



*Special Issue Reprint*

## **Molecular Mechanisms of Sensorineural Hearing Loss and Development of Inner Ear Therapeutics**

[www.mdpi.com/books/reprint/4289](http://www.mdpi.com/books/reprint/4289)

Edited by  
Srdjan M Vljakovic

ISBN 978-3-0365-1506-9 (Hardback)  
ISBN 978-3-0365-1505-2 (PDF)



The sense of hearing is vulnerable to environmental challenges, such as exposure to noise. More than 1.5 billion people experience some decline in hearing ability during their lifetime, of whom at least 430 million will be affected by disabling hearing loss. If not identified and addressed in a timely way, hearing loss can severely reduce the quality of life at various stages. Some causes of hearing loss can be prevented, for example from occupational or leisure noise. The World Health Organization estimates that more than 1 billion young people put themselves at risk of permanent hearing loss by listening to loud music over long periods of time. Mitigating such risks through public health action is essential to reduce the impact of hearing loss in the community. The etiology of sensorineural hearing loss is complex and multifactorial, arising from congenital and acquired causes. This book highlights the diverse range of approaches to sensorineural hearing loss, from designing new animal models of age-related hearing loss, to the use of microRNAs as biomarkers of cochlear injury and drug repurposing for the therapy of age-related and noise-induced hearing loss. Further investigation into the underlying molecular mechanisms of sensorineural hearing loss and the integration of the novel drug, cell, and gene therapy strategies into controlled clinical studies will permit significant advances in a field where there are currently many unmet needs.



Order Your Print Copy  
You can order print copies at  
[www.mdpi.com/books/reprint/4289](http://www.mdpi.com/books/reprint/4289)

MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.



### **Open Access**

Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.



### **Author Focus**

Authors and editors profit from MDPI's over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.



### **High Quality & Rapid Publication**

MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.



### **High Visibility**

Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), and the Verzeichnis Lieferbarer Bücher (VLB).



### **Print on Demand and Multiple Formats**

MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.