

# University of Edinburgh at the cutting edge of science

✘ The University of Edinburgh has made a £1.2 million investment in some of the world's most advanced Nuclear Magnetic Resonance (NMR) and Mass Spectroscopy instrumentation to further consolidate its position as a 'centre of excellence' for its acclaimed research in cutting-edge molecular science.

The investment, funded by Core Capability EPSRC (Engineering and Physical Sciences Research Council) and the University of Edinburgh, will support the installation of NMR and Mass Spectroscopy instrumentation, providing the chemical sciences industry with one of the most advanced facilities in Europe, capable of handling an array of molecular constituents, across a broad spectrum of chemical and proteomic sampling.

Moreover, it heralds a new frontier in NMR and Mass Spectroscopy by offering greater efficiencies – higher sensitivity, shorter measurement times, high throughput, better accuracy and superior characterisation. For example, Throughputs by Ingenza, a biocatalyst and bioprocess development company, serving the pharmaceutical, food, fine chemical and biofuel industries, claims that the new NMR spectroscopy 'provides an almost instantaneous turnover of samples which is a huge benefit to research efforts.'

Welcoming the investment, Professor Eleanor Campbell, Head of the School of Chemistry, University of Edinburgh said:- "This latest investment in Nuclear Magnetic Resonance and Mass Spectroscopy further enhances our capability to support the chemical sciences and pharma communities.

"We now provide full access to the latest analytical instruments and expertise, and I'm confident we'll see

fruitful national and global collaboration, given the University of Edinburgh's historic legacy as a centre of excellence in this field and also for our students and researchers to take their expertise into the wider world."

Edinburgh Research and Innovation (ERI), the commercialisation arm of the University of Edinburgh, will look to develop commercial opportunities for the state-of-the-art instrumentation. Stuart Duncan, ERI's Business Development Executive at the School of Chemistry commented:-"This investment builds on our excellent track record in making our world class research base available to the wider chemical sciences community and on our ongoing collaboration and equipment-sharing with the University of St Andrews who have made a similar scale investment in complementary equipment. It will be of interest to many different businesses which need access to these important analytical techniques."

The investment has been warmly welcomed by Chemical Sciences Scotland, the partnership of industry with Scotland's world-renowned academic sector and government agencies.

Its chairman, Sandy Dobbie, said:-"Collaboration, in particular between industry and academia, is a key component if we are to grow Scotland's chemical sciences sector. Today's announcement is another great example of how Scotland's academic sector is helping to support research within industry to improve manufacturing processes and develop new products."

Head of chemical sciences at Scottish Enterprise, Caroline Strain, added:-"Encouraging higher levels of innovation amongst our chemical sciences companies is a key priority for us, particularly as we strive to become leading players in sustainable manufacturing. I welcome today's announcement by the University of Edinburgh, and we will continue to work closely with them to help realise our collective ambitions."

NMR is a sophisticated and powerful analytical technology that is used by many disciplines of scientific research, medicine and industry. NMR delivers structural determination and identification of a range of materials including small organic/inorganic molecules, steroids, antibiotics, carbohydrates, lipids, polypeptides, proteins, nucleic acids and complex mixtures.

Mass Spectrometry, too, is a powerful analytical tool which can help to answer a wide range of biological and chemical questions.

For example, the identification and characterisation of proteins – of interest to researchers involved in the discovery of new therapeutic targets and to the biopharmaceutical industry for the characterisation of new potential products.

The new NMR and Mass Spectroscopy facilities will be showcased at an official 'industry day' 'open ceremony' event being held by the School of Chemistry on Thursday 1<sup>st</sup> May. Details can be found [here](#).

Further information on NMR and Mass Spectroscopy at the University of Edinburgh's School of Chemistry can be found [on the University website](#).