



## Metabolic Changes and Epigenetic Alterations

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### Message from the Guest Editors

The link between metabolism and epigenetics has been established for many years. It has been demonstrated that metabolites might work as a cofactor of specific epigenetic enzymes regulating their function and, consequently, cell transcriptomic landscape. These epi-metabolite fluctuations affecting the cell epigenome might contribute to the onset and progression of the above-mentioned pathophysiological conditions. In this light, the discovery of the so-called “nuclear metabolic niches” confirmed the strict physical interaction between mitochondria, the main source of metabolites, and nuclei where the epi-metabolic exchange occurs. There, metabolic enzymes directly provide metabolites to epigenetic enzymes located at the chromatin. Moreover, recent advances in OMIC technologies and integrative analysis have helped to shed light on a set of novel epi-metabolic interactions underlying human diseases. The present issue has been designed with the goal to collect recent and original data pointing out the special link between metabolism and epigenetics in different pathophysiological contexts.





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## Message from the Editor-in-Chief

The metabolome is the result of the combined effects of genetic and environmental influences on metabolic processes. Metabolomic studies can provide a global view of metabolism and thereby improve our understanding of the underlying biology. Advances in metabolomic technologies have shown utility for elucidating mechanisms which underlie fundamental biological processes including disease pathology. *Metabolites* is proud to be part of the development of metabolomics and we look forward to working with many of you to publish high quality metabolomic studies.

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