**Sunday, June 9th**

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>7:30 am – 8:00 am</td>
<td>Morning Coffee (Committee Members)</td>
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<tr>
<td>8:00 am – 10:30 am</td>
<td>ISOM Committee Meetings</td>
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<tr>
<td>10:30 am – 12:00 pm</td>
<td>ISOM Board of Directors Meeting</td>
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<tr>
<td>12:00 pm – 12:30 pm</td>
<td>Lunch</td>
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<tr>
<td>12:30 pm – 3:30 pm</td>
<td>ISOM Research Conference</td>
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<tr>
<td>5:30 pm – 8:00 pm</td>
<td>Welcome Reception</td>
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**Monday, June 10th**

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<th>Time</th>
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<tbody>
<tr>
<td>7:30 am – 8:00 am</td>
<td>Morning Coffee with Exhibitors</td>
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**Welcome & Special Remarks**

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<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
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<tr>
<td>8:00 am – 8:30 am</td>
<td>Joseph E. Kerschner, MD</td>
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<td>Lauren O. Bakaletz, PhD</td>
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<td>Kevin M. Mason, PhD</td>
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**Opening Keynote**

**Keynote Introduction: Joseph E. Kerschner, MD**

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<th>Time</th>
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<tbody>
<tr>
<td>8:30 am – 9:30 am</td>
<td>Ear and Hearing Care – a Global Health Priority: Really??</td>
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<td>Shelly Chadha, MBBS, MS, PhD</td>
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<tr>
<td>9:30 am – 10:00 am</td>
<td>Coffee Break with Exhibitors</td>
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**Session I: Polymicrobial OM**

**Moderator: W. Edward Swords, PhD**

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<tr>
<td>10:00 am – 10:25 am</td>
<td>Respiratory Viruses – Paving the Way for Otopathogens</td>
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<td>Johanna Nokso-Koivisto, MD, PhD</td>
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<tr>
<td>10:25 am – 10:40 am</td>
<td>NTHI and M. catarrhalis Released from a Polymicrobial Biofilm by Antibodies against NTHI Type IV Pili are Hypersensitive to Antibiotic Mediated Killing</td>
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<td>Elaine Mokrzan</td>
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<tr>
<td>10:40 am – 11:05 am</td>
<td>The Polymicrobial Environment: How Relevant is What We Know?</td>
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<td>Jennelle Kyd, PhD</td>
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<tr>
<td>11:05 am – 11:20 am</td>
<td>Nasal microbiota profiles and chronic otitis media with effusion</td>
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<td>Rebecca Walker</td>
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</table>
11:20 am – 11:45 am  Characteristics of Nasopharyngeal and Oral Microbiome Protecting from Acute Otitis Media  
Terhi Tapiainen, MD, PhD

11:45 am – 12:00 pm  The yield of respiratory viruses detection testing is age-dependent in children with uncomplicated acute otitis media  
Tal Marom, MD

Session II: AOM Clinical Management
Moderator: Anne Schilder, MD

10:00 am – 10:25 am  Topical Analgesics for Acute Otitis Media – Yes or No?  
Roderick P. Venekamp, MD, PhD

10:25 am – 10:40 am  The Impact of pneumococcal vaccine schedules on nasopharyngeal microbiology of Indigenous infants aged 12 months  
Jemima Beissbarth

10:40 am – 11:05 am  Treating the Disease When You Have the Disease  
Joseph Kerschner, MD

11:05 am – 11:20 am  Effectiveness of a Multifaceted Intervention to Educate General Practitioners about Pain Management in Children with Acute Otitis Media: a Cluster Randomized Controlled Trial  
Rick T Van Uum

11:20 am – 11:45 am  2018 Update of Japanese Guidelines for Diagnosis and Management of Pediatric Acute Otitis Media: The Reason Why We Need Our Own Version  
Tatsuya Hayashi, MD, PhD

11:45 am – 12:00 pm  Parental Perceptions and Management Strategies for Otitis Media In Greenland  
Malene Demant

