Special Issue

Interplay between Epigenetics and Metabolism in Cancer and Other Disorders

Message from the Guest Editor

Numerous studies have indicated that cellular metabolism and epigenetics are highly interconnected, contributing not only to physiological changes but also to numerous differnt human disorders and cancers. The epigenetic regulation of genes mediated by DNA- and histone-modifying enzymes (DNMT, HAT, HDAC, KAT, KDM. BET. etc.) is influenced by oncogene-mediated metabolic alterations. Such metabolic changes affect the presence or accesibility of cofactors that are required for the catalytic activity of epigenetic modifying enzymes. In addition, these metabolic alterations may produce oncometabolites that abnormally activate or inhibit such modifying enzymes, altering the epigenome. As a result, the interplay between metabolism and epigenetics is crucial for the development of human diseases and tumorigenesis. Discovering novel molecular mechanisms linking the two pathways and targeting their downstream substrates could provide novel therapeutic targets to treat patients with different diseases.

In this issue, we are particularly interested in the regulation and mechanism of epigenetic enzymes and metabolic enzymes in cancer.

Guest Editor

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Deadline for manuscript submissions

closed (28 February 2021)



International Journal of Molecular Sciences

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