







Special Issue Reprint

Genetics of Hearing Impairment

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The inner ear is a complex machinery at the cellular and molecular levels. Many different genes and proteins play roles in the development and maintenance of its structure and function, through participating in diverse molecular networks. A defect in any of these components can result in the loss of hearing. Consequently, hearing impairment encompasses a wide variety of disorders that are clinically and genetically heterogeneous. Understanding their genetic causes and their pathophysiological mechanisms, and characterizing the resulting phenotypes, are essential for developing novel therapies that target the specific defects. The articles and reviews in this book are representative of the many research lines that are currently active in the field, including recent advances in the genes and mutations involved in hearing impairment, the mechanisms through which mutations result in different syndromic or non-syndromic disorders, and the description of the associated phenotypes in humans and in animal models.





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