12:00 pm – 1:15 pm  Lunch and/or NIH Workshop

Lunch and NIH Workshop
Moderator: Jian-Dong Li, MD, PhD
12:15 pm – 1:15 pm  Bracie Watson, PhD  
Alberto Rivera-Rentas, PhD

Panel I: Comparing OM Management and Outcomes in US and Australia/New Zealand
Moderator: Linda Miller Calandra, MSN, CRNP, CORLN
1:15 pm – 2:45 pm  Kandice Bowman, MS, CPNP  
Teresa Giordano, DNP, CORLN  
Theresa O’Leary, Director/Ear Nurse Consultant New Zealand  
Roxanne Link, CFNP, APNP  
Kristina L. Keppel, DNP, RN, APNP

Panel II: OM Post-PCV
Moderator: Ron Dagan, MD
1:15 pm – 2:45 pm  Janak A. Patel, MD  
Stephen Pelton, MD  
Paula Tahtinen, MD

2:45 pm – 3:00 pm  Coffee Break with Exhibitors
Session III: Vaccines/Immunology  
Moderator: Allen F. Ryan, PhD

3:00 pm – 3:25 pm  
Pediatric Immune Responses to Otopathogen Antigens to Inform Vaccine Development  
Lea-Ann Kirkham, PhD

3:25 pm – 3:40 pm  
Immunization with a Bandaid Protects Against Experimental Otitis Media Due to nontypeable Haemophilus influenzae  
Laura Novotny

3:40 pm – 4:05 pm  
Can Maternal Immunisation Strategies Prevent Infant Otitis Media?  
Michael Binks, PhD

4:05 pm – 4:20 pm  
Acute otitis media in infants younger than two months of age: epidemiologic and microbiologic characteristics in the era of pneumococcal conjugate vaccines  
Oren Ziv

4:20 pm – 4:45 pm  
Immune dysfunction in the otitis prone child  
Michael Pichichero, MD

4:45 pm – 5:00 pm  
Aboriginal Australian Otitis Prone children have reduced natural antibody titers to NTHi vaccine candidate antigens associated with attachment and biofilm formation  
Sharon Clark

5:00 pm – 5:15 pm  
Disparity in Allergy Testing Results Among Patients with Allergic Rhinitis And Eustachian Tube Dysfunction  
David Hurst, MD PhD

Session IV: CSOM and Sequelae  
Moderator: Ken Kazahaya, MD

3:00 pm – 3:25 pm  
CSOM, the Burden of Disease  
Ramon Gordon Jensen, PhD

3:25 pm – 3:40 pm  
Baseline and end of therapy hearing in Aboriginal children with chronic suppurative otitis media receiving standard topical treatment plus adjunct therapies: a factorial randomised control trial  
Debbie Taylor-Thomson

3:40 pm – 4:05 pm  
Nasopharyngeal Microbiome Analysis in Healthy and Otitis-Prone Children: Focus on History of Spontaneous Tympanic Membrane Perforation  
Paola Marchisio, MD

4:05 pm – 4:20 pm  
Chuan-Ming Li

4:20 pm – 4:45 pm  
Innate Immune Interaction in Otitis Media Epitympanalis  
Anke Leichtle, MD

4:45 pm – 5:00 pm  
Hearing Outcomes at 1 to 3 Years of Age for Aboriginal Children Living in Remote Communities Allocated to Combination Schedules of
Tuesday, June 11th

7:30 am – 8:00 am  Morning Coffee with Exhibitors

Plenary I: Vaccines
*Moderator: Jennelle Kyd, PhD*

8:00 am – 8:25 am  How does *Moraxella catarrhalis* Fly Under the Radar? Vaccine for an Enigmatic Pathogen
*Timothy F. Murphy, MD*

8:25 am – 8:50 am  PCV and Otitis Media: New Light in the Dark
*Ron Dagan, MD*

8:50 am – 9:15 am  Hollywood Casting Call – Looking for: a surface exposed, highly conserved & broadly protective NTHI vaccine antigen
*Lauren Bakaletz, PhD*

