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Deciphering Epigenetic Signature in Human Health and Disease

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Message from the Guest Editors

Epigenetic modifications, including DNA methylation, histone modifications, chromatin remodeling, and noncoding RNAs, represent the regulatory network at the basis of development and differentiation. The fundamental role in gene expression puts epigenetics at the head of many diseases related to both development and cancer progression.

Aberrant DNA methylation is a cause of altered development and is liable for tumors and several diseases. In recent years, the methylation signature has been the focus of numerous studies for the early diagnosis of diseases, given the advantage of being able to detect DNA methylation through free circulating DNA analysis. The genome and epigenome in single-cell sequencing have enabled deciphering some of the epigenetic codes underlying both development and severe diseases.

The aim of this Special Issue is to provide a broad overview of the topic of epigenetic signatures that mark development and cells differentiation. It will give attention to the genomic distribution of DNA methylation at high resolution in various organisms, cell types, and diseases.









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Message from the Editor-in-Chief

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