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## MYC, New Insights into Its Regulation and Function

Guest Editor:

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### **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.



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# Special Issue



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