Special Issue

The Lesser Known World of RNA Circles

Message from the Guest Editors

Circular RNAs (circRNAs) represent a heterogeneous class of covalently closed single-stranded RNA molecules. CircRNA was first discovered in plant viroids and eukaryotic cells by electron microscopy more than 40 years ago. For the last four decades, they were mostly considered as non-functional splicing products or intronic lariats. The advent of next-generation sequencing technologies and novel bioinformatic tools led to the discovery of the ubiquitous and abundant expression of circRNAs across eukaryotic organisms. However, it is essential to note that only a handful of circRNAs has been functionally characterized among thousands of circRNAs identified to date. The last few vears have seen an increasing number of reports suggesting the association of circRNAs in human development and diseases. In addition, recent studies have established that circRNAs regulate gene expression by modulating the activity of RNA-binding proteins and microRNAs. Some of the circRNAs have been shown to translate into proteins and regulate cellular physiology. However, many of the molecular details of circRNA biogenesis and function remain to be explored.

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Message from the Editor-in-Chief

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