameters for Inner Ear Drug Delivery
*Erin E. Leary Swan; Jeffrey T. Borenstein; Zhiqiang Chen; Jason Fiering; Ernest S. Kim; Sharon G. Kujawa; Michael J. McKenna; Mark J. Mescher; Brian Murphy; Sarah Tao; William F. Sewell
Effects of Molecular Weights and Osmotic Pressure of Various Acids on Cochlear Function in the Guinea Pig
*Takafumi Yamano; Hitomi Higuchi; Mayumi Sugamura; Tetsuko Ueno; Takashi Nakagawa; Tetsuo Morizono; Tetsuo Morizono

Temporal and Spatial Gentamicin Distribution in the Peripheral Vestibular Organ After Intratympanic Injection
*Chunfu Dai; Ru Zhang; Peter Steyger

Session Q9: Poster

Inner Ear: Damage and Protection: Prevention and Treatment Strategies II
1:00 pm, Monday, February 8, 2010 (48 hours)
Disneyland Exhibit Hall

Adenoviral-Mediated Gene Transfer Into the Mouse Cochlea in Vivo
*Fukuichiro Iguchi; Debbie Bratt; Ming Xiao; Amy Erdman; Amanda Sekijima; Clifford R. Hume

Intratympanic Delivery of Antivirals and the Effects on SNHL
*Jonette Ward; Fernando Bravo; S. Kevin Li; Gaurav Tolia; Jinsong Hao; David Bernstein; Daniel Choo

Adeno-Associated Virus Transduction of the Adult Mouse Cochlea in Vivo
*Lauren Kilpatrick; Manna Li; Vinu Jyothi; Richard Schmiedt; Donna M. Fekete; Hainan Lang

Nanoparticles as Carriers for Rolipram to Increased the Neuroprotective Effect on Spiral Ganglion Cells
*Verena Scheper; Athanasia Warnecke; Nurdanat Berkingali; Gerrit Paasche; Thomas Lenarz; Timo Stöver

Use of the Biodegradable Polymer Chitosan as a Vehicle for Applying Drugs to the Inner Ear
*Amanj Saber; Sabina Strand; Mats Ulfendahl
#659
Hyaluronic Acid Enhanced Cochlear Gene Delivery Via the Round Window Membrane
*Seiji B. Shibata; Sarah R. Cortez; James A. Wiler; Yehoash Raphael

#660
Rodent Intracochlear Infusion Systems: Technology Advances for Implantable Micropumps
*Dean G. Johnson; Matthew J. Waldron; Robert D. Frisina; David A. Borkholder

#661
Flow Rate as a Parameter for Reducing Concentration Gradients in Murine Intracochlear Infusions
*Xiaoxia Zhu; Brad Hyatt; Robert D. Frisina; David A. Borkholder

#662
Agarose Encapsulated Lentivirally Modified Fibroblasts as Model for Hydrogel Based Drug Delivery to the Inner Ear
*Kirsten Wissel; Susanne Sasse; Andrea Hoffmann; Thomas Lenarz; Timo Stoever

#663
Development of a Micropump for Dispensing Nanoliter-Scale Volumes of Concentrated Drug for Intracochlear Delivery
*Jeffrey T. Borenstein; Mark J. Mescher; Ernest Kim; Jason Fiering; Maria Holmboe; Erin E. Swan; William F. Sewell; Sharon G. Kujawa; Michael McKenna

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Session Q10: Poster

Otoacoustic Emissions II: Characterizations and Efferent Effects
1:00 pm, Monday, February 8, 2010 (48 hours)
Disneyland Exhibit Hall

#664
Decreased Variability of High-Frequency DPOAE Measures in Patients Using an Alternate Calibration Method Compared to Non-Patients Using a Traditional Calibration Method
*Laura Dreisbach; Erika Zettner; Caitlin Meuel; Margaret Chang
Reliability of Threshold and OAE Measurements Using Two Calibration Methods
*Rebekah Abel; Sumitrajit Dhar; Renee Banakis; Evan Grolley; Jungmee Lee; Steven Zecker; Jonathan Siegel

Monitoring Carboplatin Ototoxicity in Children with Distortion-Product Otoacoustic Emissions: A Feasibility Study
*Shaum Bhagat; Johnnie Bass; Stephanie White; Ibrahim Qaddoumi; Matthew Wilson; Carlos Rodriguez-Galindo

Auditory Peripheral Dysfunction in Tinnitus Subjects with Clinically Normal Audiograms
*Inge Knudson; Christopher A. Shera; Robert Levine; Jennifer Melcher

A Preliminary Report of Aging Effects on DPOAE Fine Structure, Components and MOC Reflex
*Srikanta Mishra; Carolina Abdala

Relationship Between MOC Reflex Strength and Masked Thresholds
*Angela Garinis; Lynne A. Werner; Carolina Abdala

Lateral Asymmetry of Otoacoustic Emissions to Tonal and Broadband Stimuli in Children
*Yvonne Sininger; Anjali Bhatara; Hannah Hultine

The Importance of Considering Phase When Evaluating Efferent Function with DPOAE
*Simon Henin; Glenis Long; Shukrallah Abdelrazeg; Suzanne Thompson

Fast and Slow Effects of Medial Olivocochlear Efferent Activity on Spontaneous Otoacoustic Emissions in Humans
*Wei Zhao; Dashiell Oatman-Stanford; Sumitrajit Dhar

Analysis of Influence on Cochlear Activity for Auditory Attention from TEOAEs
*Hyemi Kim; Yuyong Jeon; Sangmin Lee
#674
Corticofugal Modulation of Peripheral Auditory Activity by Repetitive Transcranial Magnetic Stimulation of Auditory Cortex in Healthy Normal-Hearing Subjects: Preliminary Results of the MagOTO Study
*Stéphane Tringali; Annie Moulin; Emile Simon; Lionel Collet; Xavier Perrot

Session Q11: Poster

Acoustic Trauma: Mechanisms
1:00 pm, Monday, February 8, 2010 (48 hours)
Disneyland Exhibit Hall

#675
High Throughput Analysis of Noise-Induced Protein Responses in Sensory, Vascular and Neural Components of Chinchilla Cochlea
*Samson Jamesdaniel; Bo-Hua Hu; Mohammad Habiby Kermany; Haiyan Jiang; Dalian Ding; Richard Salvi; Donald Coling

#676
Developmental Expression in the Mouse Cochlea of PLZF, a Transcriptional Protein Involved in Protection from Acoustic Trauma
*Marcello Peppi; Sharon G. Kujawa; William F. Sewell

#677
Involvement of P38 MAP Kinase and Sequestosome 1 Stress Protein in Acoustic Injury of the Cochlea
*Keiji Tabuchi; Tomofumi Hoshino; Bungo Nishimura; Mariko Nakamagoe; Kentaro Hayashi; Eiji Warabi; Toru Yanagawa; Tetsuro Ishii; Akira Hara

#678
The Expression of Proinflammatory Cytokines After Acoustic Overexposure
*Tetsuya Nakamoto; Takefumi Mikuriya; Kazuma Sugahara; Hiroshi Yamashita

#679
Stretching Stress on the Organ of Corti Alters Adhesion Molecules and Induces the Degradation of the Cytoskeleton of Hair Cells
*Bo-Hua Hu; Qunfeng Cai; Chiemi Tanaka
#680  
Caspase-2 Expression in the Inner Ear After Noise Insult  
*Colleen Le Prell; Ashley Johnson; Amanda Dossat; Dustin Lang

#681  
Overexpression of Pro-BDNF Leads to Increased Noise-Induced Hearing Loss  
*Bobby Tajudeen; Maria Aburto; Chia-Jen Siao; Jianmin Yang; Barbara Hempstead; Moses Chao; Pamela Roehm

#682  
Mitogen-Activated Protein Kinases: Differential Activation After Temporary and Permanent Hearing Loss in the Cochlea and the Auditory Brainstem  
*Inna Meltser; Yeasmin Tahera; Barbara Canlon

#683  
Expressions of Endothelin-1, Endothelin Receptor A, B in the Cochlea of Noise Induced Transient Threshold Shift Rat Model  
*Yong Ho Park; Wook Kyoung Han

#684  
Cochlear Gene Expression in Mice Exposed to TTS and PTS Levels of Noise  
*Kumar Alagramam; Nam Kim; Daniel Chen; David A. Custer; Rickie Davis

#685  
Distribution of Adenovector Transfection After Sound Trauma in the Mouse  
*Susanna Pfannenstiel; Davina Gassner; Mark Praetorius; Douglas E. Brough; Hinrich Staecker

#686  
Genetic Bases of Noise-Induced Endocochlear Potential (EP) Reduction in BALB/cJ Mice  
*Kevin K. Ohlemiller; Patricia M. Gagnon

#687  
Phosphoinositide Signaling in Acquired Hearing Loss  
*Jochen Schacht; Fu-Quan Chen; Su-Hua Sha

#688  
Transient-Receptor-Potential Channel TRPM3 Deficiency Leads to Noise Vulnerability and Progressive Hearing Loss in Mice  
*Lukas Rüttiger; Christoph Franz; Marlies Knipper; Stephanie Kuhn; Jutta Engel; Stefanie Mannesbach; Petra Weißgerber; Marc Freichel; Stephan Philipp
#689
Susceptibility to Noise-Induced Hearing Loss in Two Congenic Mouse Strains
*Rickie Davis; Kenneth R. Johnson; David A. Custer; Edward Krieg, Jr.

#690
PLZF-Deficient Mouse Mutants Do Not Generate Conditioning-Mediated Protection from Acoustic Trauma
*Marcello Peppi; Sharon G. Kujawa; William F. Sewell

#691
Genes Contributing to Noise Resistance on Chromosome 17 in 129S6 Mice
*Bruce Tempel; Valerie Street; Braulio Peguero; Tim Galitsky; Greg Carter; M. Charles Liberman; Sharon G. Kujawa

#692
The Blood-Labyrinth-Barrier Repair After Loud Sound Injury Through Bone Marrow Cell Recruitment Mediated by a Local INOS Signal Pathway
*Min Dai; Yue Yang; Irina Omelchenko; Alfred Nuttall; RuiJuan Xiu; Xiaorui Shi

#693
Bone Marrow Cells to Resident Tissue Macrophages in Relation to INOS-Derived Nitric Oxide in the Blood-Labyrinth-Barrier
*Xiaorui Shi; Min Dai; Yue Yang; Allan Kachelmeier; RuiJuan Xiu; Alfred Nuttall

#694
Cyclic AMP (CAMP) Signaling Plays Differential Roles in Spiral Ganglion Neuron (SGN) Axon Regrowth and Synaptogenesis on Inner Hair Cells (IHCs) Following Excitotoxic Trauma
*Qiong Wang; Suleimaan Waheed; Daniel Denman; Anh To; Steven H. Green

#695
Noise-Induced Permanent Threshold Shift: Hair-Cell Loss Is Not the Whole Story!
*Gary W. Harding; Barbara A. Bohne
Session Q12: Poster

Acoustic Trauma: Prevention
1:00 pm, Monday, February 8, 2010 (48 hours)
Disneyland Exhibit Hall

#696
Ebselen Treatment for Noise Induced Hearing Loss Through Activation of Nrf2 Regulated Gene Expression
*Eric Lynch; Rende Gu; James LaGasse; Jerry Glattfelder, Jr.; Huy Tran; Jonathan Kil

#697
Prevention of Noise-Induced Hearing Loss with an Inhibitor of NADPH Oxidase
*Eric Bielefeld

#698
Effect of Oral Administration of a Combination of 4-OHPBN and NAC on Noise-Induced Hearing Loss
*Chul-Hee Choi; Charles A. Stewart; Xiaoping Du; Kejian Chen; Angelica Vasquez-Weldon; Robert A. Floyd; Richard D. Kopke

#699
D-Methionine (D-Met) Provides Significant Outer Hair Cell and ABR Threshold Rescue from Noise Exposure
*Kathleen Campbell; Alex Claussen; Robert Meech; Kelen Seymour; Larry Hughes

#700
Protective Effect of Calmodulin Blockers in Acoustic Injury of the Mouse
*Isao Uemaetomari; Keiji Tabuchi; Mariko Nakamagoe; Bungo Nishimura; Kentaro Hayashi; Syuhou Tananka; Shigeki Tsuji; Akira Hara

#701
Genetic and Temporal Aspects of Protection Against Noise-Induced Hearing Loss by Kanamycin in Mice
*Allyson D. Rosen; Mary E. Rybak Rice; Patricia M. Gagnon; Kevin K. Ohlemiller

#702
The Role of Prostaglandin E Receptor Subtypes EP2 and EP4 in Autocrine and Paracrine Functions of Vascular Endothelial Growth Factor in the Inner Ear
*Ryusuke Hori; Takayuki Nakagawa; Norio Yamamoto; Tatsunori Sakamoto; Kiyomi Hamaguchi; Juichi Ito
Blockade of Interleukin-6 Signaling Suppressed Cochlear Inflammatory Response and Improved Hearing Impairment in Noise-Induced Damaged Mice Cochlea

*Kenichiro Wakabayashi; Masato Fujioka; Sho Kanzaki; Hirotaka Okano; Daisuke Yamashita; Masatsugu Masuda; Yoshiyuki Ohsugi; Kaoru Ogawa; Hideyuki Okano

Acute Noise Induced Hearing Loss Is Reduced by Local Application of Steroids

*Marcus Mueller; Matthias Tisch; Heinz Maier; Hubert Loewenheim

A Corticotropin-Releasing Factor System Expressed in the Cochlea Modulates Hearing Sensitivity and Protects Against Noise-Induced Hearing Loss and Oxidative Stress

*Douglas Vetter; Christine Graham; Johnvesly Basappa

Session Q13: Poster

Ototoxicity: Mechanisms
1:00 pm, Monday, February 8, 2010 (48 hours)
Disneyland Exhibit Hall

Connexin 43 Hemichannels Are Likely to Mediate Gentamycin Uptake in MDCK Cells

*Tian Wang; Ketao Ma; Qi Wang; Yuqin Yang; Peter Steyger; Zhi-Gen Jiang

Identification of Ion Channel(S) Mediating Gentamicin Trafficking in Cochlear Strial Marginal Cells of Rodents

*Yuqin Yang; Ketao Ma; Tian Wang; Qi Wang; Peter Steyger; Zhi-Gen Jiang

Do Infection-Mediated Vasoactive Substances Influence Cochlear Uptake of Aminoglycosides?

*Ja-Won Koo; Qi Wang; Peter Steyger

Noise Exposure Facilitates Gentamicin Uptake in Outer Hair Cells in Vivo

*Hongzhe Li; Pachida Lo; Qi Wang; Takatoshi Karasawa; Peter Steyger
Aminoglycosides Rapidly and Selectively Enter Hair Cells, Largely Via Mechanotransducer Channels
*Lauren Luk; Abdelrahman Alharazneh; Taiyabah Naeem; Ashkan Monfarad; Peter Steyger; Alan Cheng; Anthony Ricci

The Differential Vulnerability Across Cochlear Turns in Gentamicin-Induced Hair Cell Damage Is Correlated with the Differential Uptake of Gentamicin
*Yun-Hoon Choung; Hae Kyoung Lee; Jung Sook Joo; Seung Won Kim; Jong Bin Lee; Seong Jun Choi

Determination of the Apoptosis and Cell Survival Signal Transduction in the Rat Cochlea Following Neomycin Induced Deafness
*Souvik Kar

Genetic Analyses of Interactions with Eukaryotic RRNA Identify the Mitoribosome as a Target in Aminoglycoside Ototoxicity
*E. Böttger; R. Akbergenov; S. N. Hobbie; S. Akshay; T. Matt; D. Shcherbakov

Long-Term Effects of Focal Gentamicin-Induced Lesions in the Vestibular Neuroepithelia
*Larry F. Hoffman; David R. Sultemeier

Combined Cisplatin-Ethacrynic Acid Treatment Induces Widespread Apoptosis: Cochlea, Cochlear Nucleus, Hippocampus, Cortex
*Richard Salvi; Dalian Ding; Yong Fu; Yongqi Li; Haiyan Jiang

Cochlear Outer Hair Cell Degeneration in Mice Induced by Co-Administration of Cisplatin and Furosemide
*Yongqi Li; Dalian Ding; Haiyan Jiang; Yong Fu; Richard Salvi

Ototoxic Effects of Carboplatin in Organotypic Cultures in Rats and Chinchillas
*Haiyan Jiang; Dalian Ding; Yong Fu; Richard Salvi
#718
Cisplatin-Induced TLR Expression of Cochlea Deteriorates Hearing Impairment in the Presence of LPS
*Gi-Su Oh; HyungJin Kim; Raekil Park; Hong-Seob So

#719
Cochlear Distribution of Texas Red-Conjugated Cisplatin
*Thomas Dickey; Qi Wang; Amanda Phillips; Takatoshi Karasawa; Martha Sibrian-Vazquez; Robert Strongin; Peter Steiger

#720
Cisplatin Ototoxicity Causes Structural Changes in Inner Ear Supporting Cells and Reduces the Numbers of Resident Macrophages
*Mark Warchol; Eric Slattery

#721
Oxaliplatin Ototoxicity in Rat Cochlear Organotypic Cultures
*Dalian Ding; Yong Fu; Haiyan Jiang; Richard Salvi

#722
Ouabain-Induced Cochlear Degeneration in Rat in Vitro and in Vivo
*Dalian Ding; Yong Fu; Haiyan Jiang; Richard Salvi

#723
Salicylate Induces Spiral Ganglion Neuron Degeneration
*Lei Wei; Dalian Ding; Richard Salvi

#724
Developing an Ototoxicity Screen in the Zebrafish Lateral Line: Results of the BIOMOL FDA-Approved Drug Library Screen
*Thomas Yoo; David W. Raible; Edwin W. Rubel
Henry Ou

Session Q14: Poster

Ototoxicity: Prevention
1:00 pm, Monday, February 8, 2010 (48 hours)
Disneyland Exhibit Hall
#725
Protective Effect of Gangliosides GM1 and GM3 Against Gentamicin-Induced Hair Cell Loss of the Rat Cochlea
*Bungo Nishimura; Keiji Tabuchi; Mariko Nakamagoe; Shuho Tanaka; Yuki Hirose; Akira Hara

#726
The Effect of a Src Inhibitor (KX1-004) on Cisplatin Toxicity and Antineoplastic Activity
*Chiemi Tanaka; Donald Henderson; Eric Bielefeld; Guang-Di Chen; Donald Coling; Samson Jamesdaniel; Manna Li

#727
Round Window Administration of TAT-FNK Protein, a Bcl-XL Derivative, Immersed in Gelatin Sponge Prevents Aminoglycoside-Induced Cochlear Damage
*Akinori Kashio; Takashi Sakamoto; Kenji Kondo; Asoh Sadamitsu; Shigeo Ohta; Tatsuya Yamasoba

#728
Celastrol Inhibits Aminoglycoside-Induced JNK Activation and Hair Cell Death
*Shimon Francis; Lisa Cunningham; Carlene Brandon; Fu-Shing Lee; Inga Kramarenko

#729
Hsp70 Inhibits Aminoglycoside-Induced Activation of JNK and Downstream Signaling
*Inga Kramarenko; Carlene Brandon; Lisa Cunningham

#730
Heat Shock Inhibits Cisplatin-Induced Activation of P53 and STAT-1 in Adult Mouse Utricle
*Tiffany Baker; Inga Kramarenko; Carlene Brandon; Fu-Shing Lee; Lisa Cunningham

#731
Hydrogen Protects Auditory Hair Cells from Cisplatin-Induced Ototoxicity
*Mirei Taniguchi; Yayoi S. Kikkawa; Takayuki Nakagawa; Juichi Ito

#732
The Protection of Vestibular Hair Cells with Resveratrol
*Kazuma Sugahara; Takefumi Mikuriya; Yoshinobu Hirose; Yujiro Fukuda; Hideki Toyota; Makoto Hashimoto; Hiroaki Shimogori; Hiroshi Yamashita
#733
Minocycline Protection of Hearing Loss in Gerbils Treated with Neomycin
*Alan Robinson; Irena Vujanovic; Claus-Peter Richter

#734
Aminoglycoside Ototoxicity Ameliorated with Mechatrontransducer Channel Blockers
*Abdelrahman Alharazneh; Alan Cheng; Anthony Ricci

#735
Intracochal Infusion of Brain-Derived Neurotrophic Factor Combined with Electrical Stimulation Affects Function and Morphology of Spiral Ganglion Neurons in Cats Deafened as Neonates
*Alexander Hetherington; Olga Stakhovskaya; Gary Hradek; Ben Bonham; Patricia Leake

#736
Screening for Hair Cell Death Inhibitors in the Zebrafish Lateral Line
*Allison Coffin; Anna Mamiya; David W. Raible; Edwin W. Rubel

Session Q15: Poster

Auditory Nerve II: Physiology and Modeling
1:00 pm, Monday, February 8, 2010 (48 hours)
Disneyland Exhibit Hall

#737
Heterogeneous Distribution of the Calcium Binding Protein Calretinin in Murine Spiral Ganglion Neurons
*Wenke Liu; Robin L. Davis

#738
Characterization of Voltage-Gated Calcium Channel α-Subunits in Spiral Ganglion Neurons
*Wei Chun Chen; Yun Hsu; Hui Zhong Xue; Robin L. Davis

#739
The Role of the Auxiliary Ca2+ Channel Alpha2delta-3 Subunit for Signal Transmission in the Auditory Brainstem and Acoustic Startle Reflex Pathway
*Jutta Engel; Antonella Pirone; Lukas Ruettiger; Peter Pilz; Annalisa Zuccotti; Christoph Franz; Eckhard Friauf; Marlies Knipper
#740
Hair-Cell Spontaneous Activity in the Zebrafish Lateral-Line Organ
*Josef Trapani; Teresa Nicolson

#741
Ionic Mechanisms That Regulate Murine Spiral Ganglion Neuron Firing Excitability
*Qing Liu; Robin L. Davis

#742
Pre- And Postsynaptic Properties Determine the Firing Pattern of Developing Primary Auditory Neurons
*YingXin Zhang; Nicolas Tritsch; Dwight Bergles

#743
Responses of Ferret Auditory Nerve Fibres to Tones
*Christian J. Sumner; Alan Palmer

#744
Neural Tuning Measured with Forward-Masked Compound Action Potentials
*Eric Verschooten; Luis Robles; Damir Kovacic; Philip X. Joris

#745
Subharmonics and Auditory Nerve Tuning Curves in Gerbil
*Stanley Huang; Wei Dong; Elizabeth Olson

#746
Amplitude and Phase in the Apical Turn of the Gerbil Cochlea Estimated from Auditory Nerve Recordings
*Corstiaen P. C. Versteegh; Sebastiaan W. F. Meenderink; Marcel Van der Heijden

#747
Mapping Auditory Nerve Density Using Chirp Stimuli and High-Pass Noise Masking
*Brian Earl; Mark Chertoff; Ashlee Martz

#748
Neural Modulation Sensitivity Is Determined by One-Dimensional, Nonlinear Maps
*David E. O’Gorman; Christopher A. Shera; H. Steven Colburn

#749
Spatial Profiles of Correlation in Spike Timing to Broadband Noise Across Auditory Nerve Fibers
*Damir Kovacic; Pascal Michelet; Philip Joris
#750
Time-Intensity Trading: Ongoing Temporal Coding of Broadband Noise in the Auditory Nerve as a Function of Intensity
*Pascal Michelet; Damir Kovacic; Myles Mc Laughlin; Philip X. Joris

