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Altri autori (Persone)	FraifeldVadim E
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Nota di contenuto	Introduction to optimistic gerontology -- The origin of life, immortality, and aging -- Cellular learning, decision-making, and rejuvenation -- Sporulation, meiosis and rejuvenation -- Longevity secrets of the three marine beauties—sponges, corals and sea anemones -- Metazoans who live longer than Jeanne Calment -- Transposable elements and rejuvenation of genome -- Embryonic stem cells and the 'last-minute' correction -- Muse cells and VSEL stem cells in longevity and rejuvenation -- The paradox of the adult stem cells: Relevance to aging and rejuvenation -- Biological age can be moved in both directions -- Rejuvenation is on its way.
Sommario/riassunto	This book is a systematic collection and critical analysis of current information on rejuvenation, starting from the evolutionary aspects of the origin of life, immortality, and aging. Models, mechanisms, and

types of rejuvenation are the key subjects of the book. Processes like cellular reprogramming, resetting of the aging clock, immortal unicellulars and cell cultures are explored through the lens of rejuvenation. Recent discoveries in this field offer a nuanced view of rejuvenation that has fascinated mankind since early history. There is evidence, though still controversial, indicating that biological time could be reversible. Indeed, under specific experimental conditions, cells can be moved back and forth along the age axis. Differentiation status and replicative age of cells can be modified not only by defined transcription factors, but also by 'cocktails' of small molecules originating from natural substances or well-known longevity-promoting drugs. Still in its infancy, such findings open up the perspective of in vivo rejuvenation trials. Special attention is given to the quasi-immortal and extremely long-lived multicellular animal species as well as to the role of rejuvenation in treatment of pathology and healthy aging. Rejuvenation is experiencing a significant growth in recent years. There is ample debate in the scientific and near-scientific community about the ethics of rejuvenation and radical life span extension. This book aims to take a balanced and scientific approach to the mirage of immortality and ever-lasting youth and serves as a valuable resource for parties on both sides of the coin.

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