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Case Study

Project Goal

In a novel model system of metastatic prostate cancer, we use proteomics and genomics profiling to understand the biological mechanisms of metastasis and find biomarkers of disease state and therapeutic response.

The Challenges

- Creation of permanent, quantitative, digital record of the proteome
- Processing large amounts of SWATH® Acquisition data and generating biological conclusions
- Compare proteomics data with transcriptomics

The Solution

Employing state-of-the-art Omics technologies that provide comprehensive quantitative profiles

The Outcomes

- Using SWATH Acquisition, we can quickly create proteomic profiles of a large # of proteins in each sample (up to 4,500 in an hour's LC gradient), which enables us to run many different samples to characterize the biology, like cancer vs. non-cancer, or aggressive vs. non-aggressive, for example.
- Achieving 20-50 samples MORE per week than previous methods.
- The better we understand the mechanisms of metastatic cancer, the better we can develop new therapies and eventually tailor these to the right type of cancer

“SCIEX SWATH does exactly what was promised; it offers us fast, high-depth quantitative proteomics. SWATH genuinely revolutionised the way our lab worked and allowed many more scientific collaborations to be underway at any given time.”

Type of Organization

Educational Institution, Biomarkers & Omics

Goals

A key research focus is on the discovery of new markers that can predict prostate cancer metastasis.

Applications

Proteomics research, biomarker discovery

SCIEX products

- SWATH® Acquisition on the TripleTOF® 6600 and 5600+ Systems
- OneOmics™ cloud solution
- SCIEX NanoLC 400 System (Microflow mode)

“The SCIEX mass spectrometer (TripleTOF 6600) is the key to the research program”

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