#751
Ensemble Responses of the Auditory Nerve to CV Syllables Spoken by Multiple Talkers
*Leslie Knapp; Robert Wickesberg

#752
Within and Across Fiber Temporal Fine Structure Coding in Auditory Nerve Following Noise Induced Hearing Loss
*Sushrut Kale; Jonathan Boley; Jayaganesh Swaminathan; Michael Heinz

#753
Predicted Effects of Sensorineural Hearing Loss on Across-Fiber Envelope Coding in the Auditory Nerve
*Jayaganesh Swaminathan; Michael Heinz

#754
Pre-Synaptic and Post-Synaptic Auditory Neuropathy
*Arnold Starr; Rosamaria Santarelli; Taosheng Huang

Session Q16: Poster

Auditory Brainstem: Superior Olivary Complex
1:00 pm, Monday, February 8, 2010 (48 hours)
Disneyland Exhibit Hall

#755
Identification of Inputs to Olivocochlear Neurons Using Transneuronal Labeling with Pseudorabies Virus (PRV)
*M. Christian Brown; Sudeep Mukerji; Alanna Windsor; Daniel J. Lee

#756
Cochlear Nucleus Multipolar Cell Projections to MOC Neurons in the Ventral Nucleus of the Trapezoid Body
*Keith N. Darrow; Marie Drottar; M. Christian Brown

#757
Malformation of the Rat Superior Olivary Complex in an Animal Model of Autism
*Randy Kulesza; Richard Lukose
Characterization of Glycinergic Inhibition to MNTB Principal Cells
*Otto Albrecht; Florian Mayer; Achim Klug

Function of KCNQ Channels in the Calyx of Held
*Hai Huang; Laurence Trussell

A Comparison of in Vivo Synaptic Transmission in the Mouse and Gerbil MNTB
*Jeannette Lorteije; Marcel Van Der Heijden; Gerard Borst

Hyperbilirubinemia Causes Hearing Loss and Impairment of Synaptic Transmission at the Calyx of Held Auditory Synapse
*Martin D. Haustein; Ian D. Forsythe

Endocannabinoid Receptor Expression in the LSO and MNTB of the Developmental Rat
*David Chi; Jessica Garver; Karl Kandler

A Novel Form of Synaptic Plasticity Observed at Excitatory Inputs to the LSO
*Jason Castro; Karl Kandler

Physiological Heterogeneity in the Avian Superior Olivary Nucleus
*Matthew J. Fischl; William L. Coleman; Danielle A. Trause; R. Michael Burger

Increased Temporal Precision of Envelope Coding in the Intensity-Coding Pathway of the Barn Owl
*Louisa J. Steinberg; Jose L. Pena

Modeling the Effect of SAM-Tone Modulation Frequency on Average Response Rates of LSO Cells
*Le Wang; H. Steven Colburn

Inhibition Shapes the Temporal Discharge Patterns of Units in the Lateral Superior Olive: A Modeling Study
*Nathaniel Greene; Oleg Lomakin; Kevin Davis
Rebound Spiking in the Mouse Superior Paraolivary Nucleus
*Anna Magnusson; Anders Fridberger; Sara Leijon

Are Chopper-Like Offset Responses of SPN Neurons Mediated by a Hyperpolarization-Activated Cyclic Nucleotide-Gated Current (I_H)?
*Conny Kopp-Scheinpfug; Susan Robinson; Ian D. Forsythe

Responses to Temporal Sound Features in the Inferior Colliculus Are Influenced by the Superior Paraolivary Nucleus
*Richard A. Felix II; Albert S. Berrebi

Effect of Sampling Frequency on the Measurement of Phase-Locked Spikes
*Go Ashida; Catherine E. Carr

Properties of the Low-Frequency Components of the Auditory Neurophonic in the Barn Owl's Nucleus Laminaris in Response to Clicks
*Hermann Wagner; Sandra Brill; Richard Kempter; Catherine E. Carr

Endogenous GABA Sharpens Interaural Time Difference Coding in the Chicken Nucleus Laminaris
*Zheng-Quan Tang; Liechcheng Wang; Yong Lu

Burst Firing of MSO Neurons In Vitro Prior to Hearing Onset
*Sheree D. Cherry; Nace Golding
GABAB Receptor Activation as a Possible Mechanism for Maintaining Precise ITD Selectivity Across Varying Stimulus Conditions: An in Vitro Study  
*T. Dalton Combs; Matthew J. Fischl; Achim Klug; Benedikt Grothe; R. Michael Burger

Axonal Delay Lines from Bushy Cells to the Medial Superior Olive: A Reexamination  
*Shotaro Karino; Philip H. Smith; Tom C. T. Yin; Philip X. Joris

Reassessing the Intrinsic and Synaptic Properties of MSO and LSO Principal Neurons in Light of Their Interaural Time Difference Sensitivity  
*Jason Mikiel-Hunter; Roberta Donato; David McAlpine

A Comparison of Correlation Sensitivity and Bandwidth at Multiple Anatomical Levels in the Interaural Time Difference Processing Pathway  
*Myles McLaughlin; Marcel Van Der Heijden; Philip Joris

Binaural Interaction and Internal Delays: The Intrinsic Disparity Hypothesis  
*Philip Joris

Modeling Binaural Response in the Auditory Brainstem to Electric Stimulation of the Auditory Nerve: Effects of Membrane Properties on ITD Sensitivity  
*Yoojin Chung; H. Steven Colburn

Prediction of Precedence Effect Phenomenon by a Network of Coincidence Detector Cells  
*Tal Klap; Ram Krips; Miriam Furst

Session Q18: Poster

Auditory Midbrain: Tinnitus, Plasticity, and Modulation  
1:00 pm, Monday, February 8, 2010 (48 hours)  
Disneyland Exhibit Hall
#782
Mapping Tinnitus in Auditory Related Brain Regions Across Two Rat Models Using Manganese Enhanced MRI
*Avril Genene Holt; Gary Rajah; Bruce Berkowitz; David Bissig

#783
Sound-Evoked Forward Suppression of Spontaneous Firing in Auditory Neurons May Relate to Residual Inhibition in Tinnitus
*Alexander Galazyuk; Sergiy Voytenko

#784
Salicylate-Induced Tinnitus: Alterations in Neuronal Activity in the Inferior Colliculus of Tranquilized Mice
*Daniel Stolzberg; Richard Salvi; Adam Dziorny; Joseph Walton

#785
Mechanisms Underlying Plasticity of Rate-Level Functions in the Inferior Colliculus
*Calum Grimsley; Shobhana Sivaramakrishnan

#786
GABA \( \Delta \) Receptors Mediate Stimulus-Specific Adaptation (SSA) in the Auditory Midbrain
*Manuel S. Malmierca; Olga Hernández; Flora M. Antunes; David Pérez-González; Marco A. Izquierdo; Ellen Covey

#787
Stimulus-Specific Adaptation in Neurons in the Rat’s Dorsal Cortex of the Inferior Colliculus
*Huiming Zhang; Ariana Lumani

#788
Adaptation to Stimulus Statistics in the Perception and Neural Representation of Auditory Space
*Johannes Dahmen; Peter Keating; Fernando R. Nodal; Andreas Schulz; Andrew J. King

#789
The Time Course of Binaural Masking in the Inferior Colliculus of Guinea Pig
*Trevor Shackleton; Alan Palmer
Adaptation of IC Neurons to Repeated Presentation of a Harmonic Complex
Simon Jones; Georg M. Klump

Inferior Colliculus Neurons and Psychophysical Performance: Perceptual Enhancement Reflects Central Computations
Paul Nelson; Eric Young

Corticofugal Modulation of Adaptation to Sound Level Statistics in the Inferior Colliculus
Benjamin Robinson; Nicol Harper; Isabel Dean; David McAlpine

Changes in C-Fos Expression in the Inferior Colliculus After Unilateral Auditory Cortex Ablation in the Adult Rat
Cheryl Clarkson; Miguel Merchán

Tonotopy Within the Human Inferior Colliculus: Is It Fixed or Plastic?
Hubert Lim; Minoo Lenarz; Gert Joseph; Thomas Lenarz

Neural Coding of ITD with Bilateral Cochlear Implants: Effects of Auditory Experience
Kenneth E. Hancock; Victor Noel; Bertrand Delgutte

Central Auditory Processing Following Exposure to an Augmented Acoustic Environment: Is There a Critical Period?
Joseph Walton; Adam Dziorny; Anne Luebke

Serotonin Release in the Auditory Midbrain of Females During Acute Stress
Jessica Hanson; Ian Hall; Laura Hurley
Session Q19: Poster

Auditory Pathways: Cortex and Thalamus: Physiology II
1:00 pm, Monday, February 8, 2010 (48 hours)
Disneyland Exhibit Hall

#798
Tone Processing in the Higher-Order Auditory Cortical Field DP of Awake and Anesthetized Female Mice - Mothers and Naive Females in Various Estrous Cycle Phases
*Simone Kurt; Yvonne Mindler; Anja Dorrn; Günter Ehret

#799
Measures of Backward Masking in Auditory Cortex of Awake Gerbils
*Merri Rosen; Dan H. Sanes

#800
Wireless Multi-Channel Single Unit Recordings from Freely Roaming and Vocalizing Marmosets
*Sabyasachi Roy; Cory Miller; Xiaoqin Wang

#801
Simultaneous Neural and Behavioural Assessment of Pitch Discrimination in Freely Moving Ferrets
*Jennifer Bizley; Kerry Walker; Fernando R. Nodal; Andrew J. King; Jan Schnupp

#802
Contrast Normalisation in Auditory Cortex
*Ben Willmore; Neil Rabinowitz; Jan Schnupp; Andrew J. King

#803
Neural Correlate of Stream Segregation on the Basis of Phase Relations Between Harmonics in Complex Sounds in the Bird Auditory Forebrain
*Naoya Itatani; Georg M. Klump

#804
Responses to Synchronous Vs. Alternating Tone Sequences in Monkey Primary Auditory Cortex: a Crucial Test of a Neural Model of Auditory Stream Segregation
*Yonatan Fishman; Mitchell Steinschneider

#805
Examining a Temporal Mismatch Between Spike- And Current-Source-Density-Receptive Fields in Ferret Auditory Cortex
Session Q20: Poster

Auditory Cortex and Thalamus: Pathophysiology
1:00 pm, Monday, February 8, 2010 (48 hours)
Disneyland Exhibit Hall

#809
Temporal-Integration Mechanism of Bone-Conducted Ultrasonic Speech Sound
*Tadao Okayasu; Tadashi Nishimura; Akinori Yamashita; Yanai Shuichii; Seiji Nakagawa; Yuka Uratani; Yoshiki Nagatani; Hiroshi Hosoi

#810
Objective Assessments of Bone-Conducted Ultrasonic (BCU) Hearing by Neuromagnetic Measurements
*Seiji Nakagawa

#811
Hemispheric Lateralization of Cortical Responses in Children Using Bilateral Cochlear Implants
*Daniel Wong; Karen Gordon

#812
First-Spike Latency in the Congenitally Deprived Auditory Cortex
*Andrej Krak; Peter Hubka; Jochen Tillein

#813
Cortical Development and Re-Organization in Children with Auditory Neuropathy/Dys-Synchrony
*Anu Sharma; Phillip Gilley; Garrett Cardon; Amy Nash; Alissa Wallace
Conductive Hearing Loss Produces Changes in Cortical Inhibition That Persist to Adulthood
*Anne Takesian; Vibhakar Kotak; Dan H. Sanes

Blast and Acoustic Trauma-Induced Tinnitus: Auditory and Non-Auditory Aspects
*Edward Pace; Paige Pierozynski; Johnny Mao; Lyndsay Bobak; Zhifeng Kou; Pamela VandeVord; Yimin Shen; Mark Haacke; Anthony Cacace; Jinsheng Zhang

Influence of Intensity and Quantity of Noise Exposure on Neuronal Activity in Central Auditory Structures
*Moritz Gröschel; Susanne Müller; Romy Götze; Arne Ernst; Dietmar Basta

Long-Term Reorganization of Mature Primary Auditory Cortex by Passive Exposure to Moderate-Level Sounds
*Martin Pienkowski; Jos J. Eggermont

Role of GABAergic Activity in Auditory Cortex Gain Control
*Wei Sun; Jianzhong Lu; Anchun Deng; Edward Lobarinas; Ronald Goodey; Richard Salvi

Auditory Processing in a Mouse Model of Fragile X Syndrome
*Sarah Rotschafer

Background Strain Influences Behavioral Hearing-In-Noise Assessment
*Anne Luebke; Paul Allen; Kellie Chung; Sara Dickerson; James Ison

Block of Norepinephrine Reuptake by Nortriptyline Improves Sustained Auditory Attention and Decreases Impulsivity
*Swagata Roychowdhury; Clay Brown; Marco Atzori

Nicotinic Modulation of Attentional Shift in the Auditory System
*Clay Brown; Justin Nichols; Marco Atzori
Salicylate-Induced Tinnitus: Alterations in Neuronal Activity in the Auditory Cortex of Anesthetized Rats
*Daniel Stolzberg; Guang-Di Chen; Richard Salvi

Salicylate-Induced Modulation of Gene and Protein Expression in Rat Auditory Cortex Correlates with Behavioral Phenotype of Central Tinnitus
*Senthilvelan Manohar; Samson James; Caroline Shillitoe; Edward Loban; Richard Salvi; Donald Coling

Characterization of Tinnitus Treatment Drugs in Pentylenetetrazole-Induced Activity Using an in Vitro Model of Auditory Cortex Networks
*Kamakshi Gopal; Calvin Wu; Timothy Jaquez; Guenter Gross; Ernest Moore

Session Q21: Poster

Sound Localization: Temporal Processes in Spatial Hearing
1:00 pm, Monday, February 8, 2010 (48 hours)
Disneyland Exhibit Hall

Effects of Conditioner Position on Detection Thresholds in the Owl
*David Tran; Andrew Cvitanovich; Elizabeth Whitchurch; Terry Takahashi

Contextual Shifts in Sound Localization Induced by an a Priori-Known Distractor
*Beata Tomori; Rudolf Andoga; Norbert Kopco

Does Temporal Weighting of Interaural Level Differences Include Both Onset and Offset-Specific Effects?
*G. Christopher Stecker; Andrew D. Brown

Does the Onset “Tip the Scale” in the Franssen Effect?
*Richard Freyman; Amanda Griffin; Patrick Zurek

A Two Source Reference for Determining When a Simulated Echo Becomes Localizable
*Jeff Masterson; Brian Nelson; Terry Takahashi
More Modeling of Temporal Weighting Functions for Interaural Time and Level Differences  
*G. Christopher Stecker

Localization Dominance Depends on Envelope Correlation  
*Caitlin Baxter; Brian Nelson; Terry Takahashi

Investigation of the Precedence Effect in Ferrets: Do They Experience a Build-Up of Echo Suppression?  
*Sandra Tolnai; Ruth Y. Litovsky; Andrew J King

Does Multi-Second Monaural Adaptation Reduce Sensitivity to Interaural Time Differences in Human Listeners?  
*Andrew D. Brown; Marina S. Kuznetsova; William J. Spain; G. Christopher Stecker

Rate Adaptation in Binaural Detection  
*Matthew Goupell; Ruth Y. Litovsky

Session Q22: Poster

Sound Localization: Binaural and Spatial Coding  
1:00 pm, Monday, February 8, 2010 (48 hours)  
Disneyland Exhibit Hall

Concurrent Development of the Head and Pinnae and the Acoustical Cues to Sound Location in the Chinchilla  
*Heath Jones; Kanthaiah Koka; Jennifer Thornton; Daniel J. Tollin

Acoustic Cues for Sound Localization Measured in Humans and a Mini-Basketball  
*Clinton Kuwada; Brian Bishop; Shigeyuki Kuwada; Duck O. Kim

Responses of Inferior Colliculus Neurons in the Unanesthetized Rabbit to Virtual Auditory Space Stimuli  
*Shigeyuki Kuwada; Brian Bishop; Duck O. Kim
#839
Frequency Mismatch in Low-Best Frequency Neurons in the Barn Owl Argues Against Cochlear Delays as a Coding Mechanism for Interaural Time Difference
*Martin Singheiser; Hermann Wagner

#840
The Range of Interaural Time Differences in the Barn Owl Is Almost Independent of Frequency
*Laura Hausmann; Hermann Wagner

#841
The Representation of ITD Detectors in Mammals: No Evidence for 'Jeffress-Like' Distributions
*David McAlpine; Nicol Harper; Brian Scott; Malcolm Semple

#842
Closed-Field Measures of Behavioral Sensitivity to ITDs and ILDs in the Ferret
*Peter Keating; Fernando R. Nodal; Andreas Shulz; Andrew J. King

#843
Correlation of Individual Performance in Monaural and Binaural Temporal Detection Tasks
*Atsushi Ochi; Tatsuya Yamasoba; Shigeto Furukawa

#844
Spatial and Temporal Unmasking in a Symmetric Stimulation Paradigm
*Lutz Wiegrebe; Alessandro Binetti

#845
Maximum Sensitivity to Interaural Incoherence: At the Peak or the Slope of ITD-Tuning Curves
*David McAlpine; Torsten Marquardt

#846
Processing of Interaural Temporal Disparities at High Frequencies: Which Metrics Work and Which Do Not?
*Leslie Bernstein; Constantine Trahiotis

#847
The Normalized Cross-Correlation Function Including Peripheral Compression: A Case of Mistaken Identity?
*Matthew Goupell
#848
A Spiking Neural Model of Binaural Sound Localization
*Romain Brette; Dan Goodman

Session Q23: Poster

Aging II: Animal Model Studies
1:00 pm, Monday, February 8, 2010 (48 hours)
Disneyland Exhibit Hall

#849
Cisplatin Ototoxicity in the CBA Mouse Model of Presbycusis
*Kourosh Parham; Efua Adetona

#850
The Change of Aggregations with Heat Shock Protein 70 in the Cochlea During Aging
*Takefumi Mikuriya; Kazuma Sugahara; Yoshinobu Hirose; Makoto Hashimoto; Tetsuya Nakamoto; Hiroaki Shimogori; Hiroshi Yamashita

#851
Can Hydrogen Water Attenuate Age-Related Hearing Impairment?
*Rie T. Horie; Yayoi S. Kikkawa; Takayuki Nakagawa; Juichi Ito

#852
Involvement of the Neural Cell Adhesion Molecule (NCAM) in Age-Related Hearing Loss as Assessed in NCAM Null Mutant Mice
*Sara Euteneuer; Sylvia Grammerstorf-Rosche; Barbara Wollenberg; Melitta Schachner

#853
Comparison of Cochlear Morphology and Apoptosis in Mice Models of Presbycusis
*Shi-Nae Park; Sang A. Back; Kyoung-Ho Park; Hyeog-Gi Choi; Omar Akil; Laurence R. Lustig; Sang Won Yeo

#854
Age-Related Changes in Cochlear Histopathology of Rhesus Macaque Monkeys
*James Engle; Steve Tinling; Gregg Recanzone

#855
Prevention of Age-Related Hearing Loss by MB-12066
*Hong-Seob So; HyungJin Kim; Gi-Su Oh; Jeong-Han Lee; Jin-Man Kim; Tae Hwan Kawk; David Lim; Raekil Park
Mitochondrial Dysfunction and Proinflammatory Cytokines Sign Ageing Cochlea and Hearing Impairment
*Jing Wang; Julien Menardo; Sabine Ladrech; François Casas; Jérôme Bourien; Jérôme Ruel; Christophe Michel; Guy Rebillard; Marc Lenoir; Jean-Luc Puel

Mature Mammal Hearing Loss: a Natural Experiment in Presbycusis
*Darlene R. Ketten; S. Ridgway; J. Arruda; J. O’Malley; S. Cramer; M. Dunn

Semi-Quantitative Analysis of the Expression of Markers in Different Fibrocytes of the Spiral Ligament of CD-1 Mice
*David Furness; Ella Shepard; Shanthini Mahendrasingam

Efferent Nerve Degeneration Associated with Alpha-Synuclein Expression in Mouse Cochlea: a Possible Cause of Early Onset Presbycusis
*Shi-Nae Park; Sang A. Back; Yun-Hoon Choung; Jung Sook Joo; Kyoung-Ho Park; Mi Young Choi; Omar Akil; Laurence R. Lustig; Sang Won Yeo

Changes in the Expression Pattern of Estrogen Receptors in the Central Auditory System of Pre-Pubertal, Young Adult and Aged Mice
*Konstantina Charitidi; Robert D. Frisina; Olga N. Vasilyeva; Xiaoxia Zhu; Barbara Canlon

Effects of Age on Pre-Pulse, Variable and Fixed Gap Inhibition of the Acoustic Startle Response Amplitude in HET4 Mice
*David F. Dolan; Karin Halsey; Peter Ghisleni; Richard A Altschuler
Session Q24: Poster

Psychophysics: Psychophysics in Special Human and Animal Populations
1:00 pm, Monday, February 8, 2010 (48 hours)
Disneyland Exhibit Hall

#862
Effect in CBA/CaJ Mice of Varying Signal Intensity and Age on the Inhibition of the Acoustic Startle Reflex Produced by a Change in Sound Location Along the Azimuth
*James Ison; Paul Allen

#863
Exposure to Noise in Early Ontogeny Affects the Auditory Startle Reflex in Adulthood in the Rat
*Natalia Rybalko; Jana Burianová; Zbyněk Bures; Jolana Grecova; Josef Syka

#864
Tinnitus: From Rats to Humans - Validation of the Acoustic Gap Startle Paradigm
*Sylvie Hébert; Philippe Fournier; Émilie Gosselin

#865
Gap Induced Reduction of the Acoustic Startle Response as a Behavioural Test for Noise Induced Tinnitus in Guinea Pigs
*Susanne Dehmel; Beth A. Hand; Susan E. Shore

#866
Baclofen and the Role of GABA Inhibition on Salicylate and Noise Induced Tinnitus
*Edward Lobarinas; Ronald Goodey; Richard Salvi; Wei Sun

#867
Variability in Tinnitus Suppression Via Electric Stimulation
*Janice Chang; Esther Fine; Vanessa S. Rothholtz; Hamid R. Djalilian; Fan-Gang Zeng

#868
Temporal Interaction of Pulses in Cochlear Implants
*Sonja Karg; Christina Lackner; Werner Hemmert
Are All Syllables Perceived Equally? A Comparative Analysis of Song Syllable Perception in Zebra Finches (Taeniopygia Gutta) and Budgerigars (Melopsittacus Undulatus)

*Erikson G. Neilans; Thomas E. Welch; Ross Maddox; Barbara G. Shinn-Cunningham; Micheal L. Dent

Female and Male Mice Vocalize in Response to Auditory Playbacks of Mouse Ultrasonic Vocalizations

*Kelly E. Radziwon; Erikson G. Neilans; Micheal L. Dent

Session Q25: Poster

Psychophysics: Auditory Grouping and Streaming
1:00 pm, Monday, February 8, 2010 (48 hours)
Disneyland Exhibit Hall

Recovering Sound Sources from Acoustic Invariance
*Josh McDermott; David M. Wroblewski; Andrew J. Oxenham

Influences of Interaural Time Differences in Grouping of Ambiguous Auditory Scenes
*Andrew Schwartz; Josh McDermott; Barbara Shinn-Cunningham

