

Poster Presentation

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From gene to structure: high performance facility for structural biology.

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Structural studies became an important stage in the modern biotechnological researches. It plays a key role in the discovery of new drug targets, development of novel biocatalysts and drug design. NBICS- Center of NRC «Kurchatov Institute» has a high performance scientific platform for structural studies of macromolecules by means of X-ray and NMR. Among preliminary methods employed in the department are genome sequencing, LC-mass spectrometry, expression of recombinant proteins in bacterial, yeast and mammalian cells and subsequent isolation by HPLC. Primary screening of protein crystallization conditions is performed by sitting drop method using Phoenix RE system. Diffraction data can be collected at "Protein" station of Kurchatov Synchrotron Radiation Source.

Main scientific interests of the department are focused in the area of biomedical engineering. It includes discovery of novel drug targets for antibacterial therapy, development of enzymes involved in synthesis of pharmaceutical precursors and biosensors based on the fluorescent proteins.

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