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Study of Ribonucleoprotein complexes by solution-state NMR, and application to the identification of novel drug targets

We aim to characterize the structure and the mode of action of ribonucleoprotein (RNP) complexes involved in RNA processing, in the regulation of gene expression and in host-pathogen interactions. This knowledge allows the design of small molecules inhibitors or enhancers of the activity of the RNP machinery and consequently human intervention in disease processes. The regulation of cellular processes and host-pathogen interactions through RNP complexes offers the opportunity to identify new drug targets. This is highly relevant in an era when human health is challenged by the outbreak of new infectious diseases, and pathogens with increasing resistance to established treatment represent another threat to human health. Finally, the increasing age of the population intensifies the demand for treatment of age-related pathologies, such as cancer and neurological degeneracy. In this picture the emergence of new drug targets, together with a molecular understanding of their function, represents an important perspective.

Hôte : Groupe des Jeunes Chercheurs de l'IBS