How Object Formation Can Influence Speech Perception
*Siddharth Rajaram; Nicholas Kurkjy; Frederick Gallun; Virginia Best; Barbara Shinn-Cunningham

Interaction Between Vocal Tract Length and Fundamental Frequency on Vowel Sequence Segregation
*Minoru Tsuzaki; Yuki Nakagawa

Influence of Voice Continuity on Selective Auditory Attention
*Scott Bressler; Salwa Masud; Virginia Best; Barbara Shinn-Cunningham
Perceptual Discontinuities Between Sequential Sounds Differing in Ear of Presentation
*Ian Harrington

Context Effects in Auditory Stream Segregation: Adaptation of Frequency Shift Detectors or Criterion Shifts?
*Joel Snyder; Christophe Micheyl; David Weintraub

Pattern Specificity in the Effect of Prior Δf on Auditory Stream Segregation
*David Weintraub; Joel Snyder

Auditory Streaming by SAM Determined Using the Drunken Horse Paradigm
*Lena-Vanessa Dollezal; Georg M. Klump

Behavioral Measures of Auditory Streaming in Ferrets
*Ling Ma; Christophe Micheyl; Pingbo Yin; Andrew J. Oxenham; Shihab A. Shamma

Acoustic Factors Influencing Auditory Streaming in Budgerigars and Zebra Finches
*Kristen A. Garcia; Thomas E. Welch; Siddharth Rajaram; Kamal Sen; Barbara G. Shinn-Cunningham; Micheal L. Dent

A Test of Gestalt Auditory Grouping Principles in Cope's Grey Treefrog (Hyla Chrysoscelis): Perceptual Restoration or Rule-Based Sensory Biases?
*Folkert Seeba; Joshua J. Schwartz; Mark A. Bee

Session Q26: Poster

Psychophysics: Cognitive Processes in Auditory Perception
1:00 pm, Monday, February 8, 2010 (48 hours)
Disneyland Exhibit Hall

Influences of Aging on Memory for Intensity
*Frederick Gallun; Anna Diedesch; Robertson Beasley; Patrick Tsukuda
<table>
<thead>
<tr>
<th>#</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>#884</td>
<td>Reverberation Disrupts Spatial Selective Auditory Attention</td>
<td>*Dorea Ruggles; Barbara Shinn-Cunningham</td>
</tr>
<tr>
<td>#885</td>
<td>Voluntary and Obligatory Influences of Visual Spatial Cues for When and Where to Listen</td>
<td>*Lingqiang Kong; Barbara Shinn-Cunningham</td>
</tr>
<tr>
<td>#886</td>
<td>Interplay of Stimulus Detection and Eye Movements in an Alternative-Forced Choice Paradigm: A Combined EEG/EOG and Psychophysical Study</td>
<td>*Peter Heil; Heinrich Neubauer</td>
</tr>
<tr>
<td>#887</td>
<td>Effect of Juvenile Auditory Training on Adult Perception</td>
<td>*Emma Sarro; Dan H. Sanes</td>
</tr>
<tr>
<td>#888</td>
<td>Changes in Accuracy with Interval Order During Auditory Development and Learning</td>
<td>*David Moore; Sygal Amitay; Lorna Halliday</td>
</tr>
<tr>
<td>#889</td>
<td>The Emergence of Sound Localization Abilities in Children Who Use Bilateral Cochlear Implants</td>
<td>*Cynthia M. Zettler; Shelly P. Godar; Emily Kishel-Cross; Sara M. Misurelli; Ruth Y. Litovskiy</td>
</tr>
<tr>
<td>#890</td>
<td>Learning Owl Ears</td>
<td>*Marc van Wanrooij; A. John Van Opstal</td>
</tr>
<tr>
<td>#891</td>
<td>The CI-MUSHRA Method to Assess Musical Sound Quality: A Study of Bass Frequency Perception in Cochlear Implant Users</td>
<td>*Alexis Roy; Charles J. Limb; Patpong Jiradejvong; Courtney Carver</td>
</tr>
<tr>
<td>#892</td>
<td>Auditory Preference of Children with Autism Spectrum Disorders</td>
<td>*Lynn Gilbertson; Robert Lutfi; Susan Ellis-Weismer; Raman Arora</td>
</tr>
</tbody>
</table>
Session Q27: Poster

Auditory Prosthesis: Bilateral, Spatial Hearing and Pitch
1:00 pm, Monday, February 8, 2010 (48 hours)
Disneyland Exhibit Hall

#893
Spatial Release from Masking in Children: Symmetric and Asymmetric Masker Distribution in the Horizontal Plane
*Sara M. Misurelli; Cynthia M. Zettler; Shelly P. Godar; Ruth Y. Litovsky

#894
The Role of Interaural Time and Level Cues in Spatial Release from Masking and Localization Abilities for Cochlear Implant Users
*Justin Aronoff; Yang-Soo Yoon; Ivan Pal; Sigfrid Soli

#895
Binaural Unmasking with Multiple Masking Electrodes in Bilateral Cochlear Implant Users
*Thomas Lu; Ruth Y. Litovsky; Fan-Gang Zeng

#896
The Benefits and Perceptual Mechanism by Bilateral and Bimodal Cochlear Implant Users
*Yang-Soo Yoon; Yongxin Li; Qian-Jie Fu

#897
A Sensitive Period for Cortical Development and Plasticity in Children with Sequential Bilateral Cochlear Implants
*Anu Sharma; Michael Dorman; Allison Biever; Phillip Gilley; Amy Nash; Julia Campbell

#898
Ipsilateral Simultaneous Masking Between Acoustic and Electric Stimulations
*Payton Lin; Fan-Gang Zeng; Christopher Turner; Hamid R. Djalilian

#899
Effects of Experience on Electric Pitch Perception in Hybrid and Long-Electrode Cochlear Implant Patients
*Lina Reiss; Sue Karsten; Christopher Turner; Bruce Gantz
Anisochronous Beat Detection: A Study of Rhythmic Clocking in Cochlear Implant Users
*Patrick J Donnelly; Eunice Yang; Charles J Limb

Pitch Perception of Regular-Interval Noise Stimuli in Cochlear Implant Users
*Wade Chien; Emily Boeke; Patpong Jiradejvong; Courtney Carver; Charles J Limb

Bandpass Filtering Can Improve Cochlear Implant Users’ Music Perception
*John Galvin; Qian-Jie Fu; Sandy Oba

Auditory Prosthesis: Trophic and Damage Effects
1:00 pm, Monday, February 8, 2010 (48 hours)
Disneyland Exhibit Hall

Chronic Neurotrophin Infusion and Electrical Stimulation in the Deaf Cochlea: Implications for Cochlear Implant Spatial Selectivity
*Thomas Landry; James Fallon; Andrew Wise; Robert Shepherd

Neurotrophic Effects of Exogenous Brain-Derived Neurotrophic Factor (BDNF) and Electrical Stimulation in Cats Deafened as Neonates
*Patricia Leake; Gary Hradek; Alexander Hetherington; Olga Stakhovskaya; Ben Bonham

Towards a Measure of Neural Survival in Recipients of Cochlear Implants: Focused-Stimulation Thresholds, Speech Understanding, and Electrode Locations
*Christopher Long; Timothy Holden; Wendy Parkinson; Zachary Smith; Chris van den Honert

Intracochlear Monitoring of Acoustically-Generated Potentials During Cochlear Implantation in Gerbils with Normal-Hearing and Noise Induced Hearing Loss
*Thomas A. Suberman; Adam P. Campbell; Stefan Mlot; Oliver F. Adunka; Douglas C. Fitzpatrick
#907
Identification of Electrophysiological Markers of Damage in the Gerbil Cochlea During Electrode Implantation Using a Limited Stimulus Set and Direct Endoscopic Visualization
*Adam P. Campbell; Thomas A. Suberman; Stefan Mlot; John M. Pike; Douglas C. Fitzpatrick; Oliver F. Adunka

#908
Anatomical Considerations of Cochlear Morphology and Its Implications for Insertion Trauma in Cochlear Implant Surgery
*Jeroen Briaire; Berit Verbist; Luca Ferrarini; Andrzej Zarowski; Hans Reiber; Johan Frijns

#909
Factors Associated with Incomplete Insertion of Electrodes in Cochlear Implant Surgery: A Histopathologic Study
*Joonhan Lee; Joseph B. Nadol, Jr.; Donald K. Eddington

#910
Physiological and Anatomical Changes in the Auditory Nerve Fibers of Chronically Deaf Cats
*Charles A. Miller; Barbara K. Robinson; Jihwan Woo; Ning Hu; Paul J. Abbas

Session Q29: Poster
Auditory Prosthesis: Current Steering
1:00 pm, Monday, February 8, 2010 (48 hours)
Disneyland Exhibit Hall

#911
Polarity-Dependent Sensitivity of the Electrically Stimulated Human Auditory System in Users of Three Makes of Cochlear Implant and at Different Cochlear Sites
*Robert P. Carlyon; Olivier Macherey; John Deeks

#912
Extending the Range of Pitch Perception by Cochlear Implant Listeners
*Olivier Macherey; Robert P. Carlyon

#913
Quantifying Perceptual Effects of Different Levels of Current Focusing
*Monica Padilla; David M. Landsberger; Arthi G. Srinivasan; Robert Shannon
Discrimination Between Simultaneous and Sequential Virtual Channels
*Landsberger David; John Galvin

Improving Virtual Channel Discrimination with Current Focusing in a Multi-Channel Context
*Arthi G. Srinivasan; David M. Landsberger; Robert V. Shannon

Relation Between the Shape of the Tripolar Intracochlear Electrical Field and Psychophysical and Physiological Spread of Excitation
*Carlo Berenstein; Filiep Vanpoucke; Lucas Mens

Poor Electrode-Neuron Interface Demonstrated by Steep Growth of Loudness with the Partial Tripolar Configuration
*Amberly Nye; Julie Bierer

Session Q30: Poster

Auditory Prosthesis: Alternatives to Intracochlear Electrodes
1:00 pm, Monday, February 8, 2010 (48 hours) Disneyland Exhibit Hall

Directed Spiral Ganglion Axon Growth on Photopolymerized Micropatterns
*John Clinger; Joseph Clarke; Rachel Levine; Stephanie McCoy; Ningyong Xu; Lucas Sievens; Jason Clark; Allan Guymon; Marlan R. Hansen

In Vivo Effects of Surface Patterned Cochlear Implant Electrode Arrays
*Gerrit Paasche; Ronnie Oberbandscheid; Elena Fadeeva; Britta Sandkühler; Verena Scheper; Bart Volckaerts; Thomas Lenarz; Timo Stöver

Adhesion Force Measurements of Fibroblasts on Microstructured Surfaces by AFM
*Guenter Reuter; Pooyan Aliuos; Elena Fadeeva; S. Gollapudi; B. Chichkov; Thomas Lenarz; Uta Reich
#921 Dual Channel Optical Stimulation of the Guinea Pig Cochlea
*Agnella Matic; Suhrud Rajguru; Claus-Peter Richter

#922 Temporal Properties of Inferior Colliculus Recordings During Stimulation with an Infrared Laser
*Claus-Peter Richter; Agnella Matic; Suhrud Rajguru; Alice Lin; Andrew Fishman

#923 The Spread of Excitation in Inferior Colliculus for Optical Cochlear Stimulation
*Suhrud Rajguru; Agnella Izzo Matic; Andrew Fishman; Claus-Peter Richter

#924 Cochlear Stimulation by Pulsed Infrared LASER-Light: Direct and Indirect Stimulation
*Ingo Teudt; Hannes Maier; Claus-Peter Richter; Andrej Kral

#925 Effects of Green Light Application at Ear Drum and Middle Ear Level
*Gentiana I. Wenzel; Hubert H. Lim; Kaiyin Zhang; Sven Balster; Ole Massow; Justus Ilgner; Holger Lubatschowski; Guenter Reuter; Thomas Lenarz

#926 Techniques to Improve the Efficiency of Active Middle Ear Implants: Effect of Different Coupling Methods to the OSSicular Chain
*J. Eric Lupo; Arnaud Devèze; Kanthaiah Koka; Stéphane Tringali; Herman A. Jenkins; Daniel J. Tollin

#927 Can Stapes Velocity Be Used to Estimate the Efficacy of Mechanical Stimulation of the Round Window of the Cochlea with an Active Middle Ear Prostheses?
*Kanthaiah Koka; Stéphane Tringali; Daniel J. Tollin

#928 Direct Mechanical Stimulation of the Chinchilla Malleus with the MET Middle Ear Implant
*N. Julian Holland; Kanthaiah Koka; Herman A. Jenkins; Daniel J. Tollin
Electrocochleographic Measurements in Chinchilla with Unilateral Deafness and Fitted with a Bone Anchored Hearing Aid
*Stéphane Tringali; Kanthaiah Koka; Herman A. Jenkins; Daniel J. Tollin

Round Window Position of the Vibrant Soundbridge Middle Ear Implant: How Coupling Is Influenced by Placement and Orientation of the FMT Demonstrated in an Animal Study
*Jochen Tillein; Susanne Braun; Silvia Heid; Rainer Hartmann

Experimental Output Determination in Direct Cochlea Stimulation with the DACS PI
*Hannes Maier; Gérard Loquet; Georg Feigl; Izabel Kós

The Effect of Cochlear Electrode Insertion on the Mechanics of the Middle Ear
*Antonio G. Mirón; Ambrose Lee; George Jeronimidis; Alec Fitzgerald O'Connor; Dan Jiang

Electrical Suppression of Tinnitus: A Neuromodulation Approach
*Jinsheng Zhang; Xueguo Zhang; Zhenlong Guan; Hassan Beydoun; John Moran

Auditory-Tactile Integration Enhances Cochlear Implant Speech Perception in Noise
*Juan Huang; Benjamin Sheffield; Fan-Gang Zeng

Impact of SmartFocus Control on Aided Speech Intelligibility in Background Competition
*David A. Eddins; U-Cheng Leong; Donald Hayes

Speech Recognition for Bone-Conducted Ultrasound
*Akinori Yamashita; Nishimura Tadashi; Nagatani Yoshi; Sakaguchi Takefumi; Okayasu Tadao; Hosoi Hiroshi
Session Q31: Poster

Vestibular Receptors
1:00 pm, Monday, February 8, 2010 (48 hours)
Disneyland Exhibit Hall

#937
Whole-Cell Recordings from Calyx Endings in the Turtle Posterior Crista
*Shilpa Chatlani; Jay M. Goldberg

#938
Postnatal Development of Conductances in Rodent Type I Vestibular Hair Cells and Calyces
*Frances Meredith; Gang Li; Katie Rennie

#939
Distribution of Efferent Terminals in Adult Mouse Vestibular Neuroepithelia
*David R. Sultemeier; Carol Soteropulos; Dwayne Simmons; Larry F. Hoffman

#940
Efferent Actions Differentially Affect Afferent Sensitivity to Sinusoidal Indentation in the Turtle Posterior Semicircular Canal
*Joseph Holt; Amit Shah; Kathy Barsz; Paivi Jordan; David Parker

#941
Activation of Muscarinic ACh Receptors Underlies Efferent-Mediated Slow Excitation in Calyx-Bearing Afferents of the Turtle Posterior Semicircular Canal
*Paivi Jordan; Amit Shah; Kathy Barsz; Joseph Holt

#942
Efferent-Mediated Excitation of Turtle Calyx-Bearing Afferents Does Not Involve α9/10nAChRs
*Joseph Holt; Paivi Jordan; Amit Shah; Kathy Barsz

#943
Regulation of Cellular Calcium in Vestibular Supporting Cells by Otopetrin 1
*Euysoo Kim; Krzysztof Hyrc; Judith Speck; Yunxia (Yesha) Lundberg; Inna Hughes; Felipe Salles; Bechara Kachar; Mark Goldberg; Mark Warchol; David M. Ornitz
Notch Signaling in the Normal and Traumatized Mouse Utricle
*Guo-peng Wang; Ishani Basu; Hiu Tung Wong; Tzy-wen Gong; Shu-sheng Gong; Yehoash Raphael

Gravity Receptor Function Is Impaired in Triobp Knockout Mice
*Sherri M. Jones; Inna A. Belyantseva; Thomas B. Friedman; Shin-ichiro Kitajiri

Morphological Assessment of an Epitympanic Approach for a Transmeatal Selective Neurectomy of the Lateral and Anterior Ampullary Nerve
*Georg Feigl; Izabel Kös; Heimo Ulz; Jean-Philippe Guyot

Session Q32: Poster

Vestibular Afferents and CNS
1:00 pm, Monday, February 8, 2010 (48 hours)
Disneyland Exhibit Hall

The Impact of Low-Voltage Activated K⁺ Currents on Spike-Timing Regularity in Mammalian Vestibular Afferent Neurons
*Radha Kalluri; Ruth Anne Eatock

Phospholipase C-Mediated Inhibition of the M-Potassium Current by Muscarinic-Receptor Activation in the Vestibular Primary-Afferent Neurons of the Rat
*Rosario Vega; Cristina Pérez; Enrique Soto

Can Inner Ear Application of Rolipram, a P-CREB Up-Regulator, Induce Phosphorylation of CREB in Vestibular Ganglion Cells?
*Hiroaki Shimogori; Hideki Toyota; Kazuma Sugahara; Makoto Hashimoto; Takefumi Mikuriya; Yoshinobu Hirose; Hiroshi Yamashita

Inhibiting Vestibular Schwannoma Cell Growth with Lapatinib and AG825 (Tyrphostin), a Comparative Study
*Zana Ahmad; Carrie Brown; Weg Ongkeko; Allen F. Ryan; Joni Doherty
#951 Persistent C-Jun N-Terminal Kinase Activity Contributes to the Survival of Human Vestibular Schwannoma Cells by Suppressing Accumulation of Mitochondrial Superoxides
*Marlan R. Hansen; WeiYing Yue; Jason Clark; Frederick Domann

#952 Inhibitory and Excitatory Vestibular Afferent Responses Induced by Infrared Light Stimulation of Hair Cells
*Suhrud Rajguru; Richard Rabbitt; Agnella Izzo Matic; Stephen M. Highstein; Claus-Peter Richter

#953 Neurometric Thresholds of Vestibular Afferents
*Timothy Hullar; Aizhen Yang

#954 Effects of Click Intensity and Duration on Sound-Evoked Vestibular Responses in Rats
*Xuehui Tang; Wei Wei; Wu Zhou; Hong Zhu

#955 Information Processes in the Lateral Semicircular Canals: A Mathematical Analysis
*Tamara Alexandrova; Vladimir Alexandrov; Rosario Vega; Galina Sidorenko; Maribel Reyes; Enrique Soto

#956 Spontaneous Discharge Variability Alone Does Not Predict Detection Threshold and Information Transmission Properties in Vestibular Afferents
*Dylan Hirsch-Shell; Michael Paulin; Larry F. Hoffman

#957 Colocalization of 5-HT1F Receptor and Calcitonin Gene-Related Peptide in Rat Vestibular Nuclei
*Seong-Ki Ahn; Roza Khalmuratova; Sea-Yuong Jeon; Dong Gu Hur; Jin-Pyeong Kim; Jung Je Park

#958 Membrane Excitability of Cerebellar Purkinje Cell After Unilateral Vestibular Deafferentation: A Preliminary Report
*Chang-Hee Kim; Jun Kim; Sang Jeong Kim
Changes in Calbindin Expression Within the Flocculus After Unilateral Labyrinthectomy in Rats
*Seok Min Hong; Byung Rim Park; Chan Hum Park; Jun Ho Lee

Session Q33: Poster

Clinical Audiology II
1:00 pm, Monday, February 8, 2010 (48 hours)
Disneyland Exhibit Hall

Clinical Trial for Local IGF-1 Treatment for Acute Sensorineural Hearing Loss
*Tatsunori Sakamoto; Takayuki Nakagawa; Yayoi S. Kikkawa; Harukazu Hiraumi; Norio Yamamoto; Yasuhiko Tabata; Ken-Ichi Inui; Juichi Ito

Is a Tinnitus Seminar a Successful Treatment Modality?
*Caton Harris; Erik Viirre; Sara Mattson

Combined Temporal and Prefrontal Transcranial Magnetic Stimulation for Tinnitus Treatment
*Berthold Langguth; Michael Landgrebe; Elmar Frank; Julia Burger; Veronika Vielsmeier; Göran Hajak; Tobias Kleinjung

Tinnitus Suppression by Low-Rate Modulated Sounds
*Vanessa S. Rothholtz; Qing Tang; Kelly M. Reavis; Jeff Carroll; Edward C. Wu; Esther Fine; Hamid R. Djalilian; Fan-Gang Zeng

Repetitive Transcranial Magnetic Stimulation (RTMS) for Treatment of Chronic Tinnitus
*Shujiro Minami; Seiichi Shinden; Yasuhide Okamoto; Yukiko Watada; Takahisa Watabe; Naoki Oishi; Sho Kanzaki; Hideyuki Saito; Yasuhiro Inoue; Kaoru Ogawa

Ameliorative Effect of Customized Sound Stimulation on Sensorineural Hearing Loss
*Sangyeop Kwak; Seoyoung Kim; Yunjeong Bea; Eunyee Kwak
#966
Tinnitus Spectrum and Its Real-Time Visualization Based on a 134 Band Cochlear Model
*Sangyeop Kwak; Seoyoung Kim; Yunjeong Bae; Eunyee Kwak

#967
Tinnitus Retraining Therapy Using Portable Music Player
*Shinjiro Fukuda; Takenori Miyashita; Ryuhei Inamoto; Nozomu Mori

#968
The Relation Between the Tinnitus Spectrum and the Tone Audiogram
*Karin M. Heijneman; Harald Haalboom; J. Esther C. Wiersinga-Post; Pim Van Dijk

#969
Vowel Perception of Cochlear Implant Users: Listening Vs. Lip Reading
*Tatsuya Yamasoba; Erika Ogata; Yusuke Akamatsu; Ken Ito; Mitsuya Suzuki; Akinori Kashio

#970
Delayed Cochlear Implantation in Adult Patients with Prelingual Severe to Profound Hearing Loss
*Won Sun Yang; Sung Eun Lee; Hee Nam Kim; Won-Sang Lee; Jae Young Choi

#971
Auditive Outcome in Cochlear Implant Users with GJB2(Connexin26)-Associated Congenital Hearing Loss
*Julia Reinert; Nicolas Guertler

#972
Predictors of Language and Auditory Outcomes in Children After Two Years of Cochlear Implant Use
*Tinne Boons; Astrid Van Wieringen; Ellen Gerrits; Louis Peerera; Birgit Philips; A.F.M. Snik; Marja Weymans; Jan Wouters
Session R: Presidential Lecture and Awards Ceremony

Humming in Tune: Sex Recognition by Mosquitoes on the Wing through Acoustic Distortion
5:30 - 7:00 pm, Monday, February 8, 2010
*Ian Russell

Awards and Honors Reception
7:00 pm
Disneyland Grand Ballroom Lounge

Tuesday, February 9, 2010

Registration
7:30 am - 4:00 pm, Tuesday, February 9, 2010
Disneyland Center Lounge

Session S: Symposium

Stem Cell Applications for Cochlear Repair - From Proof of Principle to Therapy
Moderators: Stefan Heller, Takayuki Nakagawa
8:00 - 11:30 am, Tuesday, February 9, 2010
Disneyland Center and North Ballroom

