

Research facilities

The Structural Biology and Molecular Biophysics Theme benefits from a diverse range of state-of-the-art analytic facilities.

Birmingham's **Advanced Mass Spectrometry facility** (</facilities/advanced-mass-spectrometry/index.aspx>) boasts Thermo Scientific LTQ FT Ultra, Thermo Scientific Orbitrap Velos ETD and Thermo Scientific TSQ Vantage mass spectrometers all equipped with nano-LC separation systems, which facilitate protein identification and quantitation, as well as the characterisation of post-translational modifications of proteins metabolomics analysis.

The **Birmingham Biophysical Characterisation Facility (BBCF)** (</facilities/bbcf/index.aspx>) features a range of equipment for essential biophysical characterisation of proteins and their complexes with ligands, including circular dichroism (CD), Fourier Transform Infrared Spectroscopy (FTIR), Analytical Ultracentrifugation (AUC), Dynamic Light Scattering (DLS), X-ray Crystallography and Isothermal Titration Calorimetry (ITC).

Macromolecular X-Ray Diffraction Facility (</facilities/x-ray/index.aspx>) is supported by a state-of-the-art microfocus rotating anode generator in combination with a 4-circle kappa goniometer and CCD detector. Crystallisation of proteins takes advantage of a Mosquito nano-litre liquid handling robot and an automated microscope system with attached plate holder and UV imaging capability.

The Structural Biology and Molecular Biophysics theme has close links to Birmingham's **Henry Wellcome Centre for Biomolecular NMR** (<http://www.nmr.bham.ac.uk>), which houses the National 900 MHz NMR facility.