Special Issue

MYC, New Insights into Its Regulation and Function

Message from the Guest Editor

The MYC gene is frequently deregulated in cancer, and its overexpression is associated with the development and progression of many types of tumors. In humans, the dysregulation of c-Myc can be caused by gene amplification, chromosomal translocation, or other mechanisms that promote uncontrolled cell growth and division, contributing to the formation of tumors. While MYC is commonly studied in the context of cancer, MYC's role is critical in various physiological processes, including embryonic development, tissue regeneration, and immune responses. Using animal models, notably *Drosophila*, researchers have investigated the consequences of altered MYC expression or activity in vivo. Manipulating the endogenous MYC levels in specific tissues or developmental stages has effects on cell competition, a conserved mechanism that regulates tissue growth and homeostasis, which is implicated in the elimination of unfit or damaged cells. Furthermore, genetic screens using in silico and animal models will continue to identify targets of MYC, providing valuable insights into the components that control its complex regulatory network.

Guest Editor

Dr. Paola Bellosta

1. Department of Cellular, Computational and Integrative Biology (CiBio), University of Trento, 38123 Trento, Italy
2. Department of Medicine, NYU Langone Medical Center, New York, NY 10016, USA

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

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Editor-in-Chief

Prof. Dr. Selvarangan Ponnazhagan
Department of Pathology, The University of Alabama at Birmingham, 1825 University Blvd, SHEL 814, Birmingham, AL 35294-2182, USA

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