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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

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developing new approaches  
with us, day in, day out.”

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