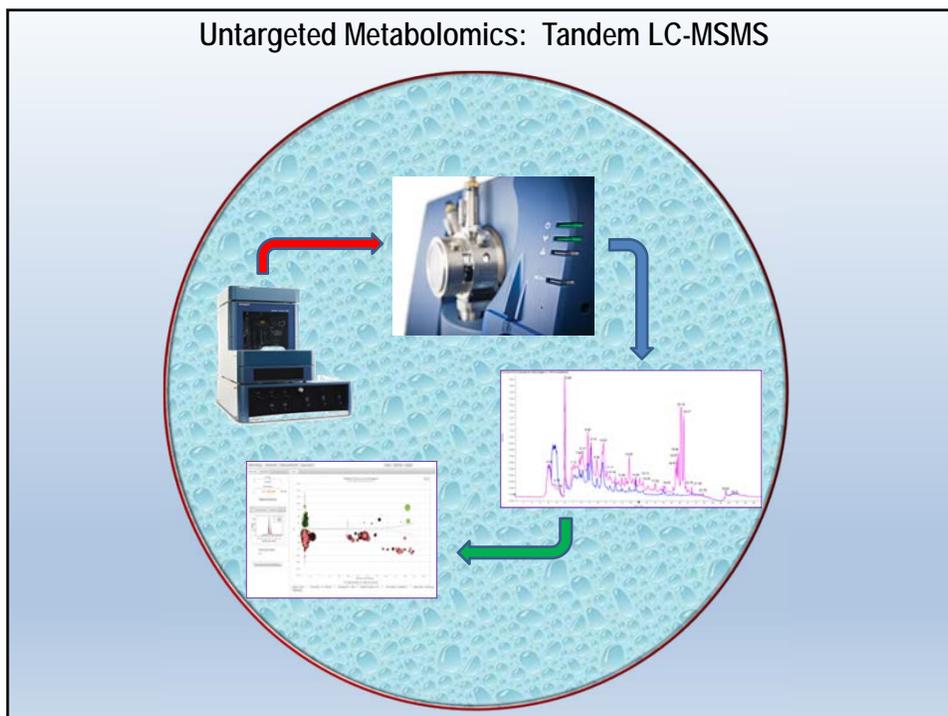
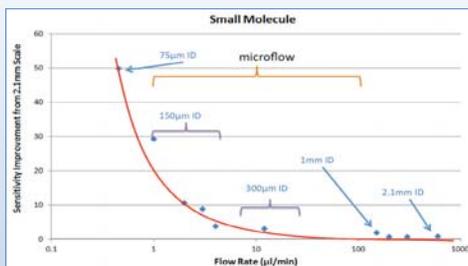


## Untargeted Metabolomics: Tandem LC-MSMS



## Column and Flow Rate Selection



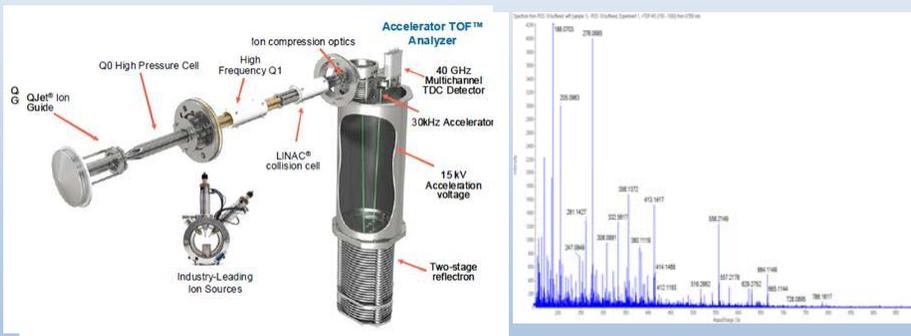
Reverse Phase and Normal Phase Selections:

- Reverse Phase (C4, C8, C18, etc...)
- Normal Phase (Silica, Amide, Amido, etc...