

Modulation of RNA function by small ligands.



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When I learned central dogma, RNA was just a blue print of proteins. But nowadays RNA is recognized as functional molecules to participate in a number of important biological reactions. To exert the RNA function, folding into the appropriate secondary and tertiary structures of RNA is essential. Riboswitches are one of typical examples of those functional RNA. In my lecture, our recent studies focused on the modulation of RNA secondary structures and function by our own RNA-binding small ligand will be discussed. These studies provide artificial RNA switches operated by small ligands, which will be useful as genetic switch in synthetic biology and chemical tools in modulating gene expression.