

Call for Papers - Special Issue on Epigenetics in Cancer

Cancer is a complex disease that can involve both genetics and epigenetics alterations. Epigenetics, unlike genetics, is a heritable state of gene expression without change in the DNA sequence. Epigenetic mechanisms that commonly occur during normal development include DNA methylation, histone modifications, and small noncoding miRNAs, disruption of which can lead to change in transcription and translation, thereby altering expression profile of specific genes. Thus, epigenetics plays fundamental role in the development, initiation and progression of human disease including cancer, as well as cancer drug resistance. Epigenetic alterations are reversible by many pharmacologic approaches, including histone deacetylase inhibitors and demethylating agents. Thus, better understanding of the contribution of epigenetic modifications to carcinogenesis may lead to improvement of cancer prevention and treatment strategies.

In this special issue, we aim to focus on cutting-edge areas of epigenetics in cancer research including basic science, translational research, treatment and drug resistance in cancer. We invite authors who are leading experts in the field to contribute original articles or reviews describing novel developments in epigenetics research.

Keywords: DNA methylation, histone modifications, epigenetic therapy, drug resistance

Potential topics include, but are not limited to:

- Chromatin regulation, dynamics and signaling in cancer
- Epigenetic alterations as biomarkers for cancer diagnosis
- Epigenetic mechanisms involved in cancer pathology
- Genome stability and environmental epigenetics.
- The future of epigenetic therapy in cancer and rational drug combinations.
- The role of epigenetics in cancer drug resistance.
- “Current methodologies to detect epigenetic changes in cancer” OR “Gold-standard methods for the detection of epigenetic changes in cancer”

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