



The Power of Precision

Customer Case Study

Steven Wong, PhD

Director of Clinical Chemistry and Toxicology at Wake Forest® Baptist Medical Center and Co-director of the Clinical and Translational Mass Spectrometry Center at Wake Forest School of Medicine



Project Goal

Advance the diagnosis and treatment of breast cancer and other diseases by developing novel mass spectrometry methods to study metabolomic biomarkers.

The Challenges

- Identifying projects with clinically useful outcomes.
- Choosing instrumentation that complements the current laboratory systems.
- Addressing a broad range of research areas, including acute kidney injury, breast cancer drugs, regenerative medicine and renal metabolomics.

Solution

- The high sensitivity and flexibility of the Citrine™ MS/MS system is used successfully for omics biomarker studies of diseases.
- The superior sensitivity of the Citrine system also made it possible to perform drug analysis of highly potent compounds.

The Outcomes

- The Citrine MS/MS system is an excellent complement to the two existing MALDI TOF systems in the translational mass spectrometry lab.
- The highly flexible Citrine system is being employed in multiple research studies including breast cancer research, transplant studies, and acute kidney injury research.
- The sensitivity of the Citrine system has enabled the lab to perform drug analysis studies of fentanyl, which is very potent in low concentrations.

“Most importantly is the performance of the system, with higher sensitivity and more flexibility. It complements our MALDI TOF mass specs and underscores the importance of mass spectrometry in clinical services.”

Type of Organization

Wake Forest Baptist Medical Center is an academic medical center in North Carolina, with a translational mass spectrometry unit that researches and develops new tests for clinical purposes.

Goals

Develop mass spectrometry based clinical tests that improve patient diagnosis and treatment.

Applications

Immunosuppressants, antifungals, renal metabolomics, drug toxicity, breast cancer, personalized medicine.

SCIEX Products

- SCIEX Citrine MS/MS system
- Analyst® MD software
- MultiQuant™ MD software