9:15 am – 9:40 am  Prevention of Early OM in Children: Rationale and Strategies
*Steven Pelton, MD*

9:40 am – 10:00 am  Coffee Break with Exhibitors

Session V: Pathogenesis I
*Moderator: Timothy F. Murphy, MD*

10:00 am – 10:25 am  Tight Regulation of Innate Immunity and Inflammation in the Pathogenesis of Otitis Media
*Jian-Dong Li, MD, PhD*

10:25 am – 10:40 am  Prevention of non-typeable *Haemophilus influenzae* colonisation and otitis media in mice by microbial interference with a closely-related commensal species
*Caitlyn Granland*

10:40 am – 11:05 am  A Bacterial Epigenetic Switch Modifies Host Immune Response During Otitis Media and Increases Nontypeable *Haemophilus influenzae* Persistence
*Kenneth Brockman, PhD*

11:05 am – 11:20 am  Sequential Episodes of Experimental Otitis Media Promote Pathogenic Lifestyles Through Microevolution of Nontypeable *Haemophilus influenzae*
*Alistair Harrison*

11:20 am – 11:45 am  Biofilms in Otitis Media
*W. Edward Swords, PhD*
11:45 am – 12:00 pm  Rapid Gene Regulation by nontypeable *Haemophilus influenzae* Impacted Sensitivity to First-Line Antibiotics Used to Treat OM  
*Sean Stacey*

**Session VI: What is Otitis Media?**  
*Moderator: Diego Preciado, MD, PhD*

10:00 am – 10:25 am  
**Differences Between “Otitis Medias”: Clinical Picture, Epithelium and Microbiology**  
*Ann Hermansson, Professor, Senior Consultant*

10:25 am – 10:40 am  
**Bacterial Reservoirs in Otitis-prone Children are Associated with Repeat Surgery Outcomes: A Cohort Study**  
*Elke Seppanen*

10:40 am – 11:05 am  
**Host Defense in the Middle Ear Epithelium**  
*Colin D. Bingle, PhD*

11:05 am – 11:20 am  
**Epidemiological Data on Hearing Impairment among Greenlandic Adolescents: Item Development and Findings from the Health Behaviour in School-aged Children Study 2018**  
*Christina Schnohr*

11:20 am – 11:45 am  
**Title TBA (Topic: OM Pathogens)**  
*Peter Richmond*

11:45 am – 12:00 pm  
**Biological Networks Underlying Genetic Susceptibility to Upper and Lower Airway Conditions**  
*Erin Baschal*

**Lunch and Poster Lightning Talks**  
12:00 pm – 1:00 pm

**Poster Session**  
1:00 pm – 3:00 pm  
Judged Posters and Coffee Break

**Session VII: Pathogenesis II**  
*Moderator: Kenneth Brockman, PhD*

3:00 pm – 3:25 pm  
**The Role of Innate Immunity in the Pathogenesis and Resolution of Otitis Media: From Single Cells to Animal Models**  
*Allen F. Ryan, PhD*

3:25 pm – 3:40 pm  
**In vitro Biofilm Formation Distinguishes Strains of *Streptococcus pneumoniae* that Persist in the Nasopharynx from Non-persistent Strains in Children with Acute Otitis Media**  
*Paula Tahtinen*

3:40 pm – 4:05 pm  
**Measuring Biomarkers at the Time of Initial VTI to Predict Children that will Require Repeat Surgery**  
*Ruth Thornton, PhD*

4:05 pm – 4:20 pm  
**Diverse Paths to Serum Resistance in Nontypeable *Haemophilus influenzae* Isolated from Children with Otitis Media**  
*Kevin Raible*
Non-typeable *Haemophilus influenzae* adhesins HMW and Hia differentially bind human airway sialic acid glycan

*Michael Jennings, PhD*

Development of a Primary Pediatric Middle Ear Epithelial Cell Model for the Study of MUC5B Regulation in Otitis Media

