Topical Collection

Epigenetic Control in Plants

Message from the Collection Editor

Plants are sessile organisms with the capacity to respond to a varying environment throughout their lives. This capability is mediated through the moderation of gene expression without change to DNA sequence, a phenomenon known as epigenetics. Epigenetic mechanisms thereby mediate developmental progression of an organism and also the resilience to accommodate for change. Thus, epigenetic regulation in plants can be mediated in several ways, most notably mi RNA- and siRNA-based systems, histone modification and DNA methylation. On a global scale methylation accumulates during somatic development, although external stimuli can cause either the methylation or demethylation of specific sites. About a third of plant genes are methylated at maturity but meiosis acts as a clearing house for methylation, with only a few methylated sites surviving through to the next generation. Atypical methylation can cause developmental or physiological anomalies. The aim of this Topic Collection is to bring together a set of reviews and research articles on the role of epigenetic regulation in plants during sexual and asexual reproduction, development, and evolution.

Collection Editor

Dr. Vladimir Brukhin

Department of Plant Embryology & Reproductive Biology, Komarov Botanical Institute RAS, 2 Professor Popov Street, 197376 Saint-Petersburg, Russia

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Epigenomes
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
epigenomes@mdpi.com

mdpi.com/journal/epigenomes

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About the Journal

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.
Epigenomes (ISSN 2075-4655) is a fully peer-reviewed publication outlet with a rapid and economical route to open access publication. All articles are peer-reviewed and the editorial focus is on determining that the work is scientifically sound rather than trying to predict its future impact.

Editor-in-Chief

Prof. Dr. Ernesto Guccione
Icahn School of Medicine at Mount Sinai, Hess Center for Science and Medicine, New York, NY 10029, USA

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