8:00
Introduction
Stefan Heller

8:05 #974
Recent Advance in Induced Pluripotent Stem Cells
*Keisuke Okita

8:35 #975
Strategies Toward CNS-Regeneration Using IPS Cell Technology
*Hideyuki Okano

9:05 #976
Pros and Cons of Different Stem Cell Types for Future Clinical Use
*Takayuki Nakagawa
Session T: Podium

Psychophysics: Relating Behavior, Physiology and Models of Hearing
Moderators: Jenny Bizley, Shigeto Furukawa
8:00 - 11:30 am, Tuesday, February 9, 2010
Disneyland South Ballroom

8:00 #981
Spatial Information Required for Normal Sound Localization and Training-Induced Plasticity Is Distributed Across Auditory Cortex
*Fernando R. Nodal; Victoria M. Bajo; Andrew J. King

8:15 #982
Differential Effects of Task on Spatial Sensitivity in Cortical Areas A1, DZ and PAF in Awake Behaving Cats
*Chen-Chung Lee; John C. Middlebrooks

8:30 #983
Behavioral Measures of Spatial and Pitch-Based Selective Auditory Attention
*Jing Xia; Adrian KC Lee; Siddharth Rajaram; Barbara G. Shinn-Cunningham
8:45 #984
MEG and EEG Measures of Spatial and Pitch-Based Selective Auditory Attention: Frontal Eye Fields Activation
*Adrian KC Lee; Siddharth Rajaram; Jing Xia; Matti S. Hämäläinen; Barbara G Shinn-Cunningham

9:00 #985
A Positron Emission Tomography (PET) Test for an Enhanced Role for the Cerebellum During Pitch Discrimination
*Augusto Petacchi; Christian Kaernbach; Rama Ratnam; Donald Robin; James Bower

9:15 #986
A Behavioral Measure of the Cochlear Changes Underlying Temporary Threshold Shifts
*Christopher Plack; Stella Howgate

9:30 #987
Psychoacoustical Evidence of Spectro Temporal Modulation Filters
*Jesko L. Verhey; Arne Oetjen

9:45 BREAK

10:00 #988
Loudness Gating Beyond the Primary Auditory Cortex
*Hubert Lim; Minoo Lenarz; Gert Joseph; Thomas Lenarz

10:15 #989
The Effects of the Catechol-O-Methyltransferase (COMT) Val^{158}Met Polymorphism on Auditory and Visual Bistable Perception
*Makio Kashino; Hirohito M. Kondo; Norimichi Kitagawa; Miho S. Kitamura; Michio Nomura

10:30 #990
Evidence for a Common Pitch Processor for the Perception of the Residue Pitch from Binaural and Diotic Pitch Components
*Hedwig Gockel; Robert P. Carlyon; Christopher Plack

10:15 #991
Auditory Interactions in FM Direction Discrimination in Humans
*Bernhard Gaese; Angela Heinrich

11:00 #992
Disruption of Frequency-Discrimination Learning by a 30-Minute Break
*Yuxuan Zhang; Beverly A. Wright
11:15 #993
Exploring the Acoustic Basis of Consonance Using Individual Differences
*Josh McDermott; Andriana Lehr; Andrew J. Oxenham

Panel on Research Funding
12:00 pm - 1:45 pm, Tuesday, February 9, 2010
Disneyland South Ballroom

Session U: Symposium
Modeling Neural Responses and Perceptions of Complex Sounds
Moderator: Laurel Carney
2:00 - 5:30 pm, Tuesday, February 9, 2010
Disneyland Center and North Ballroom

2:00 #994
Modeling Neural Responses and Perceptions of Complex Sounds: Introduction
*Laurel Carney

2:15 #995
A Phenomenological Model of the Auditory Nerve: Long-Term Adaptation with Power-Law Dynamics in the IHC-AN Synapse
*Paul Nelson; Muhammad Zilany; Ian Bruce; Laurel Carney

2:40 #996
Modeling Temporal Response Properties of Electrically-Stimulated Auditory Nerve Fibers
*Ian Bruce

3:05 #997
Investigating the Response of the Wide-Band Inhibitor Model of Comodulation Masking Release
*Lowel O'Mard; Ian Winter

3:30 BREAK

3:50 #998
Slope Sensitivity Under Noise: How Does a Phasic Brainstem Neuron Model Encode Slow Inputs
*Yan Gai; John Rinzel

4:15 #999
Neural Modeling of the Spectral Processing Pathway
*Kevin Davis; Oleg Lomakin
Session V: Podium

Genetics II

Moderators: Karen Friderici, Rick Friedman
2:00 - 5:30 pm, Tuesday, February 9, 2010
Disneyland South Ballroom

2:00 #1002
New Genes Involved in Deafness from Large-Scale Mouse Screens
*Karen Steel

2:15 #1003
Next Generation Sequencing Approaches to Identify Novel Genes Critical for Hearing
*Tom Walsh; Hashem Shahin; Alex Nord; Ming Lee; Karen B. Avraham; Moien Kanaan; Mary-Claire King

2:30 #1004
Two Novel Deafness Genes Identified by Homozygosity Mapping in Dutch Families
*Hannie Kremer; Margit Schraders; Lee Kwanghyuk; Jaap Oostrik; Patrick Huygen; Lies Hoefsloot; Joris Veltman; Cor Cremers; Wasim Ahmad; Hendrikus Kunst; Suzanne Leal; Ronald Admiraal

2:45 #1005
A Novel Mutation in a PDZ-Containing Protein in Black Swiss Mice Causes Outer Hair Cell Defects and Progressive Hearing Loss
*Nikoletta Charizopoulou; Barden B. Stagner; Glen K. Martin; Konrad Noben-Trauth

3:00 #1006
Otolaryngologic Manifestations of FGF3 Mutations
*Byung Yoon Choi; Saima Riazuddin; Ahmed Zubair; Üzma Shaukat; Munir A. Bhinder; Shahid Y. Khan; Sheikh Riazuddin; Butman John; Andrew Griffith; Thomas B. Friedman
3:15 #1007
Hypomorphic Mutation of Barttin Is Associated with Nonsyndromic Deafness DFNB73
*Saima Riazuddin; Saima Anwar; Martin Fischer; Zubair Ahmed; Shahid Yar Khan; Usman M. Zafar; Ute Scholl; Tayyab M. Husnain; Inna A. Belyantseva; Penelope L. Friedman; Sheikh Riazuddin; Thomas B. Friedman; Christoph Fahlke

3:30 #1008
Partial Loss-Of-Function Mutations in the PRPS1 Gene Cause Non-Syndromic X-Linked Sensorineural Deafness (DFN2)
*Xuezhong Liu; Jianzhong Li; Bin Han; Xiaomei Ouyang; Dong Yi Han; Jing Cheng; Maria Bitner-Glindzicz; Xiangyin Kong; Heng Xu; Albena Kantardzhieva; R. D. Eavey; C. E. Seidman; J. G. Seidman; Li L. Du; Pu Dai; Zheng-Yi Chen; Denise Yan; Huijun Yuan

3:45 BREAK

4:00 #1009
Genome-Wide Screening for Genetic Loci Associated with Noise-Induced Hearing Loss
*Rick Friedman; Cory White; Jeffrey Ohmen; Larry F. Hoffman; Richard Davis; Aldons Lusis

4:15 #1010
A Knock-In Mouse Model for DNFA20 Deafness
*Meghan Drummond; Mei Zhu; Inna A. Belyantseva; Karin Halsey; David F. Dolan; Sally A. Camper; Karen Friderict

4:30 #1011
Otitis Media in a Mouse Model for Down Syndrome
*Qing Zheng; Fengchan Han; Heping Yu; Jiangping Zhang; Cong Tian; Casey Nava; Muriel Davisson

4:45 #1012
Proteomics and Bioinformatics Analysis Reveals Up-Regulation of Cochlin in the Cochlea of Usher 1F Mouse Model
*Kumar Alagramam; Mark Chance; Jinsook Chang; Shuqing Liu; Daniel Chen; Aaron Lindsay; Ruishuang Geng; Qing Zheng

5:00 #1013
Interaction of Aminoglycosides with Human Mitochondrial 12S Ribosomal RNA Carrying the Deafness-Associated Mutation
*Min-Xin Guan; Yaping Qian
5:15 #1014
Genetic Protection Against Deafness Caused by Hypothyroidism
*Sally A. Camper; Qing Fang; Chantal Longo-Guess; L. H. Gagnon; Alicia Giordimaina; Mirna Mustapha; Margaret Van Keuren; Tzy-wen Gong; David F. Dolan; Amanda H. Mortensen; Kenneth R. Johnson

Hair Ball
8:00 pm
Disneyland Center Ballroom

Wednesday, February 10, 2010

Registration
7:30 am - 12:00 pm, Wednesday, February 10, 2010
Disneyland Center Lounge

Session W: Podium

Ototoxicity
Moderators: Richard Salvi, Yehoash Raphael
8:30 am - 12:15 pm, Wednesday, February 10, 2010
Disneyland North Ballroom

8:30 #1015
Knockdown of Cochlear NADPH Oxidase Isoform (NOX3) by siRNA Attenuates Cisplatin Ototoxicity
*Christopher Perrino

8:45 #1016
The Role of CTR1 in Platinum-Induced Ototoxicity
*Laurence R. Lustig; Swati More; Omar Akil; Alexandra Ianculescu; Kathy Giacomini

9:00 #1017
Role of P53 Signaling in Cisplatin Ototoxicity
*Donald Coling; Samson Jamesdaniel; Richard Salvi

9:15 #1018
Activation of Transient Receptor Potential Vanilloid 1 in the Cochlea Induces Hearing Loss in the Rat by Activating STAT 1
*Debashree Mukherjea

9:30 #1019
Screening for Ototoxicity in Anti-Cancer Drugs Using the Zebrafish Lateral Line
*Yoshinobu Hirose; David W. Raible; Edwin W. Rubel; Henry Ou
A New *In Vivo* Mouse Model of Cisplatin Ototoxicity
*Nicole Schmitt; Edwin W. Rubel; Neil Nathanson*

Dosage Dependent Effects of Neomycin on Spiral Ganglion Cells in a Guinea Pig Model
*Ilaaf Darrat; Lauren Wrona; Donald L. Swiderski; Yehoash Raphael*

**10:15 BREAK**

Aminoglycoside Induced Hair Cell Death in Neonatal Rat Cochlea Explants Is Dependent on the Extracellular Calcium Concentration
*Jonathan Gale; Matthew Burden; Zoe Mann; Manuela Lahne*

Aminoglycosides Enter Hair Cells Via Both Endocytosis and the Transduction Channel
*Allen F. Ryan; Kwang Pak; Masatsugu Masuda*

Too Much of a Good Thing: Long-Term Treatment with Salicylate May Strengthen Outer Hair Cell Function But Damage Auditory Sensitivity
*Guang-Di Chen; Mohammad Habiby Kermany; Alessandra D’Elia; Massimo Ralli; Chiemi Tanaka; Eric Bielefeld; Dalian Ding; Richard Salvi; Donald Henderson*

Protection of Hair Cells from Aminoglycoside Antibiotic Exposure in the *persephone* Mutant Zebrafish
*Dale W. Hailey; Brock Roberts; Kelly N. Owens; Edwin W. Rubel; David W. Raible*

Protective Effect of Paracrine Factors Secreted by Adipose Tissue Derived Stromal Cells Against Aminoglycoside Ototoxicity
*Atsuhiro Yoshida; Kento Hashido; Takayuki Nakagawa; Shin-Ichiro Kitajiri; Takatoshi Inaoka; Tomoko Kita; Juichi Ito*
11:45 #1027
Adenoviral Transfection of Supporting Cells with Hsp70 Inhibits Hair Cell Death
*Lisa Cunningham; Carlene Brandon; Shimon Francis; Christina Voelkel-Johnson

12:00 #1028
Bucillamine Attenuates Cisplatin-Induced Ototoxicity in HEI-OC1 Auditory Cells and Balb/c Mice
*Se-Jin Kim; Channy Park; Jeong-Han Lee; Hong-Seob So; Raekil Park

Session X: Podium

Inner Ear: Mechanics and Modeling II

Moderators: Anthony Gummer, Sunil Puria
8:30 - 11:45 am, Wednesday, February 10, 2010
Disneyland South Ballroom

8:30 #1029
Is There a Physiological Third Window? Measurements of Human Cadaveric Intracochlear Differential Pressures for Round Window Stimulation with Fixed Stapes
*Hideko Nakajima; Saumil Merchant; John Rosowski

8:45 #1030
Analysis of Power Flow in the Cochlea Based on Measurements with Optical Coherence Tomography
*Egbert De Boer; Alfred Nuttall; Fangyi Chen; Niloy Choudhury; Jiefu Zheng; Steven Jacques; Ruikan Wang

9:00 #1031
Measuring the Backward Wave Propagation in the Cochlea in Vivo
*Fangyi Chen; Daming Zhu; Tianying Ren; Alfred Nuttall

9:15 #1032
Autoregressive Moving-Average Models of Basilar Membrane Responses to Broadband Noise
*Alberto Recio-Spinoso; Mario Ruggero

9:30 #1033
Measurement of the Viscoelastic Mechanical Properties of the Tectorial Membrane at Acoustic Frequencies
*Richard Chadwick; Nuria Gavara

9:45 #1034
Comparison of Basilar Membrane Measurements in Fresh and Frozen-Thawed Inner Ear Preparations
*Aleks Zosuls; Seth Newburg; Darlene R. Ketten; David Mountain
10:00 BREAK

10:15 #1035
How Does Sound Leave the Cochlea by Internal Excitation of the Basilar Membrane?
*Yizeng Li; Karl Grosh

10:30 #1036
Results from Merged TWAMP and Sandwich Cochlear Models
*Allyn Hubbard; Morteza Nabavi

10:45 #1037
Modeling the Effects of Organ of Corti Cytoarchitectural Modifications
*Charles Steele; Kevin N. O’Connor; Sunil Puria

11:00 #1038
Active Force Transmission in the Organ of Corti Micromachine
*Jong-Hoon Nam; Robert Fettiplace

11:15 #1039
Time Domain Solutions of a Non Linear Nonlocal Feed-Forward Cochlear Model
*Renata Sisto; Arturo Moleti; Nicolò Paternoster; Daniele Bertaccini

11:30 #1040
Compliance Profiles of the Basilar Membrane and the Basal-Apical Dichotomy of Sound Processing
*Anthony W. Gummer; Rolf Schmidt; Mario Fleischer
<table>
<thead>
<tr>
<th>Author Index</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abbas, Paul J.</td>
<td>353, 377, 910</td>
</tr>
<tr>
<td>Abdala, Carolina</td>
<td>141, 668, 669</td>
</tr>
<tr>
<td>Abdelfatah, Nelly</td>
<td>619</td>
</tr>
<tr>
<td>Abdelrazeq, Shukrallah</td>
<td>671</td>
</tr>
<tr>
<td>Abe, Takahisa</td>
<td>582</td>
</tr>
<tr>
<td>Abel, Rebekah</td>
<td>147, 665</td>
</tr>
<tr>
<td>Abrams, Kristina</td>
<td>313</td>
</tr>
<tr>
<td>Aburto, Maria</td>
<td>681</td>
</tr>
<tr>
<td>Adachi, Yoshiaki</td>
<td>304</td>
</tr>
<tr>
<td>Adams, Joe</td>
<td>541</td>
</tr>
<tr>
<td>Adetona, Efua</td>
<td>849</td>
</tr>
<tr>
<td>Admiraal, Ronald</td>
<td>1004</td>
</tr>
<tr>
<td>Adunka, Oliver F.</td>
<td>906, 907</td>
</tr>
<tr>
<td>Agrawal, Sumit K.</td>
<td>50</td>
</tr>
<tr>
<td>Aguiar, Daniel</td>
<td>375</td>
</tr>
<tr>
<td>Ahmad, Shoeb</td>
<td>200, 203, 626</td>
</tr>
<tr>
<td>Ahmad, Wasim</td>
<td>1004</td>
</tr>
<tr>
<td>Ahmad, Zana</td>
<td>188, 950</td>
</tr>
<tr>
<td>Ahmed, Zubair</td>
<td>475, 1007</td>
</tr>
<tr>
<td>Ahn, Andrew</td>
<td>332</td>
</tr>
<tr>
<td>Ahn, Jin-Chul</td>
<td>23</td>
</tr>
<tr>
<td>Ahn, Seong-Ki</td>
<td>957</td>
</tr>
<tr>
<td>Akamatsu, Yusuke</td>
<td>969</td>
</tr>
<tr>
<td>Akbergenov, R.</td>
<td>198, 713</td>
</tr>
<tr>
<td>Akil, Omar</td>
<td>189, 853, 859, 1016</td>
</tr>
<tr>
<td>Akiyama, Kosuke</td>
<td>639</td>
</tr>
<tr>
<td>Akiyama, Naotaro</td>
<td>54</td>
</tr>
<tr>
<td>Akshay, S.</td>
<td>713</td>
</tr>
<tr>
<td>Alagramam, Kumar</td>
<td>181, 474, 684, 1012</td>
</tr>
<tr>
<td>Alain, Claude</td>
<td>470</td>
</tr>
<tr>
<td>Albrecth, Otto</td>
<td>758</td>
</tr>
<tr>
<td>Aldrich, Richard</td>
<td>378</td>
</tr>
<tr>
<td>Alexandrov, Vladimir</td>
<td>955</td>
</tr>
<tr>
<td>Alexandrova, Tamara</td>
<td>955</td>
</tr>
<tr>
<td>Alharazneh, Abdelrahman</td>
<td>710, 734</td>
</tr>
<tr>
<td>Aliuos, Pooyan</td>
<td>920</td>
</tr>
<tr>
<td>Allen, Paul</td>
<td>321, 820, 862</td>
</tr>
<tr>
<td>Al-Malky, Ghada</td>
<td>427</td>
</tr>
<tr>
<td>Altschuler, Richard A.</td>
<td>27, 612, 861</td>
</tr>
<tr>
<td>Alvarado, David</td>
<td>16</td>
</tr>
<tr>
<td>Alves-Pinto, Ana</td>
<td>330</td>
</tr>
<tr>
<td>Amitay, Sygal</td>
<td>888</td>
</tr>
<tr>
<td>Ananthakrishnan, Saradha</td>
<td>261</td>
</tr>
<tr>
<td>Andersen, Ture</td>
<td>434</td>
</tr>
<tr>
<td>Anderson, Amanda K.</td>
<td>356</td>
</tr>
<tr>
<td>Anderson, Lucy A.</td>
<td>298</td>
</tr>
<tr>
<td>Anderson, Samira</td>
<td>253</td>
</tr>
<tr>
<td>Ando, Kiyoshi</td>
<td>21</td>
</tr>
</tbody>
</table>

