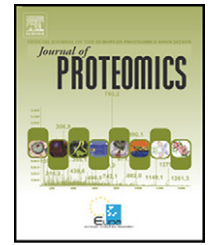


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Editorial

Clinical Proteomics; protein expression research within disease —A challenging task

Today we can see a considerable shift in the worldwide demand and expectations on the future healthcare systems, due to the drift towards differentiation between chronic or acute illness treatment, as well as the demographic shift to an elderly population. With expertise within the *biomarker diagnostics* field, there is a major challenge for the proteomics scientists to apply cutting edge developments and to build new cross-functional links to meet this challenge and shortcoming [1]. It is anticipated that this will create new opportunities and openings for the medical research community to drive a strongly patient oriented research strategy that capitalises on the absolute front line technology developments. Globally, there is an increasing interest and need to support research areas that can help solve disease understanding and improve patient care, including alternative treatment and early indication of disease diagnosis. An overall trend is to increase multiplexity by utilizing both medical imaging techniques and biomarker diagnostics for improved accuracy in predictive outcome and decision making.

High resolution liquid and gel based separation technologies interfaced to mass spectrometry are expected to play a major role in the development of new biomarkers and medicines, as well as the understanding of diseases, and disease mechanisms. It is clear that cancer is currently a major disease and target area for the proteomics field, and is expected to deliver aid, and new solutions within the health care system, that is suffering from an ever-increasing cost to society.

The 3rd EuPA Congress, 14–17 June 2009 addressed this quickly developing research area and gave an impressive overview of the protein expression research and development within the *Clinical Proteomics — protein expression research within disease*. The highlighted topic areas covered important application of proteomics in biomedical research, including biomarker discovery and exploitation, cell signaling and organelle proteomics as well as protein expression studies in important disease areas such as cancer, diabetes, cardiovascular and metabolic disease. In addition, developments of novel and emerging approaches that are now being exploited in clinical proteomics, including protein microarrays, tissue imaging, glycoproteomics and phosphoproteomics, were presented. Of course, recent advances in proteomic technologies,

including protein separation methods, quantitative mass spectrometry, bioinformatics and databases were highlights of the meeting.

The ambition of the 3rd EuPA Congress was also to support EuPA as an organization, and to develop and strengthen the European and global proteomics knowledge base to generate value that opens up the ability to further explore this together with the clinical and health care colleagues, including both the academia, as well as the industrial sector.

The European Commission in Brussels also serves as an important partner and organization to promote and support the developments within these areas. The expectations extend into new strategic plans for future research directions and subsequent medical and clinical developments. The new framework programs of the EU, and the future directions for the European initiatives on protein science and its relevance to current and future health care are central concerns for EuPA as well as for researchers within the field. In clinical practice it is of outmost importance to find new directions in treatments, and early indication of disease or disease relapse, utilizing biomarkers complemented with new diagnostic improvements in e.g. medical imaging that can aid in selecting optimal drug use for patient benefit.

The international efforts on the Proteomics Clinical Biomarker initiatives [2–4] are also getting full attention, and is supported by the NIH, the FDA, as well as other agencies worldwide. There are a number of research initiatives where these authorities together with industry, and academia, with joined forces are exchanging experience and best practice, for health care, and patient needs.

In order to succeed in the developments and implementations of the new generation of protein biomarker technologies, a strong support from our national proteomics societies, as well as from the European Proteomics Society “EuPA” is needed, to take on the challenges and reach the goals set forth.

In this respect, the EuPA Nordic Initiative was represented by the Swedish Proteomics Society (SPS), Danish Proteomic Society (DaPSoc), Norwegian Proteomics Society (NPS), and the Finnish Proteomics Society (FinnProt), gave their full support to this year’s EuPA Congress and will continue to strive to fulfill these goals. The success of the EuPA Congress is largely

also attributed to the full bodied support and engagement of the Swedish Academy of Pharmaceutical Sciences.

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