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Nota di contenuto	How do genes work? -- What is Epigenetics? -- Epigenetic mechanisms, homeostasis and potential for manipulating the epigenome -- Methods for epigenetic analyses -- Aging and epigenetic variation -- Cancer Epigenetics -- Epigenetics and Mental health -- Implications of epigenetic research and Getting Started.
Sommario/riassunto	"This book will explore selected epigenetic phenomena as applied to human health and disease. It will investigate how, through epigenetic mechanisms, our genome is responsive to a wide range of environmental influences including nutrition, toxins and social circumstances. The mechanisms controlling these effects and their phenotypic outcomes will be covered. By the end of the book the reader should understand the differences between genetic and epigenetic influences on gene expression, the range of epigenetic mechanisms used to regulate gene expression, how epigenetic modifications are propagated, and the phenotypic consequences for health and disease. The scope will cover various mechanisms of epigenetic regulation, including DNA methylation and post-translational modification of histones, and the roles of chromatin-assembly modifying complexes, non-coding RNAs and nuclear organization. The book will draw on the most recent examples from current research in the field of epigenetics and encourage the reader to question, analyse and critically appraise

literature to further develop and apply their understanding to their own area of interest. Emphasis will be placed on critical analysis of the scientific literature, helping the reader understand how to identify important biological problems and how to address them experimentally. The content will range from older classical papers to more recent papers that utilize cutting-edge genomic techniques"--