1. Record Nr. UNINA9910437617403321 Titolo Telomere territory and cancer / / Parvin Mehdipour, editor Dordrecht [Netherlands] : : New York, : Springer, 2013 Pubbl/distr/stampa **ISBN** 1-283-63389-2 9786613946348 94-007-4632-6 Edizione [1st ed. 2013.] Descrizione fisica 1 online resource (212 p.) Altri autori (Persone) MehdipourParvin Disciplina 572.87 Soggetti Telomere **Telomerase** Cancer cells Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Description based upon print version of record. Note generali Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Preface: Contents: Abbreviations and Acronyms: Contributors: Chapter-1; Telomerase: from Aging to Human Cancers; 1.1 Introduction; 1.2 Telomerase in Aging; 1.3 Telomerase in Leukemia; 1.4 Telomerase in Lymphomas; 1.5 Telomerase in Carcinomas; 1.6 Telomerase in Sarcomas; 1.7 Telomerase Targeted for Cancer Therapy; 1.8 Conclusions and Future Perspectives; References; Chapter-2; Telomerase: Basic and Clinical Approaches; 2.1 Introduction; 2.2 Telomerase Structure; 2.3 Telomerase Regulation; 2.3.1 Pretranslational Regulation; 2.3.2 Posttranscriptional Regulation; 2.3.3 **Telomerase Activators** 2.3.3.1 Akt kinase2.3.3.2 Protein kinase C and IP6; 2.3.4 Telomerase Repressors; 2.3.4.1 c-Abl; 2.3.4.2 PP2A; 2.4 Telomerase Activity and Expression of Its RNA Component (hTR) in Breast Cancer Patients (Adapted from Hosseini et al. 2006a Hosseini et al. 2006b); 2.4.1 Methods; 2.4.2 Results; 2.4.3 Discussion; 2.5 Expression of hTR and hTERT in Human Breast Cancer Patients: A Clinical Based Data (Adapted from Hosseini et al. 2006a Hosseini et al. 2006b); 2.5.1 Results; 2.5.2 Discussion: References: Chapter-3

Detection of Telomerase Activity: A New Strategy for Detecting Low Activity of Telomerase3.1 Introduction; 3.2 TRAP Assay; 3.3 TRAP-SPA;

3.4 Real-Time Quantitative Assay (RQ-TRAP); 3.5 ISTRAP; 3.6 PCR-Free Telomerase Detection: 3.7 TMA/HPA: 3.8 A New Strategy for Detecting Low Activity of Telomerase: 3.8.1 Material and Methods: 3.8.2 Results: 3.8.3 Discussion; References; Chapter-4; Telomere, Regulation and Tumorigenesis; 4.1 Introduction; 4.2 Telomeric DNA; 4.3 Telomeric Proteins and Its Regulation; 4.4 Telomeric Proteins and DNA Repair; 4.5 Telomeric Position Effect and Its Proteins 4.6 Telomere Protection and Maintenance4.7 Telomere Maintenance and DNA Damage Response: 4.8 Telomeres and Homologous Recombination: 4.9 Alternative Mechanism of Telomere Maintenance: 4.10 Telomere Function in Meiosis; 4.11 Telomere Dysfunction and Tumorigenesis: 4.12 Telomere and Telomerase in Brain Tumors: References: Chapter-5: Novel Hypothesis on Telomere Length: Heterogenic Targets as Genomic/Somatic Diverse Value in Breast Cancer and Brain Tumor; 5.1 Introduction; 5.1.1 Techniques to Measure TL At a Glance; 5.2 Cell; 5.2.1 Cell Is Core Spring of Our Life 5.2.2 The Initiative Reports on Tumor Evolution Contributed by 5.2.3 Cells Live, Divide and Die; 5.3 Pedigree-Based Insight in Cancer; 5.3.1 The Characteristics and Impact of Pedigree-Based Research; 5.4 Diversity and Evolution; 5.4.1 Hypothesis and Tumorigenesis; 5.4.2 Questions on Some Facts in Cancer Biology: 5.4.3 Diversity: 5.5 Natural Selection; 5.6 Basic Facts About Telomere at a Glance; 5.7 Evolution and Novel Hypothesis on Telomere Length; 5.7.1 Modeling and Hypothesis; 5.7.2 Pedigree as a Core in Cancer Research; 5.7.2.1 Sample Designing; 5.7.2.2 Patients and Control Groups 5.7.2.3 Brief Strategy for Materials and Methods

Sommario/riassunto

Timing, racing, combating, struggling and targeting is some actions through which cellular fate could be reflected and evaluated. Interaction between cell territory and environment occur during pre-embryonic, fetal development, and post-natal periods. What the researchers observe as the outcome of telomeres behavior is only the peak of an ice mountain within a stormy ocean. Cellular life depends on programmed behavior of telomeres, capable to surprise the cells. Telomeres provide an introduction to the history of our cells which govern the quality of life and status of health. Telomeres as the cooperative territory are capable of stabilizing the chromosomal territory. The status of telomeres reflects the key information, announcing the real age of individuals, and may be a valuable marker for prognosis and predicting cancer. Telomere territory is characterized with a multi-disciplinary manner. Therefore, this book is aimed to offer a wide range of chapters, hoping to be useful for diverse audiences, including hematologists-oncologists, radiotherapists, surgeons, cancer researchers, and all the sectors who affect the macro- and microenvironmental domains. Finally, telomeres are sensitive, cooperative, and trustable targets. It is worth to state that 'telomeres are messengers of NATURE', let's to know them as they are.