

Title	Targeting RNA with small molecules to study multicomponent RNA-based interactions
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Project description:

RNA regulates functions essential to life, and applied research in this field is a field of interest of the PNRR. This PhD project Targeting RNA with small molecules to study multicomponent RNA-based interactions (DM118 - 2023) aims at developing knowledge and skills applied to the analysis of RNA using specific drugs and ligands coupled to biophysical techniques for the study of free RNA or in binary and ternary complexes. The multicomponent molecular interaction analysis strategy uses RNA-specific mass spectrometry techniques employing molecules that bind RNA structures. RNA-ligand-protein interactions studied with mass spectrometry will allow us to understand the structures and mechanisms of alteration of the 3D conformation of RNA.

This research will be carried out in collaboration with international and intersectoral networks, focussing mainly on RNAs necessary for specific viral replication steps. The project foresees a research period of at least 6 months abroad (Department of Biochemistry, Faculty of Science, Charles University Prague-Czech Republic).

Hosting group(s) for the period abroad (tentative list, may change):