Title of the workshops:

Detection of a reduced monoclonal antibody (mAb) at low ng/ml concentration in biological samples by CESI-MS

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CE-MS especially techniques such as CESI (the integration of capillary electrophoresis (CE) and electrospray ionization (ESI) into a single process in a single device) are now enabling the easy connection of CE to a variety of mass spectrometers.

Current LCMS methodologies used to detect monoclonal antibody (mAb) in biological samples are focussed on targeted tryptic peptide quantitation which requires that the mAb undergo tryptic digestion before analysis. The use of enzymatic digestion complicates the workflow and can affect the results obtained so there is an increasing interest in developing methods which can be used to detect either the intact antibody or larger antibody fragments which could simplify the overall workflow.

In this work we will describe how a CESI-MS method has been developed to quantitate a reduced monoclonal antibody in biological samples. We will discuss the factors you need to consider when developing a CE-MS method to detect antibody fragments of 25 and 50kDa and show how injection and separation conditions can affect the sensitivity and peak resolution obtained. We will demonstrate how using a surrogate mAb improves the reproducibility of electro-kinetic injections and highlight how CE-MS is now capable of detecting a mAb at low ng/ml sensitivities.

Important information about the workshops

Date: 24th September 2019

Time: Group 1 9.00 – 10.30

Group 2 11.00 – 12.30

Location: Intercollegiate Faculty of Biotechnology UG & MUG **(**Abrahama 58 Str.**,** 80-307 Gdańsk)

Maximum number of participants: 15 (for each group)

Cost: free

Please note that due to the limited number of spots, the order of registration to the course decides about the participation.