141
<table>
<thead>
<tr>
<th>Name</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andoga, Rudolf</td>
<td>827</td>
</tr>
<tr>
<td>Andoni, Sari</td>
<td>269</td>
</tr>
<tr>
<td>Angeli, Simon</td>
<td>175</td>
</tr>
<tr>
<td>Antunes, Flora M.</td>
<td>299, 786</td>
</tr>
<tr>
<td>Anvari, Bahman</td>
<td>122, 601</td>
</tr>
<tr>
<td>Anwar, Saima</td>
<td>1007</td>
</tr>
<tr>
<td>Applegate, Brian</td>
<td>104</td>
</tr>
<tr>
<td>Appler, Jessica</td>
<td>524, 526</td>
</tr>
<tr>
<td>Ar, Amos</td>
<td>52</td>
</tr>
<tr>
<td>Ara, Maki</td>
<td>114</td>
</tr>
<tr>
<td>Aronoff, Justin</td>
<td>894</td>
</tr>
<tr>
<td>Arora, Raman</td>
<td>892</td>
</tr>
<tr>
<td>Arruda, J.</td>
<td>857</td>
</tr>
<tr>
<td>Ashida, Go</td>
<td>771</td>
</tr>
<tr>
<td>Ashley, Richard</td>
<td>256</td>
</tr>
<tr>
<td>Atiani, Serin</td>
<td>293, 514</td>
</tr>
<tr>
<td>Atkinson, Patrick</td>
<td>162</td>
</tr>
<tr>
<td>Atlas, Marcus</td>
<td>17</td>
</tr>
<tr>
<td>Atzori, Marco</td>
<td>821, 822</td>
</tr>
<tr>
<td>Avenarius, Matthew</td>
<td>194</td>
</tr>
<tr>
<td>Avni, Reut</td>
<td>407</td>
</tr>
<tr>
<td>Avraham, Karen B.</td>
<td>205, 407, 1003</td>
</tr>
<tr>
<td>Azimzadeh, Julien</td>
<td>281</td>
</tr>
<tr>
<td>Babanin, Mikhail</td>
<td>291</td>
</tr>
<tr>
<td>Bachman, Nancy</td>
<td>180</td>
</tr>
<tr>
<td>Back, Sang A</td>
<td>853, 859</td>
</tr>
<tr>
<td>Backx, Peter</td>
<td>640</td>
</tr>
<tr>
<td>Bade, Paul Wilhelm</td>
<td>376</td>
</tr>
<tr>
<td>Bae, Jae-Woong</td>
<td>624</td>
</tr>
<tr>
<td>Bae, Yunjeong</td>
<td>966</td>
</tr>
<tr>
<td>Baek, Jeong-In</td>
<td>624</td>
</tr>
<tr>
<td>Baelum, Jesper</td>
<td>434</td>
</tr>
<tr>
<td>Baer, Thomas</td>
<td>430</td>
</tr>
<tr>
<td>Bagnall, Martha</td>
<td>535</td>
</tr>
<tr>
<td>Bahloul, Amel</td>
<td>93</td>
</tr>
<tr>
<td>Bai, Jun-Ping</td>
<td>76, 568</td>
</tr>
<tr>
<td>Bailey, Erin</td>
<td>165, 168</td>
</tr>
<tr>
<td>Bailey, Janice</td>
<td>87</td>
</tr>
<tr>
<td>Bailey, Peter J.</td>
<td>335</td>
</tr>
<tr>
<td>Bajo, Victoria M.</td>
<td>981</td>
</tr>
<tr>
<td>Baker, Tiffany</td>
<td>730</td>
</tr>
<tr>
<td>Balaban, Carey</td>
<td>386</td>
</tr>
<tr>
<td>Balkany, Thomas</td>
<td>175, 177</td>
</tr>
<tr>
<td>Balkwill, David</td>
<td>406</td>
</tr>
<tr>
<td>Ballestero, Jimena</td>
<td>95, 96</td>
</tr>
<tr>
<td>Balough, Ben</td>
<td>119, 386, 408</td>
</tr>
<tr>
<td>Balster, Sven</td>
<td>925</td>
</tr>
<tr>
<td>Banakis, Renee</td>
<td>147, 665</td>
</tr>
<tr>
<td>Bandyopadhyay, Sharba</td>
<td>295</td>
</tr>
<tr>
<td>Barald, Kate F.</td>
<td>26, 27, 28, 458</td>
</tr>
</tbody>
</table>
Bhatti, Pamela ........................................ 384
Bhinder, Munir A. ......................................... 1006
Bhutta, Mahmood ....................................... 564
Bian, Lin .............................................. 145
Bian, Shumin .......................................... 567, 568
Bianchi, Lynne M. ..................................... 27
Bidelman, Gavin M. ................................... 257, 260, 261
Bielefeld, Eric ......................................... 697, 726, 1024
Bierer, Julie ........................................... 917
Biesemeier, Deborah J. ......................... 464
Bieszczad, Kasia M. .................................. 512
Biever, Allison ....................................... 897
Binetti, Alessandro ................................. 844
Binkhorst, Floor ..................................... 310
Bird, Jonathan ..................................... 475
Bishop, Brian ........................................ 837, 838
Bissig, David ........................................ 782
Bitner-Glindzicz, Maria ....................... 1008
Bizley, Jennifer ....................................... 510, 801
Björk, Per ............................................. 208
Blake, David ......................................... 513
Blin, Nikolaus ....................................... 90
Blinowska, Katarzyna ......................... 136
Bobak, Lyndsay ...................................... 815
Boeke, Emily ......................................... 901
Böhne, Barbara A. ................................ 695
Bok, Jinwoong .................................... 33, 34, 106, 626
Boley, Jonathan ..................................... 752
Bolz, Steffen Sebastian ......................... 640
Bonham, Ben ...................................... 351, 352, 735, 904
Bonine, Kevin E. .................................... 150
Boons, Tinne ......................................... 972
Borenstein, Jeffrey T. ............................. 651, 663
Borkholder, David A. ......................... 660, 661
Borst, Gerard ....................................... 221, 760
Bortfeld, Heather ................................... 422
Böttger, E. .......................................... 198, 713
Bourien, Jérôme ...................................... 856
Bourne, David ....................................... 650
Bower, James ......................................... 985
Boyle, Patrick ........................................ 348
Boyle, Richard ....................................... 98
Bozovic, Dolores ................................... 72, 73, 83, 84, 482
Bradfield, Colby ..................................... 544
Brand, Thomas ....................................... 431
Brandewie, Eugene ............................... 440
Brandon, Carlene .................................. 728, 729, 730, 1027
Brandt, Christian .................................. 51, 434
Bratt, Debbie .......................................... 654
Braun, Susanne ..................................... 930
Bravo, Fernando ........................................... 655
Brenowitz, Elliot ........................................... 247
Bressler, Scott ............................................. 875
Brette, Romain ............................................ 848
Briaire, Jeroen ............................................. 908
Brigande, John ............................................ 89
Brill, Sandra ................................................ 772
Brosch, Michael .......................................... 291, 511
Brose, Nils ................................................... 87, 88, 89
Brough, Douglas E. ....................................... 616, 685
Brown, Andrew D. ....................................... 828, 834
Brown, Carrie ............................................. 950
Brown, Clay ................................................ 821, 822
Brown, M. Christian ..................................... 755, 756
Brown, Philip R. .......................................... 356
Brown, Steve D.M. ....................................... 522, 564
Brownell, William ....................................... 122, 570, 571, 572, 601
Brozoski, Thomas ....................................... 10
Bruce, Ian ................................................... 995, 996
Brugge, John .............................................. 301
Brungart, Douglas ....................................... 442
Buchman, Craig .......................................... 280
Burden, Matthew ......................................... 1022
Bures, Zbynek ............................................. 863
Burger, Julia ................................................ 421, 962
Burger, R. Michael ....................................... 764, 775
Burianová, Jana .......................................... 863
Burns, Joseph ............................................. 979
Burnside, Beth ............................................ 71
Burstein, Rami ............................................ 1
Burton, Martin ........................................... 564
Buss, Emily ................................................ 324
Cacace, Anthony ......................................... 815
Cagaanan, Alain ......................................... 184
Cai, Qunfeng .............................................. 679
Calin-Jageman, Irina .................................... 92
Calixto, Roger ............................................. 275
Camarero, Guadalupe .................................... 163
Campagnola, Luke ...................................... 227, 240
Campbell, Adam P. ..................................... 906, 907
Campbell, Julia .......................................... 897
Campbell, Kathleen ..................................... 699
Camper, Sally A. ......................................... 525, 1010, 1014
Canis, Martin ............................................. 640
Canlon, Barbara ......................................... 682, 860
Cao, Xiao-Jie ............................................. 219
Caras, Melissa ........................................... 247
Cardon, Garrett .......................................... 813
Carey, John ............................................... 6, 392, 393
Carey, Thomas E. ....................................... 543
Chen, Shibing .................................................. 589
Chen, Shixiong .................................................. 145
Chen, Wei Chun ............................................. 19, 484, 738
Chen, Zheng-Yi .................................................. 1008
Chen, Zhiquiang .................................................. 651
Cheng, Alan .................................................. 710, 734, 980
Cheng, Jeffrey .................................................. 47
Cheng, Jing .................................................. 1008
Cheng, Weihua .................................................. 239
Cherry, Sheree D. .................................................. 774
Chertoff, Mark .................................................. 588, 747
Chervenak, Andrew P. .......................................... 27, 28
Cheung, Ryan .................................................. 444
Chi, David .................................................. 762
Chi, Fang-Lu .................................................. 519
Chia-Cheng, James .................................................. 400
Chiang, Bryce .................................................. 380, 382
Chichkov, B. .................................................. 920
Chidavaenzi, Robstein .................................................. 103
Chien, Wade .................................................. 901
Chikar, Jennifer .................................................. 264
Cho, Han Kyu .................................................. 627, 637
Cho, Hyong-Ho .................................................. 182
Cho, Hyun-Ju .................................................. 626
Cho, Sung Im .................................................. 627
Cho, Yong-Bum .................................................. 182
Choi, Byung Yoon .................................................. 627, 1006
Choi, Chul-Hee .................................................. 239, 698
Choi, Daniel J. .................................................. 367
Choi, Hyeog-Gi .................................................. 853
Choi, Jae Young .................................................. 33, 106, 159, 592, 970
Choi, Mi Young .................................................. 859
Choi, Seong Jun .................................................. 711
Choi, Soo-Young .................................................. 33, 626
Choo, Daniel .................................................. 655
Chou, Shih-wei .................................................. 71
Choudhury, Niloy .................................................. 1030
Choung, Yun-Hoon .................................................. 711, 859
Christensen, Barbara .................................................. 210
Christensen-Dalsgaard, Jakob .............................................. 51, 246, 434
Christianson, G. Bjorn .................................................. 288, 298, 304
Chu, Hosuk .................................................. 629
Chung, Kellie .................................................. 820
Chung, Yoojin .................................................. 780
Chung, You Sun .................................................. 148, 558
Clark, Emily .................................................. 321
Clark, Jason .................................................. 918, 951
Clarke, Joseph .................................................. 918
Clarkson, Cheryl .................................................. 793
Claussen, Alex .................................................. 699
Clemens Grisham, Rachel ........................................ 192
Clément, Gilles ..................................................... 396
Clinard, Christopher ............................................. 320
Clinger, John ....................................................... 918
Cobo, Pedro .......................................................... 163
Coffin, Allison ..................................................... 102, 736
Cognent, Laurent .................................................. 574
Cohen, Bernard ..................................................... 385
Cohen, Helen ........................................................ 403
Cohlen, Caitlaine ................................................... 303
Colburn, H. Steven .............................................. 277, 748, 766, 780
Cole, Susan .......................................................... 516
Coleman, William L. ............................................. 764
Colesa, Deborah J .................................................. 344
Coling, Donald .................................................... 675, 726, 824, 1017
Collazo, Andres .................................................... 456
Collet, Lionel ........................................................ 674
Collins, Leslie M. .................................................. 356, 372, 373
Combs, T. Dalton .................................................. 775
Cone, Barbara ...................................................... 424
Cone, Jarrod P ....................................................... 314
Connelly, Tim ...................................................... 174
Contreras, Julio ..................................................... 163
Cooper, Nigel P. ................................................... 120, 123
Corey, David P. ..................................................... 492, 496
Corfias, Gabriel .................................................... 167
Cortez, Sarah R ..................................................... 659
Corwin, Jeffrey ..................................................... 979
Cosgrove, Dominic .............................................. 197, 548
Costa-Faidella, Jordi ................................................ 296
Cotanche, Douglas ................................................ 15
Coticchia, James ................................................... 561
Couchoux, Harold ................................................ 92
Covey, Ellen ......................................................... 786
Cox, Brandon C ................................................... 480, 521
Cramer, Karina ..................................................... 282
Cramer, S ............................................................. 857
Crass, Simon ........................................................ 237
Crawley, Brianna .................................................. 410
Cremers, Cor ......................................................... 1004
Crone, Nathan ..................................................... 501
Crumling, Mark A ................................................ 615
Cuda, Domenico ................................................... 418
Cunningham, Lisa .................................................. 728, 729, 730, 1027
Cureoglu, Sebahattin ............................................. 60, 391, 565
Curtall, Benjamin .................................................. 583
Cusack, Rhodri ..................................................... 300
Custer, David A ..................................................... 684, 689
Cvitanovich, Andrew ........................................... 826
Cyr, Janet ............................................................. 445
<table>
<thead>
<tr>
<th>Name</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dierkes, Kai</td>
<td>483</td>
</tr>
<tr>
<td>Dietz, Beatrice</td>
<td>220, 226</td>
</tr>
<tr>
<td>Ding, Dalian</td>
<td>675, 715, 716, 717, 721, 722, 723, 1024</td>
</tr>
<tr>
<td>Ding, Nai</td>
<td>509</td>
</tr>
<tr>
<td>Dinh, Christine</td>
<td>175, 178, 589</td>
</tr>
<tr>
<td>Dinh, Emile Hoang</td>
<td>108, 626</td>
</tr>
<tr>
<td>Dinh, John</td>
<td>589</td>
</tr>
<tr>
<td>Dirckx, Joris J.J.</td>
<td>48, 52</td>
</tr>
<tr>
<td>Divis, Kristin</td>
<td>334</td>
</tr>
<tr>
<td>Djalilian, Hamid R.</td>
<td>867, 898, 963</td>
</tr>
<tr>
<td>Dobreva, Marina</td>
<td>321</td>
</tr>
<tr>
<td>Doetzlohofer, Angelika</td>
<td>520</td>
</tr>
<tr>
<td>Doherty, Joni</td>
<td>188, 950</td>
</tr>
<tr>
<td>Doherty, Karen</td>
<td>357</td>
</tr>
<tr>
<td>Dohlen, Caitlin</td>
<td>302</td>
</tr>
<tr>
<td>Doi, Katsumi</td>
<td>125, 545</td>
</tr>
<tr>
<td>Dolan, David F.</td>
<td>27, 525, 861, 1010, 1014</td>
</tr>
<tr>
<td>Dollezal, Lena-Vanessa</td>
<td>879</td>
</tr>
<tr>
<td>Domann, Frederick</td>
<td>951</td>
</tr>
<tr>
<td>Donahue, Amy</td>
<td>445, 445</td>
</tr>
<tr>
<td>Donato, Roberta</td>
<td>777</td>
</tr>
<tr>
<td>Dong, Wei</td>
<td>49, 745</td>
</tr>
<tr>
<td>Donnelly, Patrick J</td>
<td>900</td>
</tr>
<tr>
<td>Dorman, Michael</td>
<td>897</td>
</tr>
<tr>
<td>Dormer, Kenneth</td>
<td>649, 650</td>
</tr>
<tr>
<td>Dorrn, Anja</td>
<td>798</td>
</tr>
<tr>
<td>Dossat, Amanda</td>
<td>680</td>
</tr>
<tr>
<td>Dott, Daltry</td>
<td>586</td>
</tr>
<tr>
<td>Dowdall, Jayme</td>
<td>591</td>
</tr>
<tr>
<td>Dreisbach, Laura</td>
<td>144, 664</td>
</tr>
<tr>
<td>Drennan, Ward</td>
<td>364</td>
</tr>
<tr>
<td>Drescher, Dennis</td>
<td>67, 82, 91, 591</td>
</tr>
<tr>
<td>Drescher, Marian</td>
<td>67, 82, 91, 591</td>
</tr>
<tr>
<td>Dror, Amiel A.</td>
<td>407</td>
</tr>
<tr>
<td>Drottar, Marie</td>
<td>756</td>
</tr>
<tr>
<td>Druga, Rastislav</td>
<td>289</td>
</tr>
<tr>
<td>Drummond, Meghan</td>
<td>1010</td>
</tr>
<tr>
<td>Du Lac, Sascha</td>
<td>378, 535</td>
</tr>
<tr>
<td>Du, Li L.</td>
<td>1008</td>
</tr>
<tr>
<td>Du, Xiaoping</td>
<td>239, 650, 698</td>
</tr>
<tr>
<td>Dubno, Judy R.</td>
<td>322</td>
</tr>
<tr>
<td>Dulon, Didier</td>
<td>100, 478</td>
</tr>
<tr>
<td>Duncan, Jeremy</td>
<td>30</td>
</tr>
<tr>
<td>Duncan, R. Keith</td>
<td>525, 612, 615</td>
</tr>
<tr>
<td>Duncker, Susanne</td>
<td>90</td>
</tr>
<tr>
<td>Dunford, Jonathan</td>
<td>350</td>
</tr>
<tr>
<td>Dunn, M</td>
<td>857</td>
</tr>
<tr>
<td>Duong, Trac</td>
<td>636</td>
</tr>
<tr>
<td>Duran, Sara I.</td>
<td>356, 373</td>
</tr>
<tr>
<td>Durham, Dianne</td>
<td>417</td>
</tr>
<tr>
<td>Name</td>
<td>Page Numbers</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Fang, Qing</td>
<td></td>
</tr>
<tr>
<td>Fang, Mei</td>
<td></td>
</tr>
<tr>
<td>Fang, Jie</td>
<td>784, 796</td>
</tr>
<tr>
<td>Fakler, Bernd</td>
<td>588, 747</td>
</tr>
<tr>
<td>Fahlke, Christoph</td>
<td></td>
</tr>
<tr>
<td>Fadeeva, Elena</td>
<td>174, 399</td>
</tr>
<tr>
<td>Eybalin, Michel</td>
<td></td>
</tr>
<tr>
<td>Evans, Alison</td>
<td>75, 529, 947</td>
</tr>
<tr>
<td>Eastwood, Hayden</td>
<td></td>
</tr>
<tr>
<td>Eatock, Ruth Anne</td>
<td></td>
</tr>
<tr>
<td>Eavey, R. D.</td>
<td>1008</td>
</tr>
<tr>
<td>Ebisu, Fumi</td>
<td>27</td>
</tr>
<tr>
<td>Eckert, Mark</td>
<td>322</td>
</tr>
<tr>
<td>Eckes, Jeremy A.</td>
<td>464</td>
</tr>
<tr>
<td>Eddington, Donald K.</td>
<td>909</td>
</tr>
<tr>
<td>Eddins, David A.</td>
<td>935</td>
</tr>
<tr>
<td>Edds-Walton, Peggy</td>
<td>51</td>
</tr>
<tr>
<td>Edeline, Jean-Marc</td>
<td>506</td>
</tr>
<tr>
<td>Edge, Albert</td>
<td>18, 166, 541</td>
</tr>
<tr>
<td>Edwards, Darren</td>
<td>292</td>
</tr>
<tr>
<td>Eggermont, Jos J.</td>
<td>488, 807, 817</td>
</tr>
<tr>
<td>Ehret, Günter</td>
<td>798</td>
</tr>
<tr>
<td>Ehrsson, Hans</td>
<td>647</td>
</tr>
<tr>
<td>Eickhoff, Holger</td>
<td>978</td>
</tr>
<tr>
<td>Eilam, David</td>
<td>407</td>
</tr>
<tr>
<td>Elgoyhen, Ana Belén</td>
<td>95, 96</td>
</tr>
<tr>
<td>Elhilaï, Mounya</td>
<td>472</td>
</tr>
<tr>
<td>Elkan, Tal</td>
<td>205, 407</td>
</tr>
<tr>
<td>Elkón, Ráni</td>
<td>204, 205</td>
</tr>
<tr>
<td>Elliott, Karen</td>
<td>552</td>
</tr>
<tr>
<td>Ellis-Weismer, Susan</td>
<td>892</td>
</tr>
<tr>
<td>Elnemr, Mina</td>
<td>177</td>
</tr>
<tr>
<td>Engel, Jutta</td>
<td>90, 688, 739</td>
</tr>
<tr>
<td>Engle, James</td>
<td>854</td>
</tr>
<tr>
<td>Englitz, Bernhard</td>
<td>220</td>
</tr>
<tr>
<td>Enticott, Joanne</td>
<td>399</td>
</tr>
<tr>
<td>Epp, Bastian</td>
<td>124</td>
</tr>
<tr>
<td>Eppinga, Ruben</td>
<td>251</td>
</tr>
<tr>
<td>Epstein, Victoria</td>
<td>423</td>
</tr>
<tr>
<td>Erdman, Amy</td>
<td>654</td>
</tr>
<tr>
<td>Ernst, Arne</td>
<td>348, 816</td>
</tr>
<tr>
<td>Escabi, Monty A.</td>
<td>273, 274</td>
</tr>
<tr>
<td>Escera, Carles</td>
<td>296</td>
</tr>
<tr>
<td>Eshraghi, Adrien</td>
<td>175, 177, 178, 589</td>
</tr>
<tr>
<td>Euteneuer, Sara</td>
<td>550, 553, 852</td>
</tr>
<tr>
<td>Evans, Alison</td>
<td>342</td>
</tr>
<tr>
<td>Eybalin, Michel</td>
<td>110</td>
</tr>
<tr>
<td>Fadeeva, Elena</td>
<td>919, 920</td>
</tr>
<tr>
<td>Fahlgren, Christian</td>
<td>1007</td>
</tr>
<tr>
<td>Fakler, Bernd</td>
<td>581</td>
</tr>
<tr>
<td>Fallon, James</td>
<td>342, 343, 903</td>
</tr>
<tr>
<td>Fang, Jie</td>
<td>595</td>
</tr>
<tr>
<td>Fang, Mei-Ya</td>
<td>623</td>
</tr>
<tr>
<td>Fang, Qing</td>
<td>525, 1014</td>
</tr>
</tbody>
</table>
Franz, Christoph ........................................ 90, 688, 739
Fredrickson, Lea ........................................ 72, 73, 83, 84
Freichsel, Marc ........................................... 688
Freyman, Richard ........................................ 829
Friauf, Eckhard ............................................ 739
Fridberger, Anders ...................................... 121, 578, 768
Friderici, Karen .......................................... 1010
Fridman, Gene ............................................ 380, 381, 382, 383
Friedland, David .......................................... 319
Friedman, Penelope L .................................. 1007
Friedman, Rick ........................................... 1009
Friedman, Thomas B .................................. 475, 945, 1006, 1007
Friedrich Jr., Victor L .................................. 532
Frijns, Johan ................................................ 908
Frisina, Robert D ......................................... 660, 661, 860
Fritz, Jonathan B ........................................... 293, 502, 514
Fritzsch, Bernd ............................................ 25, 30, 31, 549, 551, 552, 590
Frolenkov, Gregory I .................................. 69, 78, 475, 498
Fromeke, Robert ......................................... 285
Frucht, Corey ............................................... 116
Fu, Qian-Jie ................................................. 358, 369, 896, 902
Fu, Yong ..................................................... 715, 716, 717, 721, 722
Fuchs, Paul A ............................................... 94, 95, 109
Fuentes-Santamaria, Veronica ..................... 547
Fujioaka, Masato ........................................... 166, 703
Fujita, Tomoki ............................................. 540
Fujiwara, Ikuko ............................................ 475
Fukazawa, Yugo .......................................... 218
Fukuda, Shinjiro .......................................... 967
Fukuda, Yujiro ............................................. 732
Füllgrabe, Christian .................................... 430
Funnell, Robert ........................................... 48
Furlong, Cosme ............................................ 47
Furman, Gabe .............................................. 400
Furman, Joseph ............................................ 405
Furness, David ............................................ 858
Furst, Miriam ............................................... 432, 781
Furukawa, Masayuki ..................................... 606, 617
Furukawa, Shigeto ...................................... 297, 305, 843
Fuzessery, Zoltan ........................................ 270
Fyk-Kolodziej, Bozena ................................ 262
Gaese, Bernhard ........................................... 991
Gagnon, Leona H ......................................... 477, 1014
Gagnon, Patricia M ....................................... 686, 701
Gai, Yan ..................................................... 998
Galaiya, Deepa J .......................................... 453
Galano, Maria M .......................................... 543
Galazyuk, Alexander .................................... 783
Galbraith, Wendy ......................................... 650
Gale, Jonathan ............................................. 1022
<table>
<thead>
<tr>
<th>Name</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Godfrey, Donald</td>
<td>162</td>
</tr>
<tr>
<td>Godt, Tim</td>
<td>691</td>
</tr>
<tr>
<td>Gallun, Frederick</td>
<td>873, 883</td>
</tr>
<tr>
<td>Galvin, John</td>
<td>369, 902, 914</td>
</tr>
<tr>
<td>Gamberg, Jane</td>
<td>619</td>
</tr>
<tr>
<td>Gan, Lin</td>
<td>538</td>
</tr>
<tr>
<td>Gan, Rong</td>
<td>43, 44</td>
</tr>
<tr>
<td>Gandour, Jackson T.</td>
<td>257, 259, 260</td>
</tr>
<tr>
<td>Gantz, Bruce</td>
<td>899</td>
</tr>
<tr>
<td>Gao, Jiangang</td>
<td>595</td>
</tr>
<tr>
<td>Gao, Simon</td>
<td>104, 569</td>
</tr>
<tr>
<td>Gao, Wei-qiang</td>
<td>485</td>
</tr>
<tr>
<td>Gao, Xinsheng</td>
<td>649</td>
</tr>
<tr>
<td>Garadat, Soha</td>
<td>374</td>
</tr>
<tr>
<td>Garcia, Daphne</td>
<td>507</td>
</tr>
<tr>
<td>Garcia, Kristen A.</td>
<td>881</td>
</tr>
<tr>
<td>Garinis, Angela</td>
<td>669</td>
</tr>
<tr>
<td>Garnier, Stéphane</td>
<td>325</td>
</tr>
<tr>
<td>Garver, Jessica</td>
<td>762</td>
</tr>
<tr>
<td>Gassner, Davina</td>
<td>417, 685</td>
</tr>
<tr>
<td>Gaudet, Rachelle</td>
<td>496</td>
</tr>
<tr>
<td>Gavara, Nuria</td>
<td>1033</td>
</tr>
<tr>
<td>Ge, Xianxi</td>
<td>119</td>
</tr>
<tr>
<td>Geisler, Hyun-Soon</td>
<td>195</td>
</tr>
<tr>
<td>Geleoc, Gwenaelle S. G.</td>
<td>80</td>
</tr>
<tr>
<td>Gellibolian, Robert</td>
<td>448, 622</td>
</tr>
<tr>
<td>Geng, Ruishuang</td>
<td>474, 1012</td>
</tr>
<tr>
<td>George, Sagila</td>
<td>463</td>
</tr>
<tr>
<td>Gerlach-Bank, Lisa M.</td>
<td>27, 28</td>
</tr>
<tr>
<td>German, Michael</td>
<td>345</td>
</tr>
<tr>
<td>Germiller, John A.</td>
<td>27</td>
</tr>
<tr>
<td>Gerrits, Ellen</td>
<td>972</td>
</tr>
<tr>
<td>Ghadarghadar, Nastaran</td>
<td>50</td>
</tr>
<tr>
<td>Ghisleni, Peter</td>
<td>861</td>
</tr>
<tr>
<td>Giacomini, Kathy</td>
<td>1016</td>
</tr>
<tr>
<td>Gilbertson, Lynn</td>
<td>892</td>
</tr>
<tr>
<td>Gill, Ruth M.</td>
<td>112, 646, 648</td>
</tr>
<tr>
<td>Gillespie, Peter G.</td>
<td>65, 70, 477, 497</td>
</tr>
<tr>
<td>Gilley, Phillip</td>
<td>813, 897</td>
</tr>
<tr>
<td>Giordimaina, Alicia</td>
<td>1014</td>
</tr>
<tr>
<td>Gittelman, Joshua</td>
<td>267, 268, 276</td>
</tr>
<tr>
<td>Glasberg, Brian</td>
<td>430</td>
</tr>
<tr>
<td>Glattfelder, Jr., Jerry</td>
<td>14, 696</td>
</tr>
<tr>
<td>Glavaski, Aleksandra</td>
<td>214</td>
</tr>
<tr>
<td>Glover, Greta</td>
<td>79</td>
</tr>
<tr>
<td>Glowatzki, Elisabeth</td>
<td>109</td>
</tr>
<tr>
<td>Gockel, Hedwig</td>
<td>990</td>
</tr>
<tr>
<td>Godar, Shelly P.</td>
<td>889, 893</td>
</tr>
<tr>
<td>Goddard, John</td>
<td>213</td>
</tr>
<tr>
<td>Godfrey, Donald</td>
<td>237</td>
</tr>
</tbody>
</table>

