Case Study

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Project Goal

To deepen our understanding of the human eye to inform how specific diseases differ in each patient and how patients respond to various therapies, so new therapies can be tailored in the treatment of various types of eye diseases.

The Challenges

- Having the right analytical platform that can be used for both discovery research and monitoring the response of the human eye to disease and treatment.
- Maximizing results from small sample volumes.
- Sensitive enough machines to offer high-throughput with timely and accurate data.

The Solution

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

The Outcomes

- Leveraging SWATH® Acquisition to get the most results from small sample volumes.
- Achieving 20-25% MORE sample throughput over previous methods.
- Establishing proteomic biomarkers for common eye diseases; now using the metabolomics capabilities to investigate the cellular response of the eye to stress and disease.

"SCIEX has great instrumentation and software development – SWATH and OneOmics have been very important to us. The SCIEX team has been terrific in their continued support."

Type of Organization
Research Institution

Goals
Proteomic and metabolomic biomarkers of eye disease and the inflammatory response of the eye to infection.

Applications
Multi-omics research, biomarkers discovery and development of new antimicrobials.

SCIEX products
- SWATH® Acquisition on the TripleTOF® 5600 system
- API 2000™ LC-MS/MS System
- OneOmics™ Project, cloud solution
- iTRAQ® reagent technology

"SWATH Acquisition has been tremendously useful and it has improved our workflow and our analytical capabilities. Recently we have been applying SWATH to metabolomics as well."

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