Forging a New Pathway: Introducing ENT Discovery

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It is with immense pride and a profound sense of responsibility that we introduce the inaugural issue of *ENT Discovery*, a new, open-access journal dedicated to the vibrant and ever-evolving field of Otorhinolaryngology-Head and Neck Surgery. Our launch represents not just the addition of another publication, but a commitment to fostering a global, collaborative, and transparent forum for the dissemination of groundbreaking research that will define the future of our specialty. As the Editors-in-Chief, on behalf of the editorial team, we would like to extend a warm welcome to the readership of *ENT Discovery*.

Aims and Mission of *ENT Discovery*

In the era of globalization and rapid advances in information technology and medicine, Chinese scholars have increasingly emerged as an important force in international research, making transformative contributions across diverse scientific disciplines [1–4]. In otorhinolaryngology (ENT), breakthroughs in areas such as gene therapy, artificial intelligence (AI), minimally invasive surgery, and regenerative medicine have pushed the boundaries of clinical practice and innovation [5–9]. Yet despite these strides, the number of high-quality English-language journals dedicated to ENT remains limited, especially in Asia [10]. To address this unmet need, we are proud to introduce *ENT Discovery*, an international, peer-reviewed journal sponsored by the Eye & ENT Hospital of Fudan University. Our mission is to provide a global platform for cutting-edge ENT research, encouraging the exchange of new ideas, promoting interdisciplinary dialogue, and fostering meaningful collaborations among scholars, clinicians, and researchers from diverse backgrounds.

ENT diseases pose significant global health challenges. According to the World Health Organization, more than 1.5 billion people live with some degree of hearing impairment, and chronic rhinosinusitis, along with allergic rhinitis, affects hundreds of millions globally [11]. Head and neck cancers, especially nasopharyngeal carcinoma, are notably prevalent in Asia, with a disproportionate burden in Southern China and Southeast Asia [12]. Despite the enormity of these health concerns, ENT medicine has long been underrepresented in high-impact general medical journals. The existing subspecialty journals often focus narrowly on one aspect of the field, such as otology, rhinology, or laryngology. Few offer an integrated, interdisciplinary platform that reflects the nature of modern ENT practice, where surgery, genetics, immuno-

logy, neuroscience, and digital technology converge. *ENT Discovery* aims to address this need by advancing scientific knowledge of ENT physiology and pathophysiology, promoting innovations in diagnostics, therapeutics, and prevention, encouraging collaboration across disciplines such as bioinformatics and neuroscience, and focusing on global equity by highlighting strategies to improve access to ENT care in underserved regions.

This inaugural editorial will set out the rationale for establishing the journal review the milestones that have brought the field to its current state, and share our aspirations for the decades to come.

The scope of *ENT Discovery* is broad, covering a wide range of disciplines and innovations within otorhinolaryngology. We are committed to publishing high-quality original research, reviews, meta-analyses, research highlights, editorials, case reports, clinical images and operation videos. The journal provides a platform for disseminating innovative research that spans the entire spectrum of ENT medicine, from cutting-edge technologies like AI and robotics to novel therapies such as biologics, targeted agents, and immunotherapies. Additionally, we welcome studies on surgical advancements, including minimally invasive procedures and endoscopic skull base surgery, as well as diagnostic breakthroughs from molecular assays to radiomics. We further encourage consensus statements, practice guidelines, and systematic reviews that contribute to the development of clinical care [13].

Milestones and Key Figures in the Development of ENT Discipline

From a global perspective, the development of modern ENT has been shaped by a series of transformative innovations and visionary pioneers. The invention of the laryngoscope by Manuel García in 1854, later refined by Johann Czermak and others, revolutionized the diagnosis and treatment of laryngeal diseases, opening the door to endoscopic visualization of the upper airway [14]. In the late 20th century, the advent of functional endoscopic sinus surgery, pioneered by Messerklinger and Stammberger, fundamentally changed the management of sinonasal disorders, offering minimally invasive yet highly effective solutions [15]. Equally transformative was the development of the cochlear implant, first successfully implanted by Graeme Clark and colleagues in the 1970s, which restored functional hearing to patients with profound deafness and remains one of the most significant achievements in neuroprosthetics [16]. Togeher, these breakthroughs —alongside progress in head and neck oncology, skull base surgery, and auditory rehabilitation [17]—established the foundation of modern ENT practice worldwide.

Building upon these global milestones, the evolution of modern ENT practices in China is closely intertwined with the history of the Eye & ENT Hospital of Fudan University. Founded by Professors Hu Maolian and Guo Bingkuan, the hospital was envisioned as a specialized institution that integrated clinical practice, research, and education. This holistic approach not only laid the foundation for the hospital to become a center of innovation in ENT but also played a pivotal role in advancing the ENT discipline in China. Since its inception, the hospital has reached key milestones, including the launch of China's first domestically developed cochlear implants, the establishment of the Ophthalmology and Otolaryngology Institutes to strengthen research, and a leading role in founding the National Ophthalmology and Otolaryngology Professional Quality Control Centers. Through these initiatives, Chinese ENT has aligned with global standards while maintaining a strong focus on providing scalable and affordable interventions for the country's vast population.

Looking Forward: Future Directions and Potentials

Looking to the future, the journal will be at the forefront of highlighting the next generation of innovations in ENT. The convergence of gene editing, regenerative medicine, and AI will pave the way for new treatments for hearing loss, olfactory disorders, and even laryngeal diseases.

Gene and cell therapy

The *OTOF* gene therapy trial for congenital deafness is only the beginning [5]. Future efforts will target additional mutations, acquired forms of deafness, and organoid-based models. The convergence of gene editing and regenerative medicine may ultimately enable lasting cures not just for hearing loss but for olfactory and laryngeal disorders as well [18].

Artificial intelligence and digital ENT

AI is poised to transform diagnosis, surgical planning, and patient management. Applications range from endoscopic cancer screening and radiomics-based tumor assessment to intelligent surgical robotics [19–21]. *ENT Discovery* will serve as a stage for these breakthroughs, bridging engineering and medicine. *ENT Discovery* will be a forum for showcasing these digital health innovations and their translation to real-world clinical practice.

Regenerative medicine and biomaterials

From tympanic membrane regeneration to bioengineered laryngeal scaffolds, ENT remains at the forefront of tissue engineering. Advances in hydrogel drug delivery and nanomaterials for inner-ear therapies illustrate how

the field will continue to innovate at the intersection of biology and engineering.

Global equity in ENT care

Innovation must be matched by accessibility. Millions in low- and middle-income countries still lack access to basic ENT services. *ENT Discovery* pledges to highlight implementation science, low-cost screening strategies, and health system innovations that bring state-of-the-art care to under-resourced populations.

The role of ENT Discovery

Our journal will not simply collect papers; it will curate conversations and catalyze change. Through special issues, consensus papers, early-career researcher features, and cross-disciplinary forums, we aim to guide the trajectory of ENT science and practice worldwide.

The launch of *ENT Discovery* represents both a proud legacy and a bold new vision for the future of ENT medicine. From the pioneering work of Professors Hu Maolian and others to today's groundbreaking advances in gene therapy, AI, and regenerative medicine, the Eye & ENT Hospital of Fudan University has always been at the forefront of innovation. Now, with the launch of *ENT Discovery*, we invite researchers, clinicians, scientists, and policymakers from around the world to join us. Together, we can build a collective repository of knowledge that reflects the full diversity and dynamism of our global community. Together, we can ensure that the next chapter in the history of ENT is written through open collaboration, relentless innovation, and an unwavering commitment to improving patient lives everywhere.

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Author contributions

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