154
Godfrey, Matthew ................................................................. 237
Goebel, Joel ........................................................................ 401
Goetze, Romy ..................................................................... 348
Goh, Denise ........................................................................ 202
Goldberg, Jay M. .............................................................. 531, 937
Goldberg, Mark .................................................................. 943
Golding, Nance ................................................................... 774
Gollapudi, S. ...................................................................... 920
Gómez-Nieto, Ricardo .......................................................... 217
Gong, Shu-sheng .................................................................. 944
Gong, Tzy-wen ..................................................................... 180, 525, 944, 1014
Gonzales, Analydia .............................................................. 135
Goodey, Ronald ................................................................. 818, 866
Goodman, Dan .................................................................... 848
Goodrich, Lisa ................................................................... 518, 524, 526
Goodyear, Richard .............................................................. 66, 475
Gopal, Kamakshi .................................................................. 825
Open, Quinton ..................................................................... 398
Gorbunov, Dmitry ............................................................... 581
Gordan, Karen ..................................................................... 811
Gorga, Michael .................................................................... 128
Gorkin, Alexander ................................................................ 291
Gosselin, Émilie ................................................................... 864
Gottshall, Kim ..................................................................... 408
Götz, Romy ........................................................................... 816
Goupell, Matthew ............................................................... 835, 847
Grabowski, Gregory ........................................................... 189
Grady, Brian ........................................................................ 649
Graham, Christine .............................................................. 705
Grammerstorf-Rosche, Sylvia ............................................... 852
Gratton, Michael Anne ...................................................... 197
Grayeli, Alexis Bozorg .......................................................... 197
Grecova, Jolana .................................................................... 863
Green, Steven H. .................................................................. 162, 165, 168, 184, 694
Greene, Nathaniel ............................................................... 315, 767
Gregory, Frederick ............................................................. 92
Griffin, Amanda .................................................................... 829
Griffith, Andrew .................................................................. 475, 621, 1006
Grimm, Sabine ..................................................................... 296
Grimsley, Calum .................................................................. 785
Groesche, Moritz .................................................................. 348
Grolley, Evan ......................................................................... 140, 665
Gronowicz, Gloria .............................................................. 56
Gröschel, Moritz ................................................................... 816
Grose, John .......................................................................... 280
Grosh, Karl .......................................................................... 132, 1035
Gross, Guenter ..................................................................... 825
Grothe, Benedikt .................................................................. 7, 775
Grover, Mary ......................................................................... 209
Groves, Andrew .................................................................. 516, 517
Gu, Feng .............................................................. 441
Gu, Jianwen ....................................................... 252
Gu, Rende .......................................................... 14, 696
Guan, Min-Xin .................................................... 632, 1013
Guan, Xiyi ........................................................... 43
Guan, Zhenlong .................................................... 933
Guedin, Maud ..................................................... 506
Guertler, Nicolas .................................................. 971
Guillet, Marie ....................................................... 325
Guinan Jr., John ................................................... 111, 120, 134, 397
Güloglu, Oktar ...................................................... 233
Gummer, Anthony W .......................................... 130, 584, 1040
Guo, Dayong ....................................................... 538
Guo, Wei-Wei ..................................................... 32, 484
Gupta, Chhavi ..................................................... 177
Gupta, Sharad ...................................................... 122
Gutschalk ............................................................ 508
Guymon, Allan ..................................................... 918
Guyot, Jean-Philippe ............................................ 946
Haacke, Mark ...................................................... 815
Haalboom, Harald ............................................... 968
Hachem, Ralph Abi ............................................. 175, 177, 178, 589
Hackett, Troy ...................................................... 283
Hahn, Hartmut .................................................... 648
Hailey, Dale W .................................................... 1025
Hajak, Göran ...................................................... 962
Hakiziman, Pierre ............................................... 578
Hakyemmez, Hélène ............................................ 438
Halaszovich, Christian R ..................................... 81
Hall, Deb ............................................................ 507
Hall, Ian .............................................................. 797
Hall, Joseph ......................................................... 324
Halliday, Lorna ................................................... 888
Hallworth, Richard ............................................. 583, 587, 597
Halsey, Karin ....................................................... 861, 1010
Hamade, Mohamed ............................................. 47
Hamaguchi, Kiyomi ............................................. 190, 702
Hämäläinen, Matti S ........................................... 984
Hamana, Hiroshi ................................................ 580
Hamanishi, Shinji ............................................... 22
Hammer, John ..................................................... 475
Hamre, Kristin ..................................................... 539
Han, Bin ............................................................. 1008
Han, Dong Yi ...................................................... 1008
Han, Fengchan .................................................. 1011
Han, JiHye ........................................................ 303
Han, Wook Kyoung ........................................... 683
Hancock, Kenneth E ........................................... 795
Hand, Beth A ...................................................... 865
Hanlon, Roger T .................................................. 246
<table>
<thead>
<tr>
<th>Name</th>
<th>Page References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hansen, Marlan R.</td>
<td>162, 207, 918, 951</td>
</tr>
<tr>
<td>Hanson, Jessica</td>
<td>797</td>
</tr>
<tr>
<td>Hao, Jinsong</td>
<td>655</td>
</tr>
<tr>
<td>Happel, Max</td>
<td>290</td>
</tr>
<tr>
<td>Hara, Akira</td>
<td>29, 677, 700, 725</td>
</tr>
<tr>
<td>Harasztosi, Csaba</td>
<td>130, 584</td>
</tr>
<tr>
<td>Harbridge, Donald G.</td>
<td>160</td>
</tr>
<tr>
<td>Harding, Gary W.</td>
<td>695</td>
</tr>
<tr>
<td>Harland, Ben</td>
<td>570</td>
</tr>
<tr>
<td>Harper, Nicol</td>
<td>792, 841</td>
</tr>
<tr>
<td>Harrington, Ellery</td>
<td>47</td>
</tr>
<tr>
<td>Harrington, Ian</td>
<td>876</td>
</tr>
<tr>
<td>Harris, Caton</td>
<td>961</td>
</tr>
<tr>
<td>Harris, Jeffrey P.</td>
<td>644</td>
</tr>
<tr>
<td>Harris, Kelly</td>
<td>322</td>
</tr>
<tr>
<td>Harris, Marie</td>
<td>538</td>
</tr>
<tr>
<td>Harris, Stephen</td>
<td>538</td>
</tr>
<tr>
<td>Harrop, Anne</td>
<td>644, 645</td>
</tr>
<tr>
<td>Harte, James M.</td>
<td>137</td>
</tr>
<tr>
<td>Hartman, Byron</td>
<td>610</td>
</tr>
<tr>
<td>Hartmann, Rainer</td>
<td>930</td>
</tr>
<tr>
<td>Hartsock, Jared J.</td>
<td>112, 646</td>
</tr>
<tr>
<td>Hasegawa, Shingo</td>
<td>602</td>
</tr>
<tr>
<td>Hashido, Kento</td>
<td>1026</td>
</tr>
<tr>
<td>Hashimoto, Makoto</td>
<td>390, 732, 850, 949</td>
</tr>
<tr>
<td>Hashimoto, Yasuyuki</td>
<td>114</td>
</tr>
<tr>
<td>Hatano, Miyako</td>
<td>236</td>
</tr>
<tr>
<td>Hatch, Ekaterina P.</td>
<td>24</td>
</tr>
<tr>
<td>Hausman, Frances</td>
<td>185, 555, 556, 557</td>
</tr>
<tr>
<td>Hausmann, Laura</td>
<td>840</td>
</tr>
<tr>
<td>Hausteine, Martin D.</td>
<td>220, 761</td>
</tr>
<tr>
<td>Hawkes, Aubrey</td>
<td>598, 599</td>
</tr>
<tr>
<td>Hayasaka, Takahiro</td>
<td>411</td>
</tr>
<tr>
<td>Hayashi, Kentaro</td>
<td>29, 677, 700</td>
</tr>
<tr>
<td>Hayashi, Yushi</td>
<td>12</td>
</tr>
<tr>
<td>Hayes, Donald</td>
<td>935</td>
</tr>
<tr>
<td>He, David</td>
<td>32, 484, 577</td>
</tr>
<tr>
<td>He, Peijie</td>
<td>23</td>
</tr>
<tr>
<td>He, Shuman</td>
<td>280, 324</td>
</tr>
<tr>
<td>He, Wenxuan</td>
<td>118</td>
</tr>
<tr>
<td>Heaton, James T.</td>
<td>437</td>
</tr>
<tr>
<td>Hébert, Sylvie</td>
<td>864</td>
</tr>
<tr>
<td>Heddon, Chris</td>
<td>181</td>
</tr>
<tr>
<td>Heid, Silvia</td>
<td>930</td>
</tr>
<tr>
<td>Heidrych, Paulina</td>
<td>90</td>
</tr>
<tr>
<td>Heijneman, Karin M.</td>
<td>968</td>
</tr>
<tr>
<td>Heil, Peter</td>
<td>886</td>
</tr>
<tr>
<td>Heinrich, Angela</td>
<td>991</td>
</tr>
<tr>
<td>Heinz, Michael</td>
<td>752, 753</td>
</tr>
<tr>
<td>Helfmann, Sarah</td>
<td>88</td>
</tr>
</tbody>
</table>
Hellberg, Victoria ........................................... 647
Heller, Stefan .................................................. 63, 453, 977, 980
Hemmert, Werner ........................................... 376, 868
Hempstead, Barbara ......................................... 681
Henderson, Donald .......................................... 726, 1024
Henin, Simon .................................................. 671
Henkemeyer, Mark .......................................... 35, 282
Hernández, Olga ............................................. 786
Herrero-Turrión, M. Javier ................................. 217
Herrmann, Barbara S ........................................ 252, 397
Hertzano, Ronna ............................................. 204, 205
Hetherington, Alexander .................................... 735, 904
Hibino, Hiroshi ............................................... 125
Highstein, Stephen M ........................................ 98, 952
Higuchi, Hitomi ............................................... 412, 652
Hillman, Robert E ........................................... 437
Hilton, Helen .................................................. 522
Hinshaw, Jenny ............................................... 475
Hirai, Haruka .................................................. 565
Hirano, Shigeru ............................................... 411
Hiraumi, Harukazu ........................................... 960
Hirose, Yoshinobu ........................................... 390, 732, 850, 949, 1019
Hirose, Yuki ................................................... 725
Hiroshi, Hosoi .................................................. 936
Hirsch, June C .................................................. 533
Hirsch-Shell, Dylan ........................................... 956
Hisa, Yasuo ..................................................... 125, 540
Hishikawa, Yoshitaka ....................................... 54, 55
Hoa, Michael .................................................. 447, 604
Hobbie, S. N .................................................... 198, 713
Hochmuth, Sabine ............................................ 431
Hoefsloot, Lies ............................................... 1004
Hoffer, Michael ............................................... 386, 408
Hoffman, Hal .................................................. 621
Hoffman, Larry F ............................................ 97, 714, 939, 956, 1009
Hoffmann, Andrea .......................................... 662
Hojan, Edward ............................................... 254
Holden, Timothy .............................................. 905
Holland, N. Julian .......................................... 928
Holmboe, Maria ............................................... 663
Holmes, Katie .................................................. 26
Holmes, Stephen ............................................. 354
Holstein, Gay R ............................................... 385, 532
Holt, Avril Genene .......................................... 262, 782
Holt, Jeffrey .................................................... 80
Holt, Joseph .................................................... 940, 941, 942
Holz, Nina ...................................................... 179
Hommer, Martin ............................................. 123
Homma, Kazuaki ............................................. 575
Homma, Kenji .................................................. 126
<table>
<thead>
<tr>
<th>Name</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hume, Clifford R.</td>
<td>654</td>
</tr>
<tr>
<td>Hunker, Kristina</td>
<td>194</td>
</tr>
<tr>
<td>Hunter, Lisa</td>
<td>42</td>
</tr>
<tr>
<td>Huppert, Theodore</td>
<td>422</td>
</tr>
<tr>
<td>Hur, Dong Gu</td>
<td>957</td>
</tr>
<tr>
<td>Hurd, Elizabeth</td>
<td>459</td>
</tr>
<tr>
<td>Hurley, Laura</td>
<td>248, 797</td>
</tr>
<tr>
<td>Husnain, Tayyab M.</td>
<td>1007</td>
</tr>
<tr>
<td>Huygen, Patrick</td>
<td>1004</td>
</tr>
<tr>
<td>Hwang, Chan Ho</td>
<td>460, 538</td>
</tr>
<tr>
<td>Hwang, Philsang</td>
<td>71</td>
</tr>
<tr>
<td>Hyatt, Brad</td>
<td>661</td>
</tr>
<tr>
<td>Hyrc, Krzysztof</td>
<td>943</td>
</tr>
<tr>
<td>Ianculescu, Alexandra</td>
<td>1016</td>
</tr>
<tr>
<td>Idrobo, Fabio</td>
<td>313</td>
</tr>
<tr>
<td>Iguchi, Fukuichiro</td>
<td>654</td>
</tr>
<tr>
<td>Iizuka, Takashi</td>
<td>607, 617</td>
</tr>
<tr>
<td>Ikeda, Katsuhisa</td>
<td>201, 606, 607, 617</td>
</tr>
<tr>
<td>Ikeda, Ryuukiichi</td>
<td>172</td>
</tr>
<tr>
<td>Ikeda, Takuo</td>
<td>390</td>
</tr>
<tr>
<td>Ikezono, Tetsuo</td>
<td>114</td>
</tr>
<tr>
<td>Ilgner, Justus</td>
<td>925</td>
</tr>
<tr>
<td>Imanishi, Yoshikazu</td>
<td>474</td>
</tr>
<tr>
<td>Imauchi, Yutaka</td>
<td>57</td>
</tr>
<tr>
<td>Imayoshi, Itaru</td>
<td>537</td>
</tr>
<tr>
<td>Imennov, Nikita S.</td>
<td>347</td>
</tr>
<tr>
<td>Imig, Thomas</td>
<td>417</td>
</tr>
<tr>
<td>Inamoto, Ryuhei</td>
<td>639, 643, 967</td>
</tr>
<tr>
<td>Inaoka, Takatoshi</td>
<td>22, 1026</td>
</tr>
<tr>
<td>Indzhykulian, Artur</td>
<td>69</td>
</tr>
<tr>
<td>Ingham, Neil</td>
<td>630</td>
</tr>
<tr>
<td>Inohara, Hidenori</td>
<td>545</td>
</tr>
<tr>
<td>Inoshita, Ayako</td>
<td>607, 617</td>
</tr>
<tr>
<td>Inoue, Yasuhiro</td>
<td>433, 964</td>
</tr>
<tr>
<td>Intskirveli, Irakli</td>
<td>282</td>
</tr>
<tr>
<td>Inui, Ken-Ichi</td>
<td>960</td>
</tr>
<tr>
<td>Iriki, Atsushi</td>
<td>294</td>
</tr>
<tr>
<td>Irino, Toshio</td>
<td>329</td>
</tr>
<tr>
<td>Irmler, Martin</td>
<td>205</td>
</tr>
<tr>
<td>Irvine, Dexter</td>
<td>342</td>
</tr>
<tr>
<td>Ishii, Tetsuro</td>
<td>677</td>
</tr>
<tr>
<td>Ishijima, Ken</td>
<td>318</td>
</tr>
<tr>
<td>Ishikawa, Seiji</td>
<td>411</td>
</tr>
<tr>
<td>Ishiyama, Akira</td>
<td>186, 449, 636</td>
</tr>
<tr>
<td>Ishiyama, Gail</td>
<td>186, 449, 636</td>
</tr>
<tr>
<td>Isik, Michael</td>
<td>376</td>
</tr>
<tr>
<td>Ison, James</td>
<td>820, 862</td>
</tr>
<tr>
<td>Itakura, Makoto</td>
<td>218</td>
</tr>
<tr>
<td>Itatani, Naoya</td>
<td>803</td>
</tr>
<tr>
<td>Ito, Juichi</td>
<td>12, 22, 190, 411, 537, 546</td>
</tr>
<tr>
<td>Name</td>
<td>Page Numbers</td>
</tr>
<tr>
<td>---------------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Jin, Ying</td>
<td>236, 409, 562</td>
</tr>
<tr>
<td>Jin, Dong</td>
<td>263</td>
</tr>
<tr>
<td>Jiang, Zhi</td>
<td>640</td>
</tr>
<tr>
<td>Jiang, Kevin</td>
<td>413</td>
</tr>
<tr>
<td>Jiang, Hui</td>
<td>481, 585</td>
</tr>
<tr>
<td>Jiang, Haiyan</td>
<td>618</td>
</tr>
<tr>
<td>Jiang, Dan</td>
<td>442</td>
</tr>
<tr>
<td>Jewett, Ethan M.</td>
<td>786</td>
</tr>
<tr>
<td>Jethanamest, Daniel</td>
<td>585</td>
</tr>
<tr>
<td>Jesteadt, Walt</td>
<td>88</td>
</tr>
<tr>
<td>Jeschke, Marcus</td>
<td>675, 726, 824, 1017</td>
</tr>
<tr>
<td>Jamesdaniel, Samson</td>
<td>364</td>
</tr>
<tr>
<td>Jan, Taha</td>
<td>980</td>
</tr>
<tr>
<td>Jancsó, Gábor</td>
<td>2</td>
</tr>
<tr>
<td>Jang, Jeong Hun</td>
<td>637</td>
</tr>
<tr>
<td>Jang, Jeong-Hoon</td>
<td>355, 627</td>
</tr>
<tr>
<td>Jaquez, Timothy</td>
<td>825</td>
</tr>
<tr>
<td>Jasti, Tara</td>
<td>443</td>
</tr>
<tr>
<td>Jedrzejczak, Wiktor</td>
<td>136</td>
</tr>
<tr>
<td>Jeng, Pat</td>
<td>42</td>
</tr>
<tr>
<td>Jenkins, Herman A.</td>
<td>926, 928, 929</td>
</tr>
<tr>
<td>Jennings, J. Richard</td>
<td>404, 405</td>
</tr>
<tr>
<td>Jennings, Skyler</td>
<td>339</td>
</tr>
<tr>
<td>Jennings, Todd</td>
<td>277</td>
</tr>
<tr>
<td>Jensen-Smith, Heather</td>
<td>587</td>
</tr>
<tr>
<td>Jeon, Eun-ju</td>
<td>207</td>
</tr>
<tr>
<td>Jeon, Sea-Yuong</td>
<td>957</td>
</tr>
<tr>
<td>Jeon, Yuyong</td>
<td>367, 673</td>
</tr>
<tr>
<td>Jepsen, Morten Love</td>
<td>1001</td>
</tr>
<tr>
<td>Jeronimidis, George</td>
<td>932</td>
</tr>
<tr>
<td>Jeschke, Marcus</td>
<td>287, 290</td>
</tr>
<tr>
<td>Jesteadt, Walt</td>
<td>128, 337</td>
</tr>
<tr>
<td>Jethanamest, Daniel</td>
<td>365</td>
</tr>
<tr>
<td>Jewett, Ethan M.</td>
<td>27</td>
</tr>
<tr>
<td>Ji, Hey-Min</td>
<td>216</td>
</tr>
<tr>
<td>Jia, Shuping</td>
<td>484</td>
</tr>
<tr>
<td>Jiang, Dan</td>
<td>932</td>
</tr>
<tr>
<td>Jiang, Haiyan</td>
<td>675, 715, 716, 717, 721, 722</td>
</tr>
<tr>
<td>Jiang, Hui</td>
<td>369</td>
</tr>
<tr>
<td>Jiang, Kevin</td>
<td>541</td>
</tr>
<tr>
<td>Jiang, Zhi-Gen</td>
<td>706, 707</td>
</tr>
<tr>
<td>Jin, Dong-Kyu</td>
<td>629</td>
</tr>
<tr>
<td>Jin, Ying</td>
<td>536</td>
</tr>
</tbody>
</table>

