

“Human Proteome” Core Facility

<http://proteocenter.ibmc.msk.ru/en/>

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“Human Proteome” Core Facility

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- Assists in researches in the field of biochemistry, proteomics, metabolomics, medical diagnostics and bioinformatics.
- Provides services to more than 100 organizations, including institutes of the Russian Academy of Science, Healthcare Ministry, as well as private companies.
- Is involved in International Human Proteome Project.

Main services:

- MALDI-TOF analysis (including MS/MS), HPLC followed by high resolution and high mass accuracy MS/MS
- Q-TOF-based metabolomics analysis of low-molecular weight compounds
- Full proteome analysis including enzymatic digestion of sample proteins in gel spots and solutions; HPLC-MS/MS; Mascot (or other search engine) database search and interpretation of data using standard or custom databases.
- Label-free quantitative protein analysis and targeted SRM quantitation with C13 isotopically labeled peptide standards

Mass spectrometers: MALDI-TOF, LC-ESI-MS (OrbiTrap, QQQ, Q-TOF, timsTOF)



Main services:

- Protein interactomics
- Quantitative analysis of biomolecular interactions in real-time using SPR biosensor (kinetics, affinity)
- Characterization of native or recombinant protein-protein and protein-ligand interactions.

Optical biosensors (SPR)



Main services:

- Nanobiotechnology
- Visualization of single macromolecules

AFMs: Dimension FastScan Bio, SOLVER NEXT TITANIUM



Main services:

- Bioinformatics for OMICS data
- Peptides synthesis (Overture, Hamilton automated station)
- Microscopy for cell growth analysis and cell migration analysis (Incucyte)
- Electrochemical researches for medicine
- etc

