



Epigenetic Regulation of Cellular Differentiation

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Message from the Collection Editor

Cell differentiation is a process through which newly formed cells acquire specific features required for the precise functions that they are to fulfill in the organism. Upon differentiation, cells alter not only their size, shape, motile/adhesive properties, etc., but also metabolic and other biochemical characteristics. All these changes are possible due to orchestrated and time-coordinated expression, or silencing, of multiple genes. The involvement of epigenetic factors, such as DNA methylation, histone modifications or micro RNAs, in the regulation of genes involved in cell differentiation is a recognized fact; however, what we still need to know is how the epigenetic changes accompanying cellular differentiation are tailored to execute a gene expression program appropriate for each cell/tissue type.

The aim of this Special Issue is to bring together a set of reviews and research articles on the role of epigenetic regulation in cell differentiation in vitro and in vivo.





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Message from the Editor-in-Chief

In the past years the growth of the epigenetic field has been outstanding, from here the need of a journal where to centralize all new information on the subject. The term epigenetics is now broadly used to indicate changes in gene functions that do not depend on changes in the sequence of DNA. *Epigenomes* covers all areas of DNA modification from single cell level to multicellular organism as well as the epigenetics on human pathologies and behavior.

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