Transgenerational Epigenetics
Evidence and Debate

Edited by
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Transgenerational Epigenetics provides a comprehensive analysis of the inheritance of epigenetic phenomena between generations. Few areas of the exponentially growing field of epigenetics have attracted as much interest and debate as transgenerational epigenetics. The goal of this volume is to cover this exciting and rapidly developing field of generational transfer of epigenetic information and its impact on basic biological processes and clinical disorders. There are many ongoing debates surrounding organismal inheritance of epigenetic phenomena and this seminal book on transgenerational epigenetics not only confronts these controversies, but also illuminates many other aspects of transgenerational epigenetics. Leading researchers in the field have contributed chapters on topics as diverse as the definitions and history of generational epigenetic inheritance, germline epigenetics, epidemiology and basic mechanisms of epigenetic inheritance, model organisms applied to studies of transgenerational epigenetics, the evolution of transgenerational epigenetics, parental epigenetic inheritance and environmental epigenetic effects on the offspring. Numerous chapters are also presented on the clinical relevance of the impact of transgenerational epigenetics on disorders and diseases such as metabolic, reproductive, cardiovascular and mental diseases. Finally, this volume closes with a chapter dedicated to the controversies and debates surrounding the potentially powerful yet developing field of transgenerational epigenetics.

Key Features

- Focused discussion of metabolic disorders, cardiovascular and other clinical diseases, which appear most affected by heritable and reversible epigenetic processes
- Encompasses both foundational and clinical aspects including discussions of preventive in utero therapies
- Covers history, future outlook, disease management and current controversies

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