

Otology Jubilee: 150 years of the *Archiv für Ohrenheilkunde* “Where do we come from?—Where are we?—Where are we going?”

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In 2014, our specialty Otorhinolaryngology, Head and Neck Surgery, celebrated an important jubilee. One hundred and fifty years ago, in 1864, the German journal *Archiv für Ohrenheilkunde* (*Archive of Otology, AfO*), the ancestor of the *European Archives of Oto-Rhino-Laryngology and Head & Neck*, was founded by three famous otologists: Anton von Tröltsch (1829–1890) from Würzburg, Adam Politzer (1835–1920) from Vienna, and Hermann Schwartze (1837–1910) from Halle/Saale. At the time of its initial publication, it was the world’s first journal solely devoted to otology; and thus it became the first such journal in the later field of Otorhinolaryngology. The foundation of the *AfO* in 1864 occurred in a good context regarding the general history of medicine and at a favorable moment with respect to the development of medical specialties and specialized medical journals [1]. After approximately half a century, in 1915, the *Archiv für Ohrenheilkunde* became an otorhinolaryngological journal, the *Archiv für Ohren-, Nasen- und Kehlkopfheilkunde* (*Archive of Otology, Rhinology and Laryngology*) [2]. Throughout the next decades, the journal’s name changed many times. It was published in English beginning in 1990, and since 2004 has been named *European Archives of Oto-Rhino-Laryngology and Head & Neck*.

The conference celebrated this jubilee of our specialty with a program consisting of oral and poster contributions in structured and open sessions on the history, the current state of the art, and the future directions of otology and neurotology under the motto: “Where do we come from?—

Where are we?—Where are we going?”. The sessions of the conference included (1) the history of scientific publishing in otology and neurotology, (2) basic science, (3) diagnostic procedures, (4) conservative treatment, (5) surgical treatment, and (6) implants in otology and neurotology—all with a “Past–Present–Future” approach.

One hundred and fifty years after the first appearance of a journal specific to our specialty, there are certainly enough conferences taking place every year for various reasons; however, it appeared to be a good time to pause for a moment, to look back and ahead.

We wanted to look back to the past for several reasons. One is to acknowledge the endeavors and successes of our academic predecessors. “We all need to receive and learn from those who were before us, as well as from those who are with us” (author’s translation; original text: “Wir müssen alle empfangen und lernen, sowohl von denen, die vor uns waren, als von denen, die mit uns sind” [3]). The contributions at the conference proudly emphasized the amazing developments in understanding the anatomy, physiology, and pathophysiology of the intact and the diseased organ; diagnostic technology; and surgical techniques, including the use of passive and active implants to restore hearing. All of these developments have completely changed our specialty during the last 150 years.

However, the papers also critically pointed out meanders in basic and clinical science, diagnostics, and therapy, since “Those who cannot remember the past, are condemned to repeat it” [4]. The discussions at the conference also focused on which otological and neurotological questions and problems have been solved during the last 150 years and which are still unsolved issues in different parts of the world.

Among the challenges we face today are large global discrepancies in health care. With respect to the field of

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otology, advancements in medicine and the health care system enable us in some parts of the world—as an example—to restore congenital or acquired profound hearing with cochlear implants even in cases of chronic otitis media or single-sided deafness, and with electro-acoustic stimulation to treat partial hearing loss. However, in impoverished parts of the world, children and adults with complications from acute mastoiditis or cholesteatoma are still suffering from insufficient medical care resulting in permanent health damage or even death comparable to the situation at the time of the journal's founding 150 years ago. To solve these problems, strong attempts of medical training and improvements in the health care system are indicated.

In science, we are currently facing a rapidly growing number of scientific journals and publications, but a decreasing percentage of statistically sufficiently powered studies and high-quality clinical trials. Initially promising findings throughout biomedical research are not leading to the required improvements in health care [5]. Detailed solutions for these issues have been suggested, for example, by the recent “The Lancet Research: Increasing Value, Reducing Waste Series” [5–10]. In addition, there is a pressing need to improve the ways in which funding agencies, academic institutions, and other parties evaluate the output of scientific research [11, 12]. The present challenges lie in the implementation of detailed recommendations to improve efficiency and effectiveness in research, and to improve the system through which the quality of scientific research is assessed [5–12].

The ongoing substantial changes wrought upon health care systems by marketization and privatization constitutes another challenge. This transformation carries a variety of implications for (1) the patient as a consumer, (2) medical care as commodity, and (3) competitiveness as a criterion for good medicine [13], such that the patient may be in danger of becoming a means to an end for the health industry. Consequently, core identities of medicine are at risk [14], and organizational ethics programs are needed to “address some of the possible ethical issues raised by this new healthcare environment that incorporates both private and public sector providers” [15].

Apart from all of these, the conference also aimed to increase interest in the fascinating history of otology and neurotology among the younger colleagues and to provide a glimpse of what we may expect in the future of our specialty [16]. Fascinating current developments include better diagnostic tools in audiology (psychophysics and electrophysiology), imaging, and laboratory diagnostics, as well as in genetic diagnostics through next-generation sequencing. Technological advancements and future developments for restoring hearing and balance involve improvements in active middle ear implants, cochlear

implants (including drug-device combinations, electro-acoustic stimulation, and possibly even optogenetic stimulation), and the development of vestibular implants. High hopes are also directed towards modern drug and stem cell-based therapies [17], with the world's first gene therapy trial for sensory hair cell regeneration having begun in timely coincidence with the otology jubilee conference (<https://clinicaltrials.gov/ct2/show/NCT02132130>).

Finally, on the occasion of the 150th anniversary of the foundation of the predecessor of the *European Archives of Oto-Rhino-Laryngology and Head & Neck*, the conference was an opportunity to bring together scientists and clinicians not only to discuss science and the challenges outlined above, but also to strengthen the connections between individuals and populations of different countries and nations.

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