

Special Issue on
Epigenetic Targeting Therapeutic Approaches in Drug Resistant Cancers

CALL FOR PAPERS

Cancer is one of the leading causes of death worldwide in countries at all income levels. Despite significant progress in treatment of cancer, patients have different sensitivity to available chemotherapeutics due to tumor heterogeneity, which predicts poor prognosis and outcome in patients. Combination of multidrug therapies are associated with increased toxicity levels and are more costly. High toxicity is therapy limiting factor. Therefore, overcoming drug resistance is one of the primary goals in the field of cancer research. In recent years, better understanding of tumorigenesis, angiogenesis, epithelial-mesenchymal transition, metastasis, and immune modulation has brought calls for modern, less toxic approaches with improved efficacy. Ideal approaches should be tailored to not only a given cancer but also the individual, with adequate unprecedented age of personalized medicine. In this frame, epigenetic modifications, such as DNA methylation, histone modifications, and changes in noncoding RNA expression levels alter DNA accessibility and chromatin structure, thereby regulating patterns of gene expression. Hereby epigenetic modifications play an essential role in a wide variety of biological processes and are involved in the progression of cancer and development of drug resistance. Epigenetic targeted therapies have newly become improved due to modulating chromatin structure. However, advanced studies are necessary to clarify the mechanisms that select specific target genes for directed epigenetic regulation prior to developing targeted therapeutic approaches for drug resistant cancers.

The major aim of this proposed special issue is to discuss the recent innovations about diagnostic and prognostic potential of epigenetic features of tumors across the globe and create safe personalized epigenetic targeting therapeutics for drug resistant cancer patients. We invite original papers and clinical studies focused on various aspects of epigenetic targeting therapeutic approaches to overcome drug resistance in cancers.

Potential topics include but are not limited to the following:

- ▶ Epigenetic alterations as biomarkers for tumor diagnosis and prognosis
- ▶ Epigenetic biomarkers of chemo/radiotherapy resistance
- ▶ The role of circulating epigenetic factors in cell-cell communication and metastasis
- ▶ Epigenetic factors as drug targets for cancer therapy
- ▶ Potential usage of epigenetic biomarkers in cell-based cancer therapies and biological/nonbiological drug delivery

Authors can submit their manuscripts through the Manuscript Tracking System at <https://mts.hindawi.com/submit/journals/jo/edrc/>.

Papers are published upon acceptance, regardless of the Special Issue publication date.

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