

HDX-MS WORKSHOP

15th May – 2017



HDX
HYDROGEN DEUTERIUM EXCHANGE
MASS SPECTROMETRY

 **cost**
EUROPEAN COOPERATION IN
SCIENCE AND TECHNOLOGY

A one-day data workshop is taking place preceding the main conference on the 15th of May.

The format of the workshop consists of a morning consisting of three parallel sessions, each consisting of 40 minutes. Each session will have a chaired group discussion (chaired by conference organisers) that will stimulate discussion with the following points

Session A: Sample preparation

- What are the limitations of the technique in terms of protein?
- How many samples 'should' I prepare to enough reproducibility?
- What are the advantages of different quenches?
- Under what circumstances should a fully deuterated sample be produced and where can it be foregone?
- What are the advantages and disadvantages of using automated sample preparation?
- What range of time points should I aim for?

Session B: Instrumentation, Fluidics, and Data Collection

- Overview of mass spectrometry instruments and their merits and disadvantages.
- What are the advantages of an integrated fluidics system compared to home-made.
- Optimisation of chromatography, gradients, back-pressures for most efficient digestion – reduction of disulphide bridges.
- What are the advantages of various proteases – which are commercially available?
- Various data collection methods, (MSE & Ion Mobility)

Session C: Data Analysis Overview of Available Software

- Overview of all the data analysis avenues available.
- Peptide identification using PLGS/Mascot
- Discussion of software suites available, how they differ.

The afternoon will commence with overviews of HDX processing and analysis software that have been developed in academia: **MEMHDX by Sébastien Brier**, **HDX Workbench by Bruce Pascal** and **ExMS by Zhong-Yuan Kan**.

The last part of the day will be Data Workshops and opportunity for Gold Sponsors to interact with participants. These will be drop-in sessions, participants can meet with the different software developers for troubleshooting and guidance.

Furthermore, there will be the possibility to discuss issues surrounding automation questions.