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Titolo	The Biochemistry of Retinoic Acid Receptors I: Structure, Activation, and Function at the Molecular Level [[electronic resource] /] / edited by Mary Ann Asson-Batres, Cécile Rochette-Egly
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Collana	Subcellular Biochemistry, , 0306-0225 ; ; 70
Disciplina	615.5
Soggetti	Medicine Gene expression Nutrition Medicine Health Biomedicine, general Gene Expression Science, Humanities and Social Sciences, multidisciplinary Nutrition Medicine/Public Health, general Popular Science in Medicine and Health
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Forward -- History of Retinoic Acid Receptors -- Architecture of DNA Bound RAR Heterodimers -- Retinoic Acid Receptors: Structural Basis for Coregulator Interaction and Exchange -- Evolution of Retinoic Acid Receptors and Retinoic Acid Signaling -- RXRs: Collegial Partners -- Nuclear and Extra-Nuclear Effects of Retinoic Acid Receptors: How they are interconnected- The Roles of Retinoic Acid and Retinoic Acid Receptors in Inducing Epigenetic Changes -- RARs and micro RNAs -- Integrative genomics to dissect retinoids functions -- Complexity of the RARMediated Transcriptional Regulatory Programs -- Index.
Sommario/riassunto	A role for vitamin A in living organisms has been known throughout

human history. In the last 100 years, the biochemical nature of vitamin A and its active derivative, retinoic acid, its physiological impact on growth processes and the essential details of its mechanism of action have been revealed by investigations carried out by researchers using vertebrate and more recently invertebrate models to study a multiplicity of processes and conditions, encompassing embryogenesis, postnatal development to old age. A wealth of intercellular interactions, intracellular signaling systems and molecular mechanisms have been described and the overall conclusion is that retinoic acid is essential for life. This book series, with chapters authored by experts in every aspect of this complex field, unifies the knowledge base and mechanisms currently known in detailed, engaging, well-illustrated, focused chapters that synthesize information for each specific area. In view of the recent explosion in this field, it is timely to publish a contemporary, comprehensive, book series recapitulating the most exciting developments in the field and covering fundamental research in molecular mechanisms of vitamin A action, its role in physiology, development and continued well-being and the potential of vitamin A derivatives and synthetic mimetics to serve as therapeutic treatments for cancers and other debilitating human diseases. VOLUME I: Here, we present the first volume of a multi-volume series on Retinoic Acid Signaling that will cover all aspects of this broad and diverse field. One aim of Volume I is to present a compilation of topics related to the biochemistry of nuclear retinoic acid receptors, from their architecture when bound to DNA and associated with their coregulators to their ability to regulate target gene transcription. A second aim is to provide insight into recent advances that have been made in identifying novel targets and non-genomic effects of retinoic acid. Volume I is divided into ten chapters contributed by prominent experts in their respective fields. Each chapter starts with the history of the area of research. Then, the key findings that contributed to development of the field are described, followed by a detailed look at key findings and progress that are being made in current, ongoing research. Each chapter is concluded with a discussion of the relevance of the research and a perspective on missing pieces and lingering gaps that the author recommends will be important in defining future directions in vitamin A research.

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