

Special Issue

MicroRNAs in Physiology and Pathophysiology

Message from the Guest Editor

MicroRNAs (miRNAs) are well-known members of the ncRNA family. MiRNAs are small, single-stranded RNAs about 22 nucleotides in length that are transcribed from our genome without the capacity to encode proteins. These ncRNAs are critical regulators of gene expression that affect a wide range of physiological processes necessary to maintain cellular homeostasis. On the other hand, the aberrant expression of miRNAs leads to various pathological conditions, particularly neoplastic disease. Binding of miRNAs to tumor suppressor and oncogene mRNAs is associated with cancer initiation, promotion, progression, and metastasis. Importantly, it is known that miRNAs are promising markers also for prediction, disease monitoring, and therapy response in various human disease states. Currently, one of the main goals of miRNA research is to translate this theoretical knowledge into clinical practice. This Special Issue is focused on recent advances in the involvement of miRNAs in physiological and pathological processes leading to different diseases. Discoveries of new molecular targets of miRNAs, miRNA-based diagnostic methods, and therapies are of special interest.

Guest Editor

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