Special Issue

The Opportunities for Nuclear Magnetic Resonance of Proteins: From Structure to Function and Quality Control

Message from the Guest Editors

Nuclear magnetic resonance spectroscopy is a highly developed, non-invasive technique that can be used to study biomolecules at the intimate, atomic level. NMR involves the detection of resonant interaction between magnetic moments of nuclei with an external applied magnetic field and, therefore, it can report on extraordinarily fine details as compared to other methodologies. The detectability of NMR signals is not limited by the state of matter in which the spins are sitting, and it is possible to say that NMR can directly observe interesting targets in the environment in which they act. Moreover, NMR is completely complementary to other structural techniques, such as X-ray diffraction and cryo-EM, for which it is more difficult to access the atomic level and/or there is a requirement for samples to be in a particular state (crystalline, frozen, etc.). This Special Issue is dedicated to those aspects that make NMR spectroscopy an irreplaceable tool for protein science. These include, but are not limited to, the detection of transient interactions, conformational plasticity, drug screening, and protein drug/biologics quality control as well as aspects of sample preparation.

Guest Editors

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