27th March, 2014 – The SysQuant® study addressing pancreatic cancer published yesterday in PLOS ONE provides a helicopter view over cell signalling pathways that elegantly demonstrates Proteome Sciences ability to measure the phosphorylation status and expression of very important drug targets and many other signalling proteins. This technology is equally applicable to all cancers. With our collaborators at King’s College Hospital, London SysQuant® identified a number of novel potential therapeutic targets and new diagnostic and prognostic biomarkers covered by patent applications. Through SysQuant®, it is now possible to design individual treatments with already approved medicines that should lead to changes in the way that clinical oncologists manage patient treatment.

SysQuant® is the powerful proprietary workflow combining our TMT® (Tandem Mass Tag®) reagents with high resolution mass spectrometry that can accurately map over 20,000 of the switches (phosphorylation sites) regulating cell signalling pathways in up to 10 samples in a single run. In this pancreatic cancer study a total of 6,284 unique phosphorylation sites and 2,101 individual proteins were identified.

When the patient’s sample is analysed, parameters are measured that predict the likely recurrence of tumours and which mechanisms might be used to elude anti-cancer therapies. This will allow doctors to quickly focus on the right resources for each patient and should dramatically improve the efficacy of treatment but most importantly without increasing the cost.

Commenting on the publication, Dr. Ian Pike, Chief Operating Officer at Proteome Sciences, said:

“This study is the first peer-reviewed article on SysQuant® that shows a truly comprehensive analysis of cell signalling pathway mapping in pancreatic cancer. It clearly demonstrates the potential for modern proteomics to significantly improve the way bespoke treatments can be matched to each individual patient. SysQuant® can also be used for the analysis of tissues across a range of different therapeutic areas and in the assessment of drug pharmacodynamics in pre-clinical development

Leading edge mass spectrometry has contributed a substantial increase to our SysQuant® workflow coverage and we are now close to providing a comprehensive molecular phenotype
of diseased tissue. This will have multiple applications with the potential to generate significant commercial value to our biomarker services activities.”

Dr. Debashis Sarker, Senior Lecturer and Consultant in Medical Oncology at Kings College Hospital, London commented:

“The PLOS paper shows the critical cancer proteins and pathways that are deregulated for each patient in pancreatic cancer using SysQuant. These differ from patient to patient indicating the need for a personalised approach to each patient treatment. Clinical trials should now be designed to compare standard therapy approaches compared to matching aberrant protein pathways with specific targeted therapies.”

– Ends –
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Notes to Editors:

About Proteome Sciences

Proteome Sciences, Cobham, UK is a global leader in applied proteomics and peptidomics offering high sensitivity, proprietary technologies for protein and peptide biomarker discovery, validation and assay development. PS Biomarker Services™ uses isobaric and isotopic Tandem Mass Tag® (TMT®) workflows developed on the latest Orbitrap® Fusion Tribrid, Orbitrap® Velos and TSQ Vantage mass spectrometers to deliver rapid, robust and reproducible biomarker assay development outsourcing solutions for customers in the pharmaceutical, diagnostic and biotechnology sectors. Services are provided from its ISO 9001: 2008 accredited facilities in Frankfurt, Germany. By combining Selected Reaction Monitoring (SRM) and TMT® workflows, highly multiplexed assays can be developed rapidly and are suitable for screening hundreds of candidate biomarkers in larger validation studies and transferred for immunoassay development. The Company’s own research has discovered a large number of novel protein biomarkers in key human diseases primarily in neurological, neurodegenerative conditions and cancer and for chemical sensitizers. Patented blood biomarkers, including Alzheimer’s disease, stroke, brain damage, cancers and chemical sensitizers are available to license for diagnosis, monitoring and treatment.

Visit: http://www.proteomics.com