161
Kang, Tong-Ho ..................................................... 216
Kang, Young-Jin ........................................................ 210
Kanicki, Ariane ......................................................... 27
Kanold, Patrick O. .................................................... 227, 281, 284, 295
Kantardzhieva, Albena ............................................. 1008
Kanzaki, Sho .......................................................... 53, 602, 603, 703, 964
Kao, Albert .......................................................... 72, 73, 83, 84
Kao, Shyan-Yuan ..................................................... 158
Kar, Souvik ........................................................... 712
Karasawa, Takatoshi .................................................... 709, 719
Karg, Sonja .................................................................. 868
Karino, Shotaro .......................................................... 776
Kariya, Shin .......................................................... 60, 391, 565
Karsten, Sue ................................................................ 899
Kasagi, Hiromi .......................................................... 606, 607
Kasai, Misato .......................................................... 607, 617
Kashino, Makio .......................................................... 297, 305, 989
Kashio, Akinori ......................................................... 413, 727, 969
Kassai, Masatoshi ....................................................... 266
Kastner, Daniel .......................................................... 621
Kathiresan, Thandavarayan ........................................... 74
Kato, Yasuhiro X ....................................................... 297, 305
Katz, Eleonora .......................................................... 95, 96
Kawahara, Hideki ...................................................... 329
Kawai, Jun .................................................................. 304
Kawano, Satoyuki ....................................................... 22
Kawasaki, Hiroto ....................................................... 301, 500
Kawase, Tetsuaki ....................................................... 172
Kawashima, Yoshiyuki ................................................ 621
Kawk, Tae Hwan ......................................................... 855
Kazmierczak, Piotr ...................................................... 497
Keating, Peter .......................................................... 788, 842
Keithley, Elizabeth M. .................................................. 644
Kel, Gordana ............................................................ 174
Keller, James ........................................................... 631
Kelley, Matthew ......................................................... 542
Kelly, John .............................................................. 156
Kempflé, Judith .......................................................... 18
Kempter, Richard ....................................................... 772
Kempton, Beth ......................................................... 185, 463, 554, 555, 556, 557
Kennedy, Helen ......................................................... 123
Kermany, Mohammad Habiby ........................................ 675, 1024
Kerschner, Joseph E. ................................................... 559, 560
Kersigo, Jennifer ........................................................ 549, 551
Ketlen, Darlene R. ....................................................... 51, 246, 857, 1034
Khalifa, Shaden .......................................................... 208
Khalmuratova, Roza .................................................... 957
Khan, Shahid Yar ....................................................... 1006, 1007
Khatibzadeh, Nima ..................................................... 122
Khatri, Vivek ............................................................ 283
Kieman, Amy .................................................. 536
Kikkawa, Yayoi S ........................................... 731, 851, 960
Kikkawa, Yoshiaki ........................................ 522
Kil, Jonathan ................................................. 14, 696
Kilgard, Michael .......................................... 443, 444
Kilpatrick, Lauren ........................................ 211, 212, 213, 656
Kim, Biblia ................................................... 558
Kim, Chang-Hee ............................................ 958
Kim, Chi-Hwa ............................................... 629
Kim, Dongeun ............................................... 596
Kim, Duck O .................................................. 837, 838
Kim, Ernest S ............................................... 651, 663
Kim, Eysoo .................................................... 943
Kim, Hee Nam ............................................... 970
Kim, Hyemi ................................................... 673
Kim, Hyeo Jo ................................................. 161, 634
Kim, Hyoung-Mi ........................................... 39, 160, 461
Kim, Hyun Joo ............................................... 106
Kim, Hyung Jin .............................................. 718, 855
Kim, Ji Yeon .................................................. 627
Kim, Jin-Man .................................................. 855
Kim, Jin-Pyeong ............................................. 957
Kim, Jun ........................................................ 958
Kim, Ki Ryung ............................................... 629
Kim, Kyounghee X ........................................... 152, 160
Kim, Kyung-Sung ........................................... 367
Kim, Nam ........................................................ 684
Kim, Namkeun ............................................... 126
Kim, Sang Cheol ........................................... 159
Kim, Sang Chul ............................................... 106
Kim, Sang Jeong ............................................ 958
Kim, Se-Jin ..................................................... 1028
Kim, Seong Yeon ........................................... 627
Kim, Seoyoung ............................................... 965, 966
Kim, Seung Won ............................................ 711
Kim, Sung Huhn ............................................... 159
Kim, Sun-Ok ................................................. 216
Kim, Un-Kyung ............................................... 33, 624, 626
Kim, You Hyun .............................................. 558
Kim, Young Ho .............................................. 183
Kimitsuki, Takashi .......................................... 609
Kimura, Tohru ............................................... 545
Kindt, Katie .................................................. 79, 192, 479
King, Andrew J ............................................. 510, 788, 801, 802, 805, 833, 842, 981
King, Mary-Claire ......................................... 1003
Kipatrick, Lauren .......................................... 21
Kirby, Alana .................................................. 345, 346
Kirk, Karen ................................................... 361
Kishel-Cross, Emily ...................................... 889
Kishimoto, Yo ................................................. 411
<table>
<thead>
<tr>
<th>Name</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kwong, Kelvin</td>
<td>249</td>
</tr>
<tr>
<td>Lackner, Christina</td>
<td>868</td>
</tr>
<tr>
<td>Ladak, Hanif M.</td>
<td>50</td>
</tr>
<tr>
<td>Ladrech, Sabine</td>
<td>856</td>
</tr>
<tr>
<td>Laflen, Brandon</td>
<td>375</td>
</tr>
<tr>
<td>LaGasse, James</td>
<td>14, 696</td>
</tr>
<tr>
<td>Lahne, Manuela</td>
<td>1022</td>
</tr>
<tr>
<td>Landgrebe, Michael</td>
<td>962</td>
</tr>
<tr>
<td>Landry, Thomas</td>
<td>342, 903</td>
</tr>
<tr>
<td>Landsberger, David M.</td>
<td>354, 913, 915</td>
</tr>
<tr>
<td>Lang, Dustin</td>
<td>680</td>
</tr>
<tr>
<td>Lang, Hainan</td>
<td>21, 211, 212, 213, 656</td>
</tr>
<tr>
<td>Langguth, Berthold</td>
<td>421, 962</td>
</tr>
<tr>
<td>Lanting, Cris</td>
<td>251</td>
</tr>
<tr>
<td>Lapsley-Miller, Judi</td>
<td>42</td>
</tr>
<tr>
<td>Larain, Barbara</td>
<td>555, 556</td>
</tr>
<tr>
<td>Larsen, Deb</td>
<td>244</td>
</tr>
<tr>
<td>LaRue, Amanda</td>
<td>21, 212</td>
</tr>
<tr>
<td>Lasarov, Livia</td>
<td>87</td>
</tr>
<tr>
<td>Laske, Roman D.</td>
<td>453</td>
</tr>
<tr>
<td>Laurell, Göran</td>
<td>647</td>
</tr>
<tr>
<td>Leake, Patricia</td>
<td>351, 352, 735, 904</td>
</tr>
<tr>
<td>Leal, Suzanne</td>
<td>1004</td>
</tr>
<tr>
<td>Leary Swan, Erin E.</td>
<td>651, 663</td>
</tr>
<tr>
<td>LeBel, Carl</td>
<td>644, 645</td>
</tr>
<tr>
<td>LeBlanc, Christopher</td>
<td>86</td>
</tr>
<tr>
<td>Lee, Adrian KC</td>
<td>983, 984</td>
</tr>
<tr>
<td>Lee, Ambrose</td>
<td>932</td>
</tr>
<tr>
<td>Lee, Amy</td>
<td>92</td>
</tr>
<tr>
<td>Lee, Chen-Chung</td>
<td>471, 982</td>
</tr>
<tr>
<td>Lee, Daniel J.</td>
<td>755</td>
</tr>
<tr>
<td>Lee, Dong-Jin</td>
<td>34</td>
</tr>
<tr>
<td>Lee, Edward</td>
<td>319</td>
</tr>
<tr>
<td>Lee, Fu-Shing</td>
<td>728, 730</td>
</tr>
<tr>
<td>Lee, Hae Kyoung</td>
<td>711</td>
</tr>
<tr>
<td>Lee, Hee Keun</td>
<td>33</td>
</tr>
<tr>
<td>Lee, Hyo Jeong</td>
<td>355</td>
</tr>
<tr>
<td>Lee, James</td>
<td>35</td>
</tr>
<tr>
<td>Lee, Jeong-Han</td>
<td>216, 855, 1028</td>
</tr>
<tr>
<td>Lee, Jong Bin</td>
<td>711</td>
</tr>
<tr>
<td>Lee, Joonhan</td>
<td>909</td>
</tr>
<tr>
<td>Lee, Jun Ho</td>
<td>183, 355, 959</td>
</tr>
<tr>
<td>Lee, Jungmee</td>
<td>135, 147, 665</td>
</tr>
<tr>
<td>Lee, Jun-Ho</td>
<td>637</td>
</tr>
<tr>
<td>Lee, Kenneth</td>
<td>35</td>
</tr>
<tr>
<td>Lee, Kyu Yup</td>
<td>624, 626</td>
</tr>
<tr>
<td>Lee, Ming</td>
<td>1003</td>
</tr>
<tr>
<td>Lee, Sang Heun</td>
<td>624, 626</td>
</tr>
<tr>
<td>Lee, Sangmin</td>
<td>367, 673</td>
</tr>
<tr>
<td>Lee, Stephen</td>
<td>438</td>
</tr>
</tbody>
</table>
Lee, Suh-Kyung .............................................................. 45
Lee, Sung Eun .............................................................. 970
Lee, Won-Sang ............................................................... 970
Lee, Woo Gun ............................................................... 596
Legan, Kevin ................................................................. 66
Léger, Agnès ................................................................. 325
Lehr, Andriana ............................................................... 993
Leichtle, Anke ............................................................... 550, 553
Leijon, Sara ................................................................. 768
Leitner, Michael G. .......................................................... 81
Lelli, Andrea ................................................................. 80
Lenarz, Minoo ............................................................................... 275, 794, 988
Lenarz, Thomas .................................................................. 173, 176, 275, 657, 662
794, 919, 920, 925, 988
Lenoir, Anne ...................................................................... 480, 521
Lenoir, Marc ........................................................................ 856
Lentz, Jennifer ................................................................. 326
Leong, U-Cheng ................................................................. 935
Lerman-Sinkoff, Dov .......................................................... 27
Levic, Snezana ..................................................................... 100, 485
Levine, Jessica ................................................................. 255
Levine, Rachel ................................................................. 918
Levine, Robert .................................................................... 252, 667
Levitt, Alexander ................................................................ 181
Lewis, Richard ................................................................. 5, 406
Li, Gang .............................................................................. 938
Li, Guoping ................................................................. 368
Li, Hongzhe ........................................................................ 709
Li, Hua-wel .......................................................................... 599, 600, 628
Li, Jianzhong ....................................................................... 1008
Li, Manna ........................................................................... 21, 211, 212, 213, 656, 726
Li, Na ................................................................................. 267, 276
Li, S. Kevin .......................................................................... 655
Li, Tianhao ......................................................................... 358
Li, Wei ............................................................................... 43
Li, Xiangming ..................................................................... 37, 38
Li, Yizeng ........................................................................... 1035
Li, Yongqi ............................................................................ 715, 716
Li, Yongxin .......................................................................... 896
Liang, Ru-Qiang .................................................................. 579
Liang, Shuang ...................................................................... 36
Liberman, M. Charles ......................................................... 167, 446, 599, 691
Licari, Frank ....................................................................... 228, 243
Lichtenhan, Jeffery ............................................................ 134
Lichter, Jay ......................................................................... 644, 645
Lidington, Darcy .................................................................. 640
Lim, David ........................................................................... 170, 171, 199, 855
Lim, Hubert ......................................................................... 275, 794, 925, 988
Lim, Koeun ........................................................................... 5
Lim, Lynne .......................................................................... 202
Limb, Charles J.................................................. 891, 900, 901
Lin, Alice.......................................................... 922
Lin, Frank .......................................................... 503
Lin, Jizhen .......................................................... 563
Lin, Payton .......................................................... 898
Lin, Shera, Yi-Tsen .............................................. 623
Lin, Shin-Yu .......................................................... 623
Lin, Shu-Wha ........................................................ 625
Lin, Xi .......................................................... 108, 200, 203, 626, 628
Linden, Jennifer F ............................................. 288, 298, 304
Lindner, Benjamin ............................................. 483
Lindsay, Aaron .................................................... 1012
Lin-Jones, Jennifer .............................................. 71
Linke, Annika ..................................................... 300
Linn, Stephanie A. ............................................. 26, 27, 458
Linthicum Jr., Fred H. ....................................... 191, 199, 447, 604, 622
Litovsky, Ruth Y. .............................................. 362, 833, 835, 889, 893, 895
Liu, Alyssa Yan-Zhen .......................................... 625
Liu, Charlotte .................................................... 598, 599
Liu, Christopher ................................................. 569
Liu, Dazheng ....................................................... 20
Liu, Liya .......................................................... 211
Liu, Qing .......................................................... 741
Liu, Robert ....................................................... 503
Liu, Shuqing ..................................................... 1012
Liu, Tien-Chen .................................................... 625
Liu, Wenke ....................................................... 737
Liu, Xuezhong ................................................... 1008
Liu, Yi-Wen ....................................................... 127, 128
Liu, Zhiyong ....................................................... 527
Livingston, Christine ......................................... 445
Llewellyn, G. Nicholas ....................................... 27
Llinás, Rodolfo R. ............................................... 489
Lo, Pachida ........................................................ 709
Lobarinas, Edward ............................................. 818, 824, 866
Loewenheim, Hubert ........................................ 704, 978
Loizou, Philipos C. ............................................. 371
Lomakin, Oleg .................................................... 767, 999
Lomax, Margaret ............................................... 180
Long, Christopher ............................................. 905
Long, Glenis ..................................................... 146, 671
Longo-Guess, Chantal ....................................... 477, 1014
Lonsbury-Martin, Brenda ................................... 148
López, Dolores E. ............................................... 217
Lopez, Ivan A. .................................................... 186, 449, 636
Lopez-Poveda, Enrique A .................................. 139
Loquet, Gérard .................................................. 931
Lorenzi, Christian .............................................. 325
Lorenzo-Garcia, Patricia .................................. 163
Lorteije, Jeannette ............................................. 760
Lovett, Michael .................................. 16
Lu, Cindy ........................................... 524, 526
Lu, Hui-Pin .......................................... 245
Lu, Jianzhong ....................................... 239, 818
Lu, Thomas ........................................... 895
Lu, Wenfu ........................................... 388, 389
Lu, Ying-Chang ...................................... 625
Lu, Yong ............................................. 773
Lubatschowski, Holger .......................... 925
Luebke, Anne ........................................ 796, 820
Lujan, Rafael ......................................... 547
Luk, Lauren .......................................... 710
Lukose, Richard .................................... 757
Lumani, Ariana ...................................... 787
Lund, Russell ........................................ 622
Lundberg, Yunxia (Yesha) ...................... 387, 943
Luo, Xin ............................................ 359, 361
Lupo, J. Eric .......................................... 316, 926
Lusch, Nicholas ....................................... 262
Lusis, Aldons ......................................... 1009
Lustig, Laurence R. ................................. 189, 853, 859, 1016
Lutfi, Robert ........................................ 333, 892
Lutman, Mark E .................................... 368
Luu, Cindy ........................................... 97
Lv, Ping ............................................... 161
Lynch, Eric .......................................... 14, 696
Lyons, Karen ......................................... 517
Lysaght, Andrew .................................... 158
Lysakowski, Anna .................................. 103, 530, 593
Ma, Ketao ............................................ 706, 707
Ma, Ling ................................................ 880
Maat, Bert ........................................... 143
MacArthur, Carol ............................... 185, 555, 556, 557
Macherey, Olivier .................................. 911, 912
Mack, Kelly .......................................... 467
MacLeod, Katrina .................................. 222
Macpherson, Ewan .................................. 471
Maddox, Ross ........................................ 869
Madeo, Anne ........................................ 621
Madsen, Peter T ..................................... 51, 246
Maftoon, Nima ...................................... 48
Magariños, Marta .................................. 163
Magnusson, Anna .................................. 768
Mahendrasingam, Shanthini ................... 858
Mai, Van .............................................. 482
Maier, Hannes ....................................... 924, 931
Maier, Heinz .......................................... 704
Maiorana-Brown, Carrie ....................... 188
Maison, Stephane F .................................. 599
Maki, Katuhiro ....................................... 297, 305
Milenkovic, Ivan .................................................. 220, 226
Miller, Charles A .............................................. 353, 377, 910
Miller, Cory ....................................................... 800
Miller, Katharine ............................................. 576
Miller, Mia ......................................................... 635
Minami, Shujiro ............................................... 964
Mindler, Yvonne ................................................. 798
Minekawa, Akira ............................................... 607
Mineta, Hiroyuki ............................................... 114, 618
Minor, Lloyd ..................................................... 392
Minoshima, Shinsei ........................................... 618
Minowa, Osamu ............................................... 607
Mintz, Matti ....................................................... 407
Mir, Shakeel .................................................... 199
Miroir, Mathieu ................................................ 415
Mirón, Antonio G ............................................. 932
Mishimoto, Eishi ............................................... 21
Mishina, Yuji ..................................................... 517, 538
Mishra, Srikantha ............................................. 668
Misurelli, Sara M ............................................... 889, 893
Mitchell, Derek ................................................ 610
Mitchell, John ................................................. 157
Miyamoto, Masakazu ......................................... 304
Miyashita, Takenori .......................................... 639, 643, 967
Mizuta, Kunihiro ............................................... 114, 618
Mlot, Stefan ..................................................... 906, 907
Mlyniski, Rafal ................................................ 254
Mo, Weike ......................................................... 379, 523
Mochizuki, Hideki ............................................ 607
Moechars, Diederik .......................................... 244
Moens, Cecilia ................................................ 79
Mohammad, Maha .......................................... 404
Moleti, Arturo .................................................. 1039
Molnar, Elke ..................................................... 218
Monfarad, Ashkan ............................................ 710
Moon, In Seok .................................................. 592
Moon, Sung ...................................................... 170, 171
Mooney, T. Aran ............................................... 246
Moore, Brian C.J ............................................... 325, 430
Moore, David ................................................. 888
Moore, Ernest ................................................ 825
Moran, John ..................................................... 933
More, Swati ..................................................... 1016
Morgan, Clive .................................................. 70
Mori, Nozomu .................................................. 639, 643, 967
Mori, Terushige .............................................. 639
Moriguchi, Takashi .......................................... 29
Morita, Norimasa ............................................. 60, 391, 565
Morizono, Tetsuo ............................................ 412, 652, 652
Morris, Lisa .................................................... 554
Morse, Robert ................................................................. 354
Mortensen, Amanda H.................................................. 1014
Mosegaard, Jesper .......................................................... 450
Mos, Tobias ................................................................. 87, 88, 89, 92
Moulin, Annie .............................................................. 674
Mountain, David ......................................................... 133, 1034
Muchnik, Chava ............................................................ 432
Mueller, James ............................................................. 621
Mueller, Marcus ........................................................... 704, 978
Mueller, Ulrich ............................................................. 64, 87, 495, 497
Mukerji, Sudeep ........................................................... 755
Mukherjea, Debashree .................................................... 1018
Müller, Susanne ........................................................... 816
Mullin, David ............................................................... 119
Murai, Aya ................................................................. 391
Murakami, Shingo ......................................................... 125
Murakoshi, Michio ....................................................... 580
Murata, Junko ............................................................... 545
Murillo-Cuesta, Silvia .................................................... 163
Murphy, Brian .............................................................. 651
Musolino, Mark ........................................................... 400
Mustapha, Mirna ......................................................... 525, 1014
Mylius, Judith ............................................................. 291
Myllykangas, Samuel .................................................... 453
Nabavi, Morteza ........................................................... 1036
Nachtigall, Paul E .......................................................... 246
Nadol, Jr., Joseph B ....................................................... 909
Naeem, Taiyabah .......................................................... 710
Nagaki, Takahiko .......................................................... 582
Nagatani, Yoshiki ......................................................... 809
Nair, Ramya ............................................................... 89
Nair, Than kam S .......................................................... 543
Naito, Yasushi ............................................................ 22
Nakagawa, Seiji ......................................................... 340, 809, 810
Nakagawa, Takashi ....................................................... 412, 652
Nakagawa, Takayuki ..................................................... 12, 22, 190, 546, 605
702, 731, 851, 960, 976, 1026
Nakagawa, Yuki .......................................................... 874
Nakajima, Hideko ........................................................ 1029
Nakamagoe, Mariko .................................................... 677, 700, 725
Nakamoto, Tet suya ....................................................... 678, 850
Nakanishi, Hiroshi ....................................................... 114, 618
Nakano, Toru ............................................................. 545
Nakashima, Tsutomu .................................................... 428
Nakaya, Kazuhiro ....................................................... 172
Nakayashiki, Nori ........................................................ 318
Nam, Jong-Hoon ........................................................ 1038
Nam, Sungil .............................................................. 596
Narins, Peter ............................................................. 85, 635
Nash, Amy ............................................................... 813, 897
Noyes, C. A. ................................................................. 24
Nshiike, Suetaka ........................................................... 545
Nusse, Roel ................................................................. 980
Nuttall, Alfred ......................................................... 2, 153, 154, 155, 157
................................................................. 638, 692, 693, 1030, 1031
Nye, Amberly ............................................................ 917
O'Connor, Kevin N. .................................................... 1037
Oatman-Stanford, Dashiel ............................................ 672
Oba, Sandy ................................................................. 902
Oberbandscheid, Ronnie .............................................. 919
Obholzer, Nikolaus ..................................................... 523
O'Brien, Barbara ......................................................... 283
O'Brien, Ralph ............................................................ 181
Ochi, Atsushi ............................................................... 843
O'Donohue, Heather ................................................... 240
Oertel, Donata ............................................................ 219, 234
Oetjen, Arne ............................................................... 987
Ogata, Erika ............................................................... 969
Ogawa, Kaoru ............................................................ 53, 433, 602, 603, 703, 964
Ogawa, Makio ............................................................ 21
Oghalai, John ............................................................. 104, 422, 569
O'Gorman, David E. .................................................... 748
Ogorodnikov, Dmitri ................................................... 385
Oh, Gi-Su ................................................................. 718, 855
Oh, Se-Kyoung ........................................................... 33
Oh, Seung Ha ............................................................ 183, 355, 627, 637
Ohashi, Mitsuru ........................................................ 609
Ohl, Frank W .............................................................. 287, 290
Ohlemiller, Kevin K. ................................................... 686, 701
Ohmen, Jeffrey .......................................................... 1009
Ohmori, Harunori ...................................................... 266
Ohno, Satoshi ............................................................ 411
Ohsugi, Yoshiyuki ....................................................... 703
Ohta, Shigeo .............................................................. 727
Ohtsubo, Masafumi .................................................... 618
Ohhtsuka, Hisashi ...................................................... 318
Ohyama, Takahiro ...................................................... 516, 517
Oishi, Naoki ............................................................... 433, 964
Ojima, Hisayuki ........................................................ 294
Okada, Hiroko ............................................................ 606, 607, 617
Okamoto, Yasuhide ..................................................... 964
Okano, Hideyuki ........................................................ 545, 703, 975
Okano, Hirotaka ........................................................ 703
Okano, Takayuki ........................................................ 542
Okayasu, Tadao .......................................................... 809
Okita, Keisuke ............................................................ 605, 974
O'Leary, Stephen ........................................................ 174
Oleskevich, Sharon .................................................... 224
Oliver, Dominik ........................................................ 81, 581
Oliver, Douglas ........................................................ 263, 264
Park, Kyoung-Ho..........................853, 859
Park, Kyung Tae..........................183
Park, Raekil................................216, 718, 855, 1028
Park, Shi-Nae..............................853, 859
Park, SoonHyung...........................596
Park, Sung Sup..............................627
Park, Yeong Kyu............................58
Park, Yong Ho..............................58, 683
Parker, Andrew..............................522
Parker, David...............................940
Parker, Mark.................................541
Parkinson, Wendy...........................905
Pasley, Brian................................501
Passeri, Eleonora...........................195
Paternoster, Nicolò.........................1039
Patra, Harisadhan..........................337
Patterson, Roy...............................329
Paulin, Michael.............................956
Paulo, Joao....................................158
Pawlowski, Karen.........................418, 419
Paxton, Christian N.......................454
Pearson, Selina..............................630
Pecka, Jason..................................577
Peeraer, Louis...............................972
Peguerò, Braulio..............................691
Pena, Jose L....................................765
Peng, Anthony...............................63, 977
Penninger, Richard.........................392, 393
Peppi, Marcello..............................676, 690
Pereira, Frederick.........................572, 573
Pérez, Cristina...............................948
Pérez-González, David....................786
Perin, Paola..................................107
Perkins, Guy...................................593
Perro, Christopher..........................1015
Perrot, Xavier................................674
Perry, David..................................343, 399
Perry, Trevor.................................366
Petacchi, Augusto...........................985
Petit, Christine..............................93, 478, 485
Peusner, Kenna D..........................528, 533
Pfaffenstiel, Susanna......................685
Pfingst, Bryan E.............................344, 374
Pfister, Markus...............................90
Pfotenhauer, Paul...........................515
Philipp, Stephan.............................688
Philips, Birgit...............................972
Phillips, Amanda.............................719
Phillips, Grady...............................197
Pienkowski, Martin.........................807, 817
Ranasinghe, Kamalini ........................................ 443
Ranatunga, Kishani ........................................ 473
Raphael, Robert ........................................ 573, 574
Raphael, Yehoash .......................................... 344, 459, 525, 543
                                             615, 659, 944, 1021
Ratnam, Rama ........................................ 985
Rauch, Steven D. ......................................... 397
Ravicz, Michael .......................................... 47
Rawool, Vishakha ......................................... 435
Razak, Khaleel ........................................... 806
Read, Heather ........................................... 274
Reale, Richard ........................................... 301
Reavis, Kelly M ........................................... 963
Rebillard, Guy ............................................ 856
Recanzone, Gregg ......................................... 854
Recio-Spinoso, Alberto ................................. 1032
Redfern, Mark ............................................ 400, 405
Redmond, Sharon ......................................... 17
Reh, Thomas ............................................. 474
Reiber, Hans ............................................... 908
Reich, Uta .................................................. 920
Reinert, Julia ............................................. 971
Reisinger, Ellen ........................................... 87, 88, 89
Reiss, Lina .................................................. 899
Ren, Chongyu ............................................. 241
Ren, Dong-Dong .......................................... 519
Ren, Tianying ............................................. 118, 1031
Renaud, Nicole ........................................... 16
Renfroe, Erika ............................................. 443
Renner, Danielle .......................................... 544
Rennie, Katie ............................................... 938
Reuter, Guenter .......................................... 920, 925
Reuter, Kirsten ............................................ 87, 88
Reyes, Jeannie ............................................ 612
Reyes, Maribel ............................................ 955
Reynolds, Albert B ...................................... 519
Rhee, Chung-Ku .......................................... 23
Rhee, JeongSeop .......................................... 89
Riazuddin, Saima ......................................... 475, 1006, 1007
Riazuddin, Sheikh ........................................ 475, 1006, 1007
Ricci, Anthony ........................................... 86, 99, 131, 493, 710, 734, 977
Rice, Christopher ......................................... 272
Richardson, Ben .......................................... 286
Richardson, Guy .......................................... 66, 475
Richardson, Rachael ..................................... 174
Richardson, Yvonne ..................................... 56
Richmond, Susan ......................................... 135
Richter, Claus-Peter ..................................... 423, 476, 733, 921
                                             922, 923, 924, 952
Ridgway, S ................................................. 857
Riedel, Dietmar ......................................................... 87
Rinzel, John .............................................................. 998
Riquelme, Raquel ....................................................... 163
Rivolta, Marcelo ......................................................... 19
Roberts, Brock ........................................................... 1025
Roberts, Patrick ......................................................... 271
Robin, Donald ........................................................... 985
Robinson, Alan .......................................................... 423, 733
Robinson, Barbara K. .................................................. 353, 910
Robinson, Benjamin ................................................... 304, 792
Robinson, Susan ........................................................ 769
Robles, Luis ............................................................... 744
Rocha-Sanchez, Sonia M .............................................. 13, 590
Roche, Jennica .......................................................... 400
Rodd, Jenni ................................................................. 438
Rodgers, Brian ........................................................... 572
Rodriguez de la Rosa, Lourdes .................................... 163
Rodriguez Francisco .................................................... 274
Rodriguez Joyce .......................................................... 128
Rodriguez, Michael .................................................... 57
Rodriguez-Aburto, Maria ............................................. 163
Rodriguez-Galindo, Carlos .......................................... 666
Roehm, Pamela ........................................................... 681
Rogers, Amanda Mahoney ........................................... 455
Roland, Peter ............................................................... 418
Romak, Jonathan ........................................................ 56
Romero, Maria Rosario ................................................ 522
Rööslí, Christof .......................................................... 117
Rosen, Allyson D .......................................................... 701
Rosen, Merri ............................................................... 799
Rosenthal, Tara .......................................................... 443, 444
Rosowski, John .......................................................... 45, 46, 47, 1029
Rotholtz, Vanessa S .................................................... 867, 963
Rotschafer, Sarah ....................................................... 819
Roux, Isabelle ............................................................. 93
Roverud, Elin ............................................................... 327
Roy, Alexis ................................................................. 891
Roy, Sabyasachi .......................................................... 800
Roychowdhury, Swagata ............................................. 821
Rubel, Edwin W. ......................................................... 247, 724, 736, 1019, 1020, 1025
Ruben, Robert ........................................................... 426
Rubinstein, Jay T .......................................................... 347, 363, 364
Rubio, Maria ............................................................... 218
Rübsamen, Rudolf ....................................................... 220, 226
Rudic, Milan ............................................................... 57
Rudnicki, Marek .......................................................... 376
Ruel, Jérôme ............................................................... 856
Rüttiger, Lukas ........................................................... 739
Ruggero, Mario ........................................................... 1032
Ruggles, Dorea ........................................................... 884
Ruhland, Janet .......................................................... 309
Runge-Samuelson, Christina .................................... 319
Russell, Ian ............................................................. 973
Ruth, Peter ............................................................ 90
Rutledge, Joseph ...................................................... 197
Rüttiger, Lukas ........................................................ 688
Ryals, Brenda .......................................................... 149
Ryan, Allen F. ......................................................... 188, 553, 611, 950, 1023
Rybak Rice, Mary E. ............................................... 701
Rybakko, Natalia ..................................................... 863
Ryu, Ah-Ra ............................................................ 216
Ryugo, David ........................................................ 224
Saber, Amanj .......................................................... 658
Sachdeva, Livjot ....................................................... 561
Sadamitsu, Asoh ........................................................ 727
Saeger, Bernhard ..................................................... 457
Safieddine, Saaid ...................................................... 93, 478
Sagong, Bo Rum ....................................................... 624
Sahani, Maneesh ..................................................... 288
Saito, Hideyuki ........................................................ 964
Sakaguchi, Hirofumi ................................................... 540
Sakaguchi, Takefumi .................................................. 61
Sakamoto, Takashi .................................................... 413, 475, 727
Sakamoto, Tatsunori .................................................. 605, 702, 960
Sakimura, Kenji ....................................................... 218
Salles, Felipe ........................................................... 943
Salt, Alec N. ............................................................ 112, 646, 648
Salvi, Richard .......................................................... 311, 675, 715, 716, 717, 721, 722
.......................................................... 723, 784, 818, 823, 824, 866, 1017, 1024
Samani, Abbas ........................................................ 50
Samuels, Tina .......................................................... 560
Sanchez-Calderon, Hortensia .................................... 163
Sancho, Consuelo ..................................................... 217
Sandkühler, Britta .................................................... 919
Sanes, Dan H. .......................................................... 799, 814, 887
Sanneman, Joel D. ..................................................... 160
Santarelli, Rosamaria ................................................. 754
Santi, Peter ............................................................. 101
Santos-Sacchi, Joseph ............................................... 99, 116, 566, 567, 568
Santurette, Sébastien ................................................ 336
Sarro, Emma ........................................................... 887
Sasse, Susanne ......................................................... 176, 662
Satheesha, Venkata ................................................... 233
Sato, Hiroaki ........................................................... 318
Sato, Yoko ............................................................... 54
Sayles, Mark ........................................................... 231
Scarfone, Eric .......................................................... 208
Schachern, Patricia ................................................... 60
Schächinger, Thorsten ................................................. 581
Schachner, Melitta ..................................................... 852
Schacht, Jochen ........................................... 164, 687
Scheetz, Laura ............................................. 13
Scheich, Henning ........................................ 291, 511
Sheper, Verena ........................................ 176, 657, 919
Scherer, Elias ............................................ 640
Scherer, Gerd ............................................ 457
Schlecker, Christina ..................................... 616
Schmidt, Jesper Hvass .................................. 434
Schmidt, Rolf ............................................ 1040
Schmiedt, Richard ...................................... 21, 211, 212, 656
Schmitt, Nicole .......................................... 1020
Schmitz, Heather ........................................ 101
Schnee, Michael ........................................ 86, 99
Schnupp, Jan ............................................. 510, 801, 802, 805
Schoenecker, Matthew ................................. 351, 352
Schoenwolf, Gary C ..................................... 454
Schoffelen, Richard ....................................... 105
Scholl, Ute ................................................ 1007
Schönberg, Tommy ..................................... 208
Schraders, Margit ....................................... 1004
Schreiner, Christoph ................................. 285
Schuck, Julie ............................................. 614
Schuhmacher, Ulrike ................................... 648
Schulte, Bradley ........................................ 21, 212
Schultz, Heather ........................................ 439
Schulz, Andreas .......................................... 788
Schwander, Martin ..................................... 87, 88
Schwartz, Andrew ....................................... 872
Schwartz, Joshua J ..................................... 882
Schweizer, Felix E ...................................... 97
Scott, Brian .............................................. 841
Seeba, Folkert ........................................... 882
Segenhout, Johannes .................................... 105
Segil, Neil ................................................. 447, 516, 517, 604
Seidman, C. E ........................................... 1008
Seidman, J. G ............................................ 1008
Seitz, Aaron .............................................. 806
Sekerkova, Gabriella ................................. 476
Sekijima, Amanda ....................................... 654
Selezneva, Elena ....................................... 511
Sellers, James ............................................ 475
Selvakumar, Dakshnamurthy ....................... 82
Selvaraj, Senthil ........................................ 423
Semple, Malcolm ....................................... 841
Sen, Kamal ............................................... 881
Seong, Moon-Woo ...................................... 627
Seto, Mitsutoshi ......................................... 411
Sevy, Alexander ....................................... 422
Sewell, William F ...................................... 651, 663, 676, 690
Seymour, Kelen ......................................... 699
Sokolowski, Bernd........................................ 74
Sol Collado, Maria...................................... 979
Soleimani, Manoocher................................ 160
Soli, Sigfrid.................................................. 894
Sollini, Joseph.............................................. 808
Son, Eun Jin................................................ 159
Son, Hwa Jung............................................. 138
Song, Jae-Jin.................................................. 183, 355
Song, Lei....................................................... 566, 568
Song, Mee Hyung.......................................... 33
Song, Young-Rok......................................... 367
Songer, Jocelyn............................................ 75, 529
Sonji, Guy..................................................... 416
Sonntag, Mandy........................................... 226
Sorensen, Mads Solvsten.............................. 450
Soriano, Joaquim.......................................... 547
Soteropulos, Carol......................................... 939
Soto, Enrique.............................................. 948, 955
Sotomayor, Marcos......................................... 496
Soucek, Sava............................................... 187, 191
Soukup, Garrett........................................... 544, 590
Souza, Natalie............................................. 40
Spain, William J........................................... 834
Sparto, Patrick............................................. 404
Speck, Judith............................................... 943
Spector, Alexander....................................... 570
Spinelli, Kateri............................................. 65
Squires, Jessica............................................ 619
Srivannavit, Onnop....................................... 913, 915
Staebler, Hinrich......................................... 417, 616, 685
Stagner, Barden B......................................... 148, 193, 1005
Stakhovskaya, Olga...................................... 351, 352, 735, 904
Stanely, Pamela.......................................... 516
Stanger, Ben................................................ 536
Stankovic, Konstantina............................... 158
Stanley, Nicole............................................ 115
Starlinger, Veronika..................................... 453
Starr, Arnold............................................... 754
Stasiak, Arkadiusz....................................... 231
Stecker, G. Christopher................................. 828, 831, 834
Steele, Daniel............................................. 400
Steel, Karen................................................ 630, 1002
Steele, Charles........................................... 126, 129, 1037
Steen, Hanno.............................................. 158
Stegner-Wilson, Melissa............................... 408
Steigelman, Katherine A............................... 480
Steinberg, Louisa J....................................... 765
Teller, Ryan S. ................................................................. 427
Suzuki, Mitsuya .............................................................. 413, 969
Suzuki, Toshihiro ........................................................... 125, 540
Svirsky, Mario ................................................................ 365, 486
Swaminathan, Jayaganesh ............................................. 752, 753
Swiderski, Donald L. ...................................................... 465, 1021
Syka, Josef ..................................................................... 289, 863
Szalai, Robert .................................................................. 123
Szweczyck, Jérôme .......................................................... 415
Tabata, Yasuhiko .............................................................. 22, 960
Tabuchi, Keiji ................................................................... 29, 677, 700, 725
Tadao, Okayasu .............................................................. 936
Tadashi, Nishimura .......................................................... 936
Tahera, Yeasmin ............................................................... 682
Tajudeen, Bobby .............................................................. 681
Takada, Yasunari .............................................................. 53
Takago, Hideki ................................................................. 87
Takahashi, Haruo ............................................................. 54, 55
Takahashi, Hiroki .............................................................. 329
Takahashi, Masami ........................................................... 218
Takahashi, Terry .............................................................. 308, 826, 830, 832
Takefumi, Sakaguchi ........................................................ 936
Takehiko, Koji .................................................................. 54
Takesian, Anne ............................................................... 814
Takizawa, Yoshinori ........................................................ 411
Talavage, Thomas ............................................................ 375
Talmadge, Carrick ........................................................... 146, 149
Tan, Chin-Tuan .............................................................. 365
Tan, Xiaodong ................................................................. 577
Tanaka, Chiemi ................................................................ 679, 726, 1024
Tanaka, Michio .............................................................. 294
Tanaka, Shuho ................................................................. 725
Tananka, Syuhou ............................................................. 700
Tang, Qing ..................................................................... 963
Tang, Wenhui .................................................................. 200, 203, 628
Tang, Xuehui ................................................................. 954
Tang, Zheng-Quan .......................................................... 773
Taniguchi, Mirei .............................................................. 731
Tanimoto, Nobuhiro ......................................................... 603
Tantum, Stacy ................................................................. 372
Tao, Sarah ..................................................................... 651
Taoka, Miki .................................................................... 294
Tarantino, Lisa ............................................................... 87
Tateda, Masaru .............................................................. 318
Tateya, Ichiro ................................................................. 411, 537
Tateya, Tomoko .............................................................. 537
Tavassolie, Tanya ............................................................ 392
Taylor, Ruth .................................................................... 115, 169
Telisch, Fred ................................................................. 175, 177
Teller, Ryan S. ............................................................... 27

