

## **The 28<sup>th</sup> Annual conference of the British Mass Spectrometry Society**

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The 28<sup>th</sup> Annual conference of the British Mass Spectrometry Society, held at York was an extremely beneficial for me to attend in terms of presenting my two posters (*A new approach on the identification of oxysterol metabolites; The identification of des-OH CI-MI and NOK3.15 metabolites formed in in-vitro by mass spectrometry*); getting critical feedback; to keep up-to-date with fascinating developments in mass spectrometry and analytical chemistry; and most important to keep up-to-date with the latest development in the area of interest. This conference provided an opportunity to broaden my knowledge in analytical chemistry by learning from other researches and well known scientists.

Professor R. G. Cooks presented an inspiring talk on his recently developed analytical technique - Desorption Electrospray Ionisation (DESI) and its current applications. Amazingly, DESI has proven capable of ionising samples on almost any surface at atmospheric pressure, with analysis times of just a few seconds. The transfer of ions from the surface into the atmospheric pressure interface of the mass spectrometer can take place close to the surface or at distance, even though the sample is in air. He proposed two mechanisms of this ionisation: chemical spattering and another possible mechanism is the same as in ESI.

My poster presentation took place during lunch time on Monday. Most of researchers who visited my poster were interested on the use of derivatisation agent for steroids, since steroids are not well ionised and hence difficult to detect in pg level by mass spectrometry. I was pleased to find out that several researches used similar approach for the identification of steroids in complex mixture and was able to discuss some advantages and disadvantages of this methodology. It was also very interesting to answer questions from fellow mass spectrometrists and hear their comments.

Manufacturer recent developments short talks were interesting especially one by Mark Harrison from Thermo Electron Corporation on the LTQ Orbitrap. This instrument

allows metabolite identification using MSn high-resolution and accurate mass measurements. Another interesting talk was presented by S. Karolia on new developed ProteCol™ columns for low flow LC. It was good to learn that the column body, column closure (frit) connecting tubing and end fittings are all integrated into a single unit.

Tuesday session was opened by Professor D. E. Clemmer, who described ion-mobility spectrometry analytical technique, when a packet of a mixture of ions in a buffer gas is exposed to an electric field the ions separated according to differences in their mobilities. He described an application of multi-dimensional IMS-MS separations and the development of the first IMS-IMS instrumentation, where mobility-separated ions are selected (based on their mobilities), collisionally activated and separated again. In this approach components are resolved based on differences in mobility rather than m/z values during MS/MS experiments. By applying this approach his research group had identified 800 proteins from human plasma and also identified some proteins from human brain.

Tuesday sessions on small molecules and interpretation brought a huge interest from delegates. There was no empty seat left in the lecture theatre. After the opening remarks and welcome from Soraya Monte, these sessions were opened with an excellent and inspiring presentation by Dr. W.J. Griffiths. It was interesting to learn how the analysis of a targeted analytes can be used to diagnosis disease. He talked about steroid compounds possess diverse functions in our body ranging from structural to signalling and regulatory. It was an inspiring lecture for me.

Chris Hopley gave a talk on the comparison of product ion MS/MS spectra produced by collision dissociation in tandem mass spectrometry by different mass spectrometers and pointed on the potential for the development of a universally transferable library between mass spectrometers.

The conference provided me with the opportunity to network with many groups not only from UK, but also from Canada and Netherlands; exchanging information and ideas. It was nice to see people I had met at previous BMSS 2004 conference and also to meet many new ones.

Thank you to the BMSS for the generous bursary allowing me to this great meeting in the University of York.