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A report from the conference „ Tissue engineering in the auditory system: Paving the way from basic science to clinical practice“

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Thank to ESF Travel Grants programme I had the opportunity to attend a unique scientific meeting „Tissue engineering in the auditory system: Paving the way from basic science to clinical practice“. This conference was organized by the Ear Foundation (namely prof. Gerard O'Donoghue, Nottingham and prof. Marcelo Rivolta, Sheffield) and the European Science Foundation (ESF). It was held on 2 June 2011 at the Royal Society in London, UK. The meeting was focused on the issues of tissue engineering, that combines the approaches of biology and engineering to produce artificial substitutes for damaged tissues and to demonstrate how these advances could be applied to the auditory organ and show how this interdisciplinary scientific field could provide novel solutions to repair or restore tissues in the auditory system from its peripheral part (cochlea) to auditory cortex.

The conference was attended by about 50 participants, together with 11 internationally renowned invited speakers, including e.g. prof. Helge Rask Andersen (Sweden), prof. Juichi Ito (Japan), prof. Andrej Kral (Germany). The lectures were divided systematically into several specific topics, such as detailed ultrastructural anatomy, physiology and pathophysiology of the auditory organ, stem cells, drug delivery to the cochlea and nanoparticles or central auditory pathways and their changes in pathologic conditions. The talks were followed by discussions and moreover, the conference program ended by a round table, which provided further opportunities to discuss and summarize the recent state-of-the-art in tissue engineering in relation to the auditory organ.

The meeting provided current insight to science and clinical aspects of the tissue engineering in hearing restoration as a future alternative to the recently used prosthetic devices. Sharing the most recent knowledge may contribute to development of novel diagnostic and therapeutic possibilities. As an ENT doctor and scientist dealing with molecular-genetic diagnostics of hearing disorders I am very pleased by the recent convergence level of the basic science and clinical practice with regard to the auditory organ.

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