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# PROTEOMICS AND METABOLOMICS PLATFORM



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The La Trobe University Proteomics and Metabolomics Platform offers a suite of synergistic capabilities for the characterisation of proteins and metabolites of interest to academic and industry researchers. We provide access to specialised research expertise, training and infrastructure in mass spectrometry and nuclear magnetic resonance (NMR) spectroscopy with capabilities in proteomics, metabolomics, small molecule structure determination, and bioinformatics.

#### **PROTEOMICS**

We use mass spectrometry in a wide range of applications to detect, identify, quantify and compare proteins in complex samples. We also offer quality control services for recombinant proteins and peptides.

We can perform accurate mass determination of purified proteins, proteome profiling, label-free and labelled quantification, phosphoproteomics, and custom applications.

#### **METABOLOMICS**

We provide optimisation and accurate detection, identification and quantification of small molecules in all systems, either via the non-targeted screening approach to understand the whole metabolome, and/or the targeted quantification of known specific metabolites. We work with various materials ranging from plants, viruses, bacteria, fungi to animals.

#### **BIOINFORMATICS**

Bioinformatics supports all our capabilities with core expertise in advanced experimental design, informatics, pathway analysis, high performance computing, data analysis and visualisation, statistics and highcapacity data storage.

### SMALL MOLECULE STRUCTURE DETERMINATION

We use NMR spectroscopy to determine how atoms connect to each other within a molecule and how molecules interact with each other. NMR is an important tool used in characterising the structure of compounds for a range of applications and is complementary to other biophysical characterisation methods.

#### **EXPERTISE AND TRAINING**

We provide expert advice on experimental design and methodology. We also offer technical support and training in the use of our state-of-the-art instruments and data analysis software packages.

#### ACCESS

Available to all academic and industry researchers.

Contact us pmp@latrobe.edu.au