BIOPHYSICAL CHARACTERIZATION OF PROTEINS AT CENTRE OF MOLECULAR STRUCTURE OF BIOCEV

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Centre of molecular structure (CMS) of BIOCEV, operated by the Institute of Biotechnology, is a member of the European project of large research infrastructure INSTRUCT. The biophysical research facilities as a part of the CMS provide shared resources of the state-of-the-art instruments and technologies for biophysical characterization of the stability and structure of proteins and their interactions with other proteins, DNA, RNA, lipids, carbohydrates and small molecules.

CMS provides access to the equipment for the study of biomolecular systems for research groups of Institute of Biotechnology, BIOCEV, and the broader community of the Czech and EU molecular biologists. The biophysical facility at CMS allows determining binding constants, reaction stoichiometry, thermodynamic profiles, real-time affinities, specificities, and kinetics of the interactions, stability and conformation of biomolecules using surface plasmon resonance technique, label and label-free microscale thermophoresis, isothermal titration calorimetry and differential scanning calorimetry, circular dichroism and UV/Vis spectroscopy, differential scanning fluorimetry and dynamic light scattering techniques.