

Molecular Biology of Hearing and Deafness 2018

Day 1, Wednesday May 16th, 2018

13:00 – 14:00	Registration
14:00 – 14:10	Opening remarks: Gregor Eichele, MPIbpc and Tobias Moser
14:10 – 16:20	<i>Session 1: Development (Chair: Christian Vogl)</i>
14:10 – 14:40	Bernd Fritsch „Molecular biology of spiral ganglion and organ of Corti development”
14:40 – 15:00	Barbara Vona „Disruption of FRMPD4 is associated with hearing loss in humans and hints to functional conservation”
15:00 – 15:30	Mireille Montcouquiol „Defective Gpsm2/Gai3 signalling disrupts cytoskeleton dynamics in Chudley-McCullough syndrome“
15:30 – 15:50	Irene Yuk Yee Szeto „Cooperation between SOX9 and SOX10 is required for hearing via regulation of genes involved in inner ear fluid homeostasis”
15:50 – 16:20	Brigitte Malgrange „MicroRNA regulation of cochlear development: emerging targets for deafness”
16:20 – 16:50	<i>Coffee break and posters</i>
16:50 – 18:30	<i>Session 2: Emerging themes & methods (Chairs: Ignacio del Castillo and Ste)</i>
16:50 – 17:20	Vladan Rankovic „Towards the optical cochlear implant: viral gene transfer into auditory neurons and tiny LEDs”
17:20 – 17:40	Gabriel Corfas „A metabolomics approach to study noise-induced hearing loss”
17:40 – 18:10	Eri Hashino „Human Inner Ear Organoids: Modeling Development and Disease in 3D Culture”
18:10 – 18:30	Rituparna Chakrabarti „Vesicle tethering determines vesicle sub-pools and promotes release at stimulated IHC ribbon synapses”
18:30	<i>Dinner</i>
20:00 – 21:00	<i>Poster session</i>

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Day 2, Thursday May 17th, 2018

09:00 – 10:20	<i>Session 3: Genetics (Chair: Lisbeth Tranebjærg)</i>
09:00 – 09:30	Hannie Kremer „Progressive hearing loss, novel genes and disease mechanisms”
09:30 – 10:00	Qiuju Wang „Genetic Research on Hereditary Hearing Loss and Its Prevention in China”
10:00 – 10:30	Richard Smith „Unravelling the Genetics Complexities of Hereditary Hearing Loss as a Foundation to Gene Therapy“
10:30 – 11:10	<i>Coffee break and posters</i>
11:10– 12:50	<i>Session 4: Genetics (Chair: Paolo Gasparini)</i>
11:10 – 11:30	Dan Bing „Newborn Hearing Concurrent Genetic Screening in 1,120,544 neonates – A 10-year experience in China”
11:30 – 12:00	Cynthia Morton et al. „Newborn Hearing around the Globe”
12:00 – 12:20	Anna Lysakowski „A novel missense variant in PRKCB segregates low-frequency hearing loss in an autosomal dominant family with Meniere’s disease”
12:20 – 12:50	Guy van Camp „The role of MEPE and SERPINF1 genes in otosclerosis”
13:00 – 14:00	<i>Lunch break</i>
14:00 – 15:20	<i>Session 5: Molecular Physiology (Chair: Allen Ryan)</i>
14:00 – 14:30	Dan Jagger „The molecular physiology of fast spiking behaviour in the auditory nerve”
14:30 – 14:50	Sharlen Moore „Oligodendrocyte dysfunctions lead to loss of auditory temporal coding resolution”
14:50 – 15:20	Katie Kindt „Using zebrafish to understand ribbon synapse formation and function”
15:20 – 15:50	<i>Coffee break and posters</i>
15:50 – 17:40	<i>Session 6: Molecular Physiology (Chair: Dominik Oliver)</i>
15:50 – 16:20	Lavinia Sheets „A tail of noise-induced trauma: investigating noise damage in zebrafish lateral-line organs”
16:20 – 16:40	Eric Mulhall „The Dynamic Strength of the Hair-Cell Tip-Link Bond”
16:40 – 17:10	Régis Nouvian „Spatio-temporal pattern of the action potential firing in developing inner hair cells”
17:10 – 17:40	Karen B. Avraham „Epigenetics of the Auditory System”
17:40 – 18:30	<i>Poster break</i>
18:30	<i>Dinner</i>
20:00 – 21:00	<i>Poster session</i>