*Yajun Chen*

Global Gene Expression Profile of Middle Ear Mucosa in a Chinchilla Model of Pneumococcal-induced Otitis Media

*Wenzhou Hong*

**Session VIII: Novel Treatments**

*Moderator: Marie Gisselsson-Solen, MD, PhD*

**3:00 pm – 3:25 pm**

Transtympanic Delivery of Antibiotics for Acute Otitis Media: All the Benefits with Less Patient and Environmental Impact

*Vishakha Sabharwal, MD*

**3:25 pm – 3:40 pm**

Topical and Systemic Interventions for Chronic Suppurative Otitis Media: A Suite of Cochrane Reviews

*Chris Brennan-Jones*

**3:40 pm – 4:05 pm**

Targeting the Tympanic Membrane for Antibiotic Delivery Using Phage Display

*Arwa Kurabi, PhD*

**4:05 pm – 4:20 pm**

Office Insertion of Tympanostomy Tubes in Young Children: Lessons Learned over 10 Years

*Richard Rosenfeld, MD*

**4:20 pm – 4:45 pm**

Development of Functionally Designed Nano-Scaffolds for Regeneration of Chronic Tympanic Membrane Perforations

*Yun-Hoon Choung, DDS, MD, PhD*

**4:45 pm – 5:00 pm**

Micro RNAs Implication in the Progression of Middle Ear Infection

*Diego Preciado, MD PhD*

**5:00 pm – 5:15 pm**

Trans-Tympanic Delivery of Local Anesthetics for Pain in Acute Otitis Media

*Dan Kohane, MD PhD*

**5:15 pm**

Adjourn

**7:00 pm – 10:00 pm**

ISOM Banquet at Madera Kitchen

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**Plenary II: Biomedical Advances in OM Research**

*Moderator: Cuneyt Alper, MD*

**8:00 am – 8:25 am**

Implantable Devices for Rehabilitation in Chronic Otitis Media

*Herman A. Jenkins, MD*
Behind the Curtain: Using Optical Coherence Tomography to Noninvasively Assess Ear Infections and Other Ear Pathologies
Ryan Shelton, PhD

Crossing the TM Barrier with Nanocarriers
Amit Joshi, PhD

Telemmedicine in the Last Frontier
James D. Andrews, MD

Coffee Break with Exhibitors

Session IX: Genetics/Bioinformatics
Moderator: Arwa Kurabi, PhD

Multi-informatic Approaches to Identifying OM-specific Virulence Genes from within the Bacterial Genomic Dark Matter
Garth Ehrlich, PhD

Identification of Rare, Missense PLG Variants in Families with Otitis Media
Tori Bootpetch Roberts

Sensitizing the Middle Ear: Role of FUT2 Variants
Zubair Ahmed, PhD

The Transcriptional Landscape of the In Vitro Murine Middle Ear Epithelium
Apoorva Mulay

Supragenome-wide Association Studies of Haemophilus influenzae Reveal Roles for Bacterial Nitrogen Metabolism and pH Homeostasis in Middle Ear Disease
Joshua Mell, PhD

SPINK5 Variants Confer Susceptibility to Autosomal Dominant Non-syndromic Otitis Media
Lena Hafrén

Session X: Diagnosis
Moderator: Sharon Tamir, MD

E-Health Related to Otitis Media Diagnosis
Tania Sih, MD, PhD, Hon FACS

Creating an Otitis Media Research Network in Aboriginal Medical Services in Australia
Letitia Campbell

Next Generation Middle Ear Evaluation
Oded Kraus, MD

Non-Invasive, Cross-Sectional Optical Middle Ear Imaging Compared with Acoustic Measurements during Otitis Media
Jungeun Won

Ramen Spectroscopy for the Identification of Bacteria Causing Otitis Media
Andrea Locke, PhD

Otitis Media App: Using the Grading Recommendations and Assessment and Development and Evaluation (GRADE) Approach for a Smartphone
App Guideline in the Prevention and Management of Otitis Media among Australian Indigenous Children
Sumon Das