188
<table>
<thead>
<tr>
<th>Name</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tsuji, Shigeki</td>
<td>700</td>
</tr>
<tr>
<td>Tsukuda, Patrick</td>
<td>883</td>
</tr>
<tr>
<td>Tsuzaki, Minoru</td>
<td>874</td>
</tr>
<tr>
<td>Tucci, Debora L.</td>
<td>356</td>
</tr>
<tr>
<td>Turner, Christopher</td>
<td>898, 899</td>
</tr>
<tr>
<td>Turner, Jeremy</td>
<td>10, 244</td>
</tr>
<tr>
<td>Tyler, Rich</td>
<td>490</td>
</tr>
<tr>
<td>Typlt, Marei</td>
<td>220</td>
</tr>
<tr>
<td>Tzounopoulos, Thanos</td>
<td>11</td>
</tr>
<tr>
<td>Uehara, Gen</td>
<td>304</td>
</tr>
<tr>
<td>Uemaeomori, Isao</td>
<td>700</td>
</tr>
<tr>
<td>Ueno, Tetsuko</td>
<td>412, 652</td>
</tr>
<tr>
<td>Ulfendahl, Mats</td>
<td>208, 658</td>
</tr>
<tr>
<td>Ulditsky, Igor</td>
<td>205</td>
</tr>
<tr>
<td>Ulz, Heimo</td>
<td>946</td>
</tr>
<tr>
<td>Umezawa, Akihiro</td>
<td>603</td>
</tr>
<tr>
<td>Uppenkamp, Stefan</td>
<td>508</td>
</tr>
<tr>
<td>Uratani, Yuka</td>
<td>809</td>
</tr>
<tr>
<td>Urban, Zsolt</td>
<td>196</td>
</tr>
<tr>
<td>Urness, Lisa D.</td>
<td>454</td>
</tr>
<tr>
<td>Valente, Daniel</td>
<td>337</td>
</tr>
<tr>
<td>Valentine, Alex</td>
<td>15</td>
</tr>
<tr>
<td>Valerino, Orlando</td>
<td>622</td>
</tr>
<tr>
<td>Van Barneveld, Denise C.P.B.M</td>
<td>310</td>
</tr>
<tr>
<td>Van De Water, Thomas</td>
<td>175, 177, 178, 589</td>
</tr>
<tr>
<td>van den Honert, Chris</td>
<td>905</td>
</tr>
<tr>
<td>Van Der Heijden, Marcel</td>
<td>113, 221, 746, 760, 778</td>
</tr>
<tr>
<td>Van Dijk, Pim</td>
<td>105, 143, 251, 968</td>
</tr>
<tr>
<td>Van Keuren, Margaret</td>
<td>1014</td>
</tr>
<tr>
<td>Van Opstal, A. John</td>
<td>310, 890</td>
</tr>
<tr>
<td>Van Wanrooij, Marc</td>
<td>890</td>
</tr>
<tr>
<td>Van Wieringen, Astrid</td>
<td>972</td>
</tr>
<tr>
<td>VandeVord, Pamela</td>
<td>815</td>
</tr>
<tr>
<td>Vanpoucke, Filiep</td>
<td>916</td>
</tr>
<tr>
<td>Varela-Nieto, Isabel</td>
<td>163</td>
</tr>
<tr>
<td>Varughese, Tiffany</td>
<td>650</td>
</tr>
<tr>
<td>Vasilyeva, Olga N.</td>
<td>860</td>
</tr>
<tr>
<td>Vasquez-Weldon, Angelica</td>
<td>698</td>
</tr>
<tr>
<td>Vass, Zoltán</td>
<td>2</td>
</tr>
<tr>
<td>Vazdarjanova, Almira</td>
<td>513</td>
</tr>
<tr>
<td>Vega, Rosario</td>
<td>948, 955</td>
</tr>
<tr>
<td>Veile, Rose</td>
<td>16</td>
</tr>
<tr>
<td>Velenovsky, David</td>
<td>135, 150</td>
</tr>
<tr>
<td>Veltman, Joris</td>
<td>1004</td>
</tr>
<tr>
<td>Verbist, Berit</td>
<td>908</td>
</tr>
<tr>
<td>Verhey, Jesko L.</td>
<td>124, 987</td>
</tr>
<tr>
<td>Verhulst, Sarah</td>
<td>137</td>
</tr>
<tr>
<td>Verschooten, Eric</td>
<td>744</td>
</tr>
<tr>
<td>Versteegh, Corstiaen P. C.</td>
<td>113, 746</td>
</tr>
<tr>
<td>Vetter, Douglas</td>
<td>705</td>
</tr>
<tr>
<td>Name</td>
<td>Page Numbers</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>--------------</td>
</tr>
<tr>
<td>Wilson, Matthew</td>
<td>666</td>
</tr>
<tr>
<td>Windsor, Alanna</td>
<td>755</td>
</tr>
<tr>
<td>Winkowski, Daniel</td>
<td>295</td>
</tr>
<tr>
<td>Winter, Ian</td>
<td>231, 997</td>
</tr>
<tr>
<td>Wise, Andrew</td>
<td>903</td>
</tr>
<tr>
<td>Wise, Kensall D.</td>
<td>229</td>
</tr>
<tr>
<td>Wissel, Kirsten</td>
<td>176, 662</td>
</tr>
<tr>
<td>Witte, Mirko</td>
<td>220</td>
</tr>
<tr>
<td>Wolf, Jordan</td>
<td>444</td>
</tr>
<tr>
<td>Wollenberg, Barbara</td>
<td>550, 553, 852</td>
</tr>
<tr>
<td>Won, Jong Ho</td>
<td>364</td>
</tr>
<tr>
<td>Wong, Daniel</td>
<td>811</td>
</tr>
<tr>
<td>Wong, Hiu Tung</td>
<td>944</td>
</tr>
<tr>
<td>Woo, Jeong-Im</td>
<td>170, 171</td>
</tr>
<tr>
<td>Woo, Jihwan</td>
<td>353, 377, 910</td>
</tr>
<tr>
<td>Wood, Melissa</td>
<td>45, 46</td>
</tr>
<tr>
<td>Wood, Scott</td>
<td>396</td>
</tr>
<tr>
<td>Wouters, Jan</td>
<td>972</td>
</tr>
<tr>
<td>Wright, Beverly A.</td>
<td>323, 992</td>
</tr>
<tr>
<td>Wright, Charles</td>
<td>418, 474</td>
</tr>
<tr>
<td>Wright, Samantha</td>
<td>234</td>
</tr>
<tr>
<td>Wright, Sylvia</td>
<td>515</td>
</tr>
<tr>
<td>Wrobeliski, David M.</td>
<td>334, 871</td>
</tr>
<tr>
<td>Wrona, Lauren</td>
<td>1021</td>
</tr>
<tr>
<td>Wu, Calvin</td>
<td>825</td>
</tr>
<tr>
<td>Wu, Chen-Chi</td>
<td>623, 625</td>
</tr>
<tr>
<td>Wu, Doris</td>
<td>460, 538</td>
</tr>
<tr>
<td>Wu, Edward C.</td>
<td>963</td>
</tr>
<tr>
<td>Wu, Ling</td>
<td>33</td>
</tr>
<tr>
<td>Wu, Shu Hui</td>
<td>265</td>
</tr>
<tr>
<td>Wu, Tao</td>
<td>638</td>
</tr>
<tr>
<td>Wyatt, Matthew</td>
<td>26</td>
</tr>
<tr>
<td>Xia, Jing</td>
<td>983, 984</td>
</tr>
<tr>
<td>Xiang, Jing</td>
<td>302, 303</td>
</tr>
<tr>
<td>Xiao, Ming</td>
<td>654</td>
</tr>
<tr>
<td>Xie, Rui Li</td>
<td>238</td>
</tr>
<tr>
<td>Xiu, RuiJuan</td>
<td>153, 154, 155, 157, 692, 693</td>
</tr>
<tr>
<td>Xu, Heng</td>
<td>1008</td>
</tr>
<tr>
<td>Xu, Jie</td>
<td>160</td>
</tr>
<tr>
<td>Xu, Li</td>
<td>436, 439</td>
</tr>
<tr>
<td>Xu, Li Qing</td>
<td>202</td>
</tr>
<tr>
<td>Xu, Ningyong</td>
<td>207, 918</td>
</tr>
<tr>
<td>Xu, YinFang</td>
<td>387</td>
</tr>
<tr>
<td>Xue, Hui Zhong</td>
<td>738</td>
</tr>
<tr>
<td>Xu-Friedman, Matthew</td>
<td>223, 311</td>
</tr>
<tr>
<td>Yakushimaru, Reiko</td>
<td>433</td>
</tr>
<tr>
<td>Yakushin, Sergei</td>
<td>385</td>
</tr>
<tr>
<td>Yamamoto, Hiroshi</td>
<td>428</td>
</tr>
<tr>
<td>Yamamoto, Masayuki</td>
<td>29</td>
</tr>
<tr>
<td>Yamamoto, Norio</td>
<td>12, 190, 546, 702, 960</td>
</tr>
</tbody>
</table>
Zilany, Muhammad ................................................. 995
Zilberstein, Yael .................................................. 167
Zimmerman, Shelby .............................................. 419
Zimmermann, Ulrike ............................................. 90
Zokoll, Melanie ................................................... 431
Zong, Liang .......................................................... 199
Zorilla De San Martin, Javier .................. 95, 96
Zosuls, Aleks ....................................................... 1034
Zubair, Ahmed ........................................................ 1006
Zubeldia, Jose Manuel .................................. 163
Zuccotti, Annalisa ................................................. 233, 739
Zuo, Jian ............................................................... 480, 521, 527, 594, 595
Zurek, Patrick ....................................................... 829
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