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Day 3, Friday May 18th, 2018

09:00 – 10:40	<i>Session 7: Molecular Physiology (Chair: Lukas Rüttiger)</i>
09:00 – 09:30	Catherine Weisz „Glycinergic Inhibition of Medial Olivocochlear Neurons”
09:30 – 09:50	Sandrine Marlin „Dominant mutations in tubulin cause sensorineural disease with hearing loss and severe retinal dystrophy”
09:50 – 10:20	Karen Steel „Molecular pathways underlying progressive hearing loss”
10:20 – 10:40	Raj Ladher „FGFR1 mediated protocadherin-15 loading mediates cargo specificity during IFT in inner ear hair cell kinocilia”
10:40 – 11:20	<i>Coffee break and posters</i>
11:20 – 13:10	<i>Session 8: Molecular Physiology (Chair: Steve Brown)</i>
11:20 – 11:50	David Corey „Biochemical Studies of TMC1 Suggests a Stoichiometry for the Hair-Cell Transduction Channel”
11:50 – 12:20	Jeffrey Holt „Function, Dysfunction and Restoration of TMC1 in Auditory Hair Cells”
12:20 – 12:40	Anthony Peng „Myosin motors mediate slow adaptation with a different mechanism in cochlear hair cells”
12:40 – 13:10	Robert Fettiplace „The contribution of TMC1 to transduction in cochlear hair cells”
13:10 – 14:10	<i>Lunch break</i>
14:10 – 16:00	<i>Session 9: Disease mechanisms (Chair: Jonathan Gale)</i>
14:10 – 14:40	Sharon Kujawa „Cochlear Synaptopathy in Noise-Induced and Age-Related Hearing Loss”
14:40 – 15:10	Rosamaria Santarelli „Audibility, speech perception and cochlear potential recording in otoferlin-related hearing impairment”
15:10 – 15:30	Jana Kroll „Endophilin-A regulates presynaptic Ca ²⁺ -influx and promotes synaptic vesicle recycling in auditory hair cells”
15:30 – 16:00	Michael Bowl „A <i>Wars2</i> mutant reveals tissue specific oxidative phosphorylation deficiencies and activates the integrated stress response”
16:00 – 16:30	<i>Coffee break and posters</i>
16:30 – 18:00	<i>Session 10: Innovative approaches to inner ear therapy (Chair: Jutta Engel)</i>
16:30 – 16:50	Hanan Al-Moyed „A dual-AAV vector approach partially restores exocytosis and rescues hearing in deaf otoferlin knock-out mice”
16:50 – 17:10	Elise Meijer „A New Variant of AAV9 Rescues Hearing in a Mouse Model of Usher IIIa and Transduces Hair Cells in Nonhuman Primates”
17:10 – 17:40	Michelle Hastings „Antisense technology to study and treat hearing disorders and deafness”
17:40 – 18:00	Andrew Forge „Regenerating hair cells in human vestibular sensory epithelia ”
18:00 – 18:30	<i>Poster break</i>
18:30	<i>Dinner</i>
20:00 – 21:00	<i>Poster session</i>

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Day 4, Saturday May 19th, 2018

09:00 – 10:20	<i>Session 11: Adult onset hearing loss (Chair: Hubert Löwenheim)</i>
09:00 – 09:30	Tina Pangršič-Vilfan (replacing J. Albert) „Modulation of synaptic inner hair cell Ca ²⁺ channels by Ca ²⁺ -binding proteins CaBPs”
09:30 – 09:50	Giorgia Girotto „Genome-wide association studies (GWAS), targeted re-sequencing (TRS) and in vitro functional validations for the study of normal hearing function (NHF) and age-related hearing loss (ARHL).”
09:50 – 10:20	Sally Dawson „Progress in Identifying Genes Underlying Familial Otosclerosis using a Whole Exome Sequencing Approach”
10:20 – 10:50	<i>Coffee break and posters</i>
10:50 – 12:20	<i>Session 12: Beyond the ear (Chair: Dirk Beutner)</i>
10:50 – 11:20	Benedikt Grothe „When time matters”
11:20 – 11:50	Tanvi Butola (replacing M. Götz) „Exploring the function(s) of RIM-binding protein 2 in the auditory pathway”
11:50 – 12:20	Ernst Bamberg „Optogenetics: basics, applications and chances”
12:20 – 12:40	<i>Farewell</i>
12:40 – 13:30	<i>Lunch</i>