Lunch and Panel III - How Societal and Cultural Context Affect Treatment Decisions
Moderator: Joseph E. Kerschner, MD
12:15 pm – 1:15 pm
Kelvin Kong, MD
Anne Schilder, MD
Oak-Sung Choo, MD

Panel IV: Clinical Guidelines – Do We Need an Update?
Moderator: Ann Hermansson, MD
1:15 pm – 2:45 pm
Preben Homøe, MD, DMSc, PhD
Paola Marchisio, MD
Peter Morris, MD, PhD
Marie Gisselsson-Sólén, MD, PhD
Diego Preciado,l MD, PhD
Richard Rosenfeld, MD

Panel V: Microbiota: What do we know? Where do we want to go? What is holding us back?
Moderator: Robyn Marsh, PhD
1:15 pm – 2:45 pm
Robyn Marsh, PhD
Katherine Lemon, MD, PhD
Josh Earl, PhD
Seweryn Bialasiewicz, PhD
Michel Neeff, MB, ChB, FRACS

2:45 pm – 3:00 pm
Coffee Break with Exhibitors

Integrated Research Conference Reports
Moderator: Lauren Bakaletz, PhD
3:00 pm – 3:15 pm
Biomedical Engineering/Biotechnology & New Models
Tal Marom (Chair)
Marie Gisselsson-Sólén (Co-Chair)

3:15 pm – 3:30 pm
Bioinformatics
Diego Preciado (Co-Chair)
Ann Hermansson (Co-Chair)

3:30 pm – 3:45 pm
Epigenetics/Genomics/Precision Medicine & Targeted Therapies
Garth Ehrlich (Chair)
Regie Lyn P. Santos-Cortez (Co-Chair)

3:45 pm – 4:00 pm
Microbiome/Polymicrobial Nature of OM/Microbial Shifts with Use of Antibiotics and/or Broad Licensure and Use of Vaccines
Robyn Marsh (Chair)
Heidi Smith-Vaughan (Co-Chair)

4:00 pm – 4:15 pm
Impact of OM on Quality of Life and Development
Preben Homoe (Chair)
Christian Heidemann (Co-Chair)
4:15 pm – 4:30 pm  Global Burden of Disease/Disadvantaged Populations  
Amanda Leach (Chair)  
Preben Homoe (Co-Chair)

4:30 pm – 4:45 pm  Pathogenesis  
Ruth B. Thornton (Chair)  
Ken Brockman (Co-Chair)

4:45 pm – 5:00 pm  Vaccine/Immunology  
Mark Alderson (Chair)  
Lea-Ann Kirkham (Co-Chair)

5:00 pm  Adjourn  
Dinner on your own

Thursday, June 13th

8:00 am – 8:30 am  Check Out/Morning Coffee with Exhibitors

Plenary III: Microbiome and Respiratory Health  
Moderator: Garth Ehrlich, PhD

8:30 am – 8:55 am  When is a Microbiomic Perspective Essential to Understanding OM Pathogenesis? When is it Overkill?  
Robyn Marsh, PhD

8:55 am – 9:20 am  TBA  
Katherine Lemon MD, PhD

9:20 am – 9:45 am  Down the Diversity Rabbit Hole  
Seweryn Bialasiewicz, PhD

9:45 am – 10:00 am  Coffee Break with Exhibitors

Closing Keynote  
Keynote Introduction: Lauren O. Bakaletz, PhD

10:00 am – 11:00 am  The Molecular Microbiological Profile of Chronic Suppurative Otitis Media: To Treat or Not to Treat?  
Michel Neeff, MB, ChB, FRACS

Awards & Closing Remarks  
11:00 am – 11:30 am  2021 Meeting  
Tal Maron, MD  
Sharon Tamir, MD  
Meeting Review  
Kevin Mason, PhD  
Awards Ceremony  
Kevin Mason, PhD

11:30 am  Adjourn  
Joseph E. Kerschner, MD  
Lauren O. Bakaletz, PhD