Tentative Outline

Special/Thematic Issue for the journal "Current Gene Therapy - CGT"

Tentative Title: Epigenetic regulation in human diseases and gene therapy

Guest Editor: Qiang Wu

Scope of the Thematic Issue:

Epigenetic mechanisms including DNA methylation, histone post-translational modifications, non-coding RNAs and chromatin remodeling play crucial roles in gene expression. Aberrant epigenetic changes are often correlated with human diseases and metabolic disorders. Since gene expression can be activated/inactivated by reversible epigenetic mechanisms, more and more studies have been focused on epigenetic regulation in gene therapy. This special issue welcomes review articles aiming to demonstrate the fascinating epigenetic mechanisms and efficacy of epigenetic drugs in human diseases and gene therapy.

Keywords: epigenetic regulation, histone modifications, DNA methylation, non-coding RNAs, chromatin remodeling, epigenetic drugs, gene therapy

Sub-topics:

- Functions of histone modifications in diseases and gene therapy
- Role of DNA methylation in diseases and gene therapy
- The regulatory roles of non-coding RNAs in gene therapy
- Other chromatin changes in gene therapy
- Development of new epigenetic drugs
- Cross talks among epigenetic regulations, environmental changes, and genetic factors
- Epigenetic methods in treating COVID-19 and other infectious diseases

Tentative titles of the articles:

The first part: epigenetics in cancer therapy

- Epigenetics in Cancer therapy
- Epigenetics in the development of cancer
- Long non-coding RNAs in tumor microenvironment
- Novel Therapeutic Approaches Targeting Cancer Epigenetic Processes
- Non-coding RNAs in cancer stem cells
- Therapeutics for Intractable Cancer
- Genetically engineered oncolytic viruses
- RNA methylation in cancer progression
- Histone demethylase and genome integrity
- Cancer Signaling and Epigenetics

The second part: epigenetics in human diseases

- Unfolded Protein Response and Oncogenesis
- Systems pharmacology and epigenomics
- Epigenetic state of cells of the oligodendrocyte lineage diseases
- Chromatin and Ageing
- Epigenetic mechanisms in leukemia
- Epigenetic regulation in cellular senescence
- Chromatin structure in diseases
- Histone Variants in development

- Epigenetic Chemical Biology
- Clinical implications of the aberrant epigenetic alterations

Schedule:

✧ Complete Thematic issue submission deadline: **31 October 2022**

Details of Guest Editors:

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