

## 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