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BSPR 2018 – University of Bradford

Meeting theme: “One Health and Wellness”

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This year, the 15th British Society for Proteome Research conference held in the Norcroft conference centre at the University of Bradford for three days of intense and exciting scientific exchange during the trade exhibition, the wine reception and the conference dinner with the famous “Kathryn Lilley trivial pursuit quiz”. Attendance of over 100 corporate members, students and researchers enabled this conference to be a great success with the presence of a diverse and international line-up of speakers and exciting oral presentations on the “One health and Wellness” theme.

Plenary lectures, keynote lectures and selected talks were presented in sessions, followed by numerous passionate questions and debates. These sessions gave the opportunity to both established and junior scientists to present exciting work in the proteomic field. 5 topics emerged from these talks: the application of proteomics in biomarker discovery, their validation and translation into clinical diagnostic, the application of mass spectrometry to the study of protein-protein interactions, the localization and dynamic of organelle proteins, the development of proteomic methods for the study of new chemical modifications and the revolution of “big data” in proteomics. Amongst all the interesting and engaging presentations, here is a short summary of two of my favourite talks.

Sample preparation in proteomic experiment remains one of the biggest challenge to achieve a deep and reproducible datasets and proteomics belongs to the Murphy’s Law; “anything that can go wrong will go wrong”. John Wilson from Protifi described a universal Mass Spec. sample preparation called S-Trap™. The S-Trap strategy has the advantage to be fast (1 hour trypsin digestion), to remove pernicious contaminants (PEG, glycerol, detergents, salts, etc.) from the sample and to achieve an excellent reproducibility between replicates (recent comparison in Analytical chemistry doi: 10.1021/acs.jproteome.8b00235).

The first plenary lecture was given by Prof. Daniel W. Chan, who discussed the current development and application of proteomic and immunologic techniques in the diagnosis, management, and of human diseases such as cancer. His focus is the discovery of proteomics biomarkers using mass spectrometry and protein microarrays, followed by their validation and translation of into the clinical environment. Daniel W. Chan described the success of the OVA1 and proPSA immunoassays, approved by the FDA for ovarian cancer and prostate cancer.