

EINSTEIN PROTEOMICS CORE – EQUIPMENT LIST

Agilent 6490 Triple Quadrupole mass spectrometer with Electrospray: The Triple Quadrupole is utilized to perform quantitative targeted experiments that require high sensitivity and specificity. Typical examples are quantification of selected peptides or small molecules in complex matrices like blood or other body fluids. The instrument is coupled online with liquid chromatography (Agilent) for high resolution separation of analytes.

Bruker Ultraflex TOF/TOF Imaging mass spectrometer (MALDI): This instrument is utilized either for fast screening of compounds that do not require chromatographic separation or tissue imaging. Imaging is one of our most advanced services, as it allows to map on most surfaces (including tissue slices) analytes. The instrument acquires spectra as pixels of an image, and from each pixel selected masses can be extracted to draw the position of any analyte on a surface.

Thermo Scientific Orbitrap Velos with Nano-Electrospray: The Orbitrap Velos is the instrument utilized for large-scale proteomics. The instrument is coupled with nano-liquid chromatography to achieve sub-femtomole sensitivity of peptides and other biomolecules. The service includes data processing, data analysis and visualization (performed with our state-of-the-art server).

Thermo Finnigan LTQ Linear Ion Trap mass spectrometer with TriVersa NanoMate (Advion): This instrument is dedicated to projects that analyze samples requiring high-throughput. The TriVersa NanoMate is a device that performs very rapid injection of samples in liquid state, which are sprayed and acquired by the ion trap mass spectrometer. Examples of analytes analyzed with this procedure are nucleotides, amino acids and other small molecules in not excessively complex mixtures.