Customer case study

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Project goal
Develop complex analytical solutions for qualitative and quantitative analysis of small molecules. The application of these methods is essential in metabolite identification and in pharmaceutical impurity profiling.

The solution
- Sample preparation plays a key role in the identification. Online SPE methods can help in the identification of target molecules from complex matrices.
- Miniaturization can increase the sensitivity of the system. Using the Eksigent® microflow LC and QTRAP® 6500 LC-MS/MS System, the LOQ can be pushed down.
- TripleTOF® 5600+ LC-MS/MS systems can help either in identification or in quantification by increasing the selectivity.

Biggest challenges right now
- In the COVID-19 fight, the impurity profiling of favipiravir tablets has been done by the TripleTOF 5600+ System.
- Develop a sensitive method for low-level quantification of peptide hormones.
- Develop a method for simultaneous quantification of metabolites (organic acids, amino acids, nucleotides etc).

Outcomes of research
- Complex analytical methods including sample preparation for low-level quantification of targeted molecules.
- Sensitive analytical methods for metabolite identification and quantification.
- HRMS methods for impurity profiling for pharma.
- Reliable methods for clinical diagnostic labs.

“SCIEX provides all the hardware and software solutions required for my qualitative and quantitative analysis”

Type of organization
Instrumentation Center, Research Center for Natural Sciences

Goals
Provide solutions for where the routine analysis does not work.

SCIEX products
- API 2000™ LC-MS/MS System
- 3200 QTRAP® LC-MS/MS System
- QTRAP® 6500 LC-MS/MS System
- TripleTOF® 5600+ LC-MS/MS System