REPORT ON THE 38TH MIDWINTER MEETING OF THE ASSOCIATION FOR RESEARCH IN OTOLARYNGOLOGY

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This year's Midwinter Meeting of the Association for Research in Otolaryngology (ARO) was held in Baltimore, Maryland, on 21–25 February 2015 amidst exceptional weather that included extreme cold and snowstorms. There were 21 podium sessions, 4 poster sessions, 17 symposia, and 5 workshops. In total, there were more than 300 presentations and some 880 posters.

The conference was opened by ARO president Ruth Anne Eatock with a symposium on 'Diverse ears serving diverse tasks: communicating, moving, learning, deciding'. Talks included the cocktail party problem in treefrogs (by Mark Bee), neuronal encoding of sound and gravity in the fruit fly (by Azusa Kamikouchi), circuits underlying cortical decisions (by Anthony Zador), development of the zebrafish vestibular system (by Tanya Whitfield), motor–auditory interactions for listening and learning (by Richard Mooney), and functional neuroimaging of speech perception in cochlear implant recipients (by John Oghalai).

Baltimore Harbor overtaken by winter

Entrance to the conference site

Following the scientific sessions on the third day of conference, the inaugural ARO public lecture was held in the Baltimore National Aquarium. It featured complementary presentations on navigation by sound in blind humans (by Daniel Kish) and in animals (by Cynthia F. Moss).

ARO is a conference with one of the biggest number of works on otoacoustic emissions (OAEs) and cochlear mechanics. This year most of the OAEs presentations focused on various aspects of reflection and distortion components, spontaneous OAEs, and suppression of OAEs. Time-frequency analysis was prominent in many studies related to OAEs and auditory potentials. Presentations on tinnitus mostly involved animal studies, with methods of inducing and then detecting it in animals. In the cochlear implants sessions, the focus was on localization issues.

The ARO award of merit was given to Thomas B. Friedman for his studies on the genetics of hearing. His major achievement was publishing a genetic map specifying the locus of nonsyndromic recessive deafness, DFNB3. He gave a lecture in which he reviewed some of his greatest discoveries under a mischievous title taken from Jules Verne: "Science, my boy, is composed of errors, but errors that it is right to make, for they lead step by step towards the truth." This year's awards ceremony also included special recognition of Geraldine Dietz Fox for her long and substantial support of hearing researchers.

A memorial was held for David C. Mountain, who died in November 2014. Mountain was an expert in cochlear

The conference hotel

The Katyń memorial in Baltimore

mechanics and Professor of Biomedical Engineering at Boston University. One of his most influential works is a *Science* paper on alteration of cochlear distortion products by changes in endolymphatic potential and by stimulation of the crossed olivocochlear bundle.

Each year there is a reminder about the history of hearing research. This year there was a dedicated session on research history. Ricky Davis also presented a poster on the history of research on temporary threshold shift (TTS) in which he outlined the work in 1934 of A. F. Rawdon-Smith from the Department of Psychology at Cambridge.

One of the great new ideas at ARO meetings are mentoring sessions, and this time researchers shared their experience of preparing publications.

Topics of this year's symposia were:
- The transmembrane channel-like family: molecules, mechanisms, and models of mechanotransduction;
- Epidemiological perspectives on age-related hearing loss: risk factors and prevention;
- Binaural processing and spatial unmasking for bilateral, bimodal, and single-sided deafness CI users;
- The hearing restoration project;
- Cortical dynamics of human auditory perception: insights from electrocorticography (Ecog) studies;

The Seven Foot Knoll lighthouse, built in 1855, at Baltimore Inner Harbor

- Age-related vestibular loss: research update and setting the 5-year research agenda;
- Planar polarity and neurosensory development;
- Chromatin and transcriptional regulation of neurosensory development;
- Neural substrates of music processing: from perception to cognition;
- Non-coding RNAs in the auditory system;
- The functional organization of human auditory cortex
- Cellular calcium signaling in the auditory system;
- New perspectives on sound exposure and subcortical processing: from environmental effects to damaging sounds;
- Mechanisms of social hearing.

Continuing a tradition of young investigators symposia, three sessions were organized on the following topics: Computational modeling of auditory perception, Quantifying the influences of internal noise on auditory processing: from neural coding to behavior, and Mechanisms in binaural hearing: from synapses to psychophysics.

There were also workshops: 3 NIDCD workshop; a 'tool shop' on auditory research software; a workshop on mobile and web auditory training apps for hearing impaired adults; and a spARO 'communicate your science' workshop.