



Press release

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Regensburg, March 01st, 2008 – PolyQuant GmbH presents a highly efficient method for protein quantification at the Analytica, called QconCAT. The method leads to substantially reduced hands-on time and costs in drug discovery and quality control. Moreover, QconCAT increases efficiency in biomarkers discovery and diagnostics. This method allows to precisely quantify up to one hundred proteins in a single routine mass spectrometry measurement. Handling is significantly simplified as compared to conventional methods such as ELISA, SILAC or iTRAQ.

QconCAT is based on the comparison of proteotypic peptides in the mass spectrometer. As opposed to conventional processes, there is no need to derivatize target proteins. The isotope-labeled reference peptides are not applied individually, but in the form of a polypeptide. This concatamer of peptides is encoded in a synthetic gene and produced biosynthetically by heterologous expression.

Once the polypeptide has been added in known quantity to the analyte solution – which could be, for instance, an extract of a cell culture – the target proteins as well as the polypeptide will be proteolytically digested and the proteotypic peptides are released. Depending on the complexity of the resulting peptide mixture, it will be fractionated via chromatography and then analyzed in a mass spectrometer. The relative peak intensity of analyte peptides and chemically identical reference peptides allows deducing the exact absolute amount of the target proteins.

QconCAT allows for a high level of parallelization which for the first time enables the quantitative analysis of complete proteomes of prokaryotes and eukaryotes. QconCAT has been developed at the universities Manchester and Liverpool. PolyQuant GmbH offers technology transfer licenses as well as a full quantification service to interested parties from industry and public research institutions.

About PolyQuant GmbH

PolyQuant GmbH has been founded in 2007, with the aim to provide targeted solutions for quantitative proteomics, protein analysis and protein expression. The main field of business is the proteome analysis, using the QconCAT method. The development of QconCAT has been funded by the BioChancePlus program. PolyQuant is a spin-off of Entelechon GmbH, a company who has been on the market of gene synthesis and bioinformatics since 1999.

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