

The Language of Proteins

Understanding Proteins Today Can Change Cancer Therapy Tomorrow.

The development speed of technology comes at an incredibly fast pace, with many scientific fields profiting from this rapid development. One such a field is proteomics. Simple protein analysis has evolved to understanding its function within its respective system. In the last few years, studies in complex systems such as genetic mouse models or even patient material (e.g. tumours) have been increasing.

Gold standard in analysing proteins is mass spectrometry. But as Connie Jimenez, from VU University Medical Centre in Amsterdam, Netherlands, will show, even here large improvements have been made since its



Connie Jimenez on a boat trip with her children.

selection of a personalised treatment strategy by identifying individual tumour kinase activity signatures (diagnostic markers), and may further be used to evaluate therapeutic efficacy (monitoring markers) and when required, allow refinement of the treatment course."

She sees that such profiling methods will be used to develop "disease-specific tests to identify biomarkers, guiding treatment selection and evaluation". BGR

Scientific Symposium

Novel Oncoproteomic Technology

Hall T6

Date: 25-09-2011

From: 09:00 to: 11:00



Kathrine Røe (right) talking to oncologist Anne Hansen Ree.

initial development. Jimenez believes that oncoproteomics is a way of developing target therapies to personalise treatments.

Therefore she will discuss "an example of global protein expression profiling of genetic mouse models for breast cancer," as well as the bioinformatics strategy used at her institute to discover biologically relevant 45-protein signatures that selects for homology-repair defi-

cient breast tumours with good diagnostic and prognostic performance in several human gene expression datasets. She will also show "the potential and challenges of phosphoproteomics and our progress to integrate this into clinical studies with the aim of patient selection for targeted therapy."

Mass spectrometry is, however, only a method in proteomics. The first step is to define the

goal, as Gabriele Pestlin from Roche Diagnostics in Germany explains. Only after that "a suitable proteomics technology can be employed for the discovery of novel marker candidates," she points out. After verifying and validating the results, a novel biomarker may finally be introduced to the public.

Researchers hope to find such interesting candidates in tumour kinase signalling pathways. Kinases play a role in cell proliferation, invasion, and angiogenesis. Depending on the patient, different variations in expression might be found.

Thus, tumour kinases represent attractive targets for individualised therapies in cancer patients, plus they can be used to assess therapeutic response.

Kathrine Røe, from Institutt for klinisk medisin in Oslo, Norway, explains why she is fond of proteomics: "Novel technological advancements, enabling measurement of the activity of multiple kinases simultaneously, are currently being developed into high-throughput microarray methods. If validated, such profiling assays will facilitate the

Changing tomorrow



Astellas is pleased to be participating at the 2011 European Multidisciplinary Cancer Congress.

With our dynamic partners and our focus on innovative solutions, Astellas Oncology is advancing research and development of a robust portfolio of oncology therapeutics targeting fundamental aspects of cancer biology and supportive care.

Astellas Pharma Europe is committed to discovering and developing new approaches to pain management. Our first area of focus is neuropathic pain – a complex disorder that can afflict the cancer patient through tumour-related or treatment-related nerve injury. Through innovative therapies that follow new treatment pathways, Astellas is realising its goal of providing people living with cancer additional options for tackling their pain.

We offer you a warm welcome at our booths C13:23 and C14:21.



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