



Answers for Science.
Knowledge for Life.™



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Case Study

Project Goal

To develop a biomarker discovery platform to look for diagnostic, prognostic and theranostic markers in biofluids or tissues using high throughput multiplexed mass spectrometry systems.

The Challenges

- Ensuring the whole pipeline is in place from excellent sample collection in the clinic through to good informatic assessment of data acquired.
- Current timescale for development of a clinical biomarker is around 12 years- there is a real need to develop approaches to cut this down to give a clear line of sight to clinical decision pathways.

The Solution

- High throughput proteomics “factory” consisting of 6 x TripleTOF® 6600 systems configured for microflow proteomics.
- SWATH® Acquisition for the generation of reproducible, comprehensive quantitative “maps” of clinical samples.
- QTRAP 6500 systems implemented in a GCLP laboratory to allow for verification and validation studies.
- Automated sample preparation using the Beckman NXP liquid handling platform.

The Outcomes

- Factory setup allows large scale research on a number of projects in parallel including biomarker research in a variety of disease areas including dementia, inflammatory disease and cancer allowing potential biomarkers to be discovered with very high combinations of sensitivity and specificity.
- Delivery of large cohort studies for example a recent longitudinal ovarian cancer study where 1200 samples were analysed in triplicate, producing 3600 data “maps” using SWATH Acquisition.

Type of Organization

The Stoller Biomarker Discovery Centre is a flagship translational research centre based at the University of Manchester funded by the UK Medical Research Council.

Goals

To find, verify and validate companion diagnostics and biomarkers for appropriate use in precision medicine applications and patient stratification.

SCIEX Products

- TripleTOF® 6600 System
- QTRAP® 6500 System
- Eksigent Ekspert™ 425 system
- Lipidyzer™ platform

“SCIEX are there at our side
developing new approaches
with us, day in, day out.”

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