

Cancer Phenotypes: Roles of Epigenetics, Non-Coding RNAs, Exosomes, Bioactives and New Delivery Systems for Cancer Therapy

Guest editors

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Aims:

Scope of the thematic issue is to provide an update on cancer development and its control: the effects of gene modifications, gene silencing by chromatin repression or block mRNA expression by microRNA activation, and to discuss the collaboration between different oncogenic pathways to the development and progression of cancerogenesis. We invite contributions to elucidate the role of transcriptional and post-transcriptional regulation (microRNAs, nucleotide changes altering pairing between mRNA and miRNAs, altered splicing, and various aspects of structural RNAs regulating the assembling and function of protein complexes (HOTAIR, HOTAIRM1, SAMMSON, BANCR, FAL1) in euchromatin /heterochromatin organization), and the epithelial to mesenchymal transition. Additional aspects are the application of inhibitors targeting the DNA repair proteins, the studies on cell-to-cell communication by means of exosomes, extracellular membrane vesicles (MBV) and miRNA cargos, and the exploitation of artificial MBVs to deliver oligonucleotides, RNA sponges, and bioactive compounds, including nanocarriers and liposomes, for the docking to cancer cells, delivering the bioactive components and altering their oncogenic potential.

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Final manuscripts due: 10-4-2020

Proposed contributions

1. George A Calin, MD Anderson Cancer Centre, Texas. gcalin@mdanderson.org
Immunotherapy and non-codingRNAs.
2. Chiara Martinelli, Italian Institute of Technology Chiara.Martinelli@iit.it
Smart Nanocarriers for targeted cancer therapy
3. Ammad A. Farooqi, Department of Molecular Oncology, Institute of Biomedical and Genetic Engineering (IBGE), Islamabad, Pakistan. ammadfarooqi@rlmclahore.com
Viscum album: Treasure trove for cancer therapy.
4. Massimo Mallardo, Department of Molecular Medicine and Medical Biotechnology
University of Naples, Massimo.mallardo@unina.it
5. C. Caiazza, C. Ambrosino, F. Passaro and Mallardo M. non-codingRNAs as signal transduction mediator in cancer: from function to relevance in diagnosis, prognosis and therapy.
6. Maria DiGirolamo, Sol&Farma S.r.l., Biotechnology Research unit, Faculty of Medicine, Teramo University marielladigirolamo@hotmail.com

DNA repair alterations and inhibitors of ADP ribosylation for cancer therapy.

7. Aamir Ahmad, aaahmad@health.southalabama.edu Bioactives and role in cancer control.
8. James McCubrey Department of Microbiology and Immunology, Brody School of Medicine at East Carolina University, Greenville, NC, USA MCCUBREYJ@ecu.edu
Novel Roles of Nutraceuticals and miRs in Sensitivity of Cancer Cells to Therapeutic Approaches.
9. Palmiro Poltronieri (+ Antonella Leone) Bioactivity of resveratrol polyphenols and lycopene in genetic and epigenetic regulation and cell-to-cell communication.
10. Rafael Soares Lindoso, Carlos Chagas Filho Institute of Biophysics, Federal University of Rio de Janeiro , Rio de Janeiro, Brazil . lindoso@biof.ufrj.br
Role of Extracellular Vesicles in the regulation of tumor microenvironment, and use of vesicles for drug delivery.
11. Nawaz M. Functional analysis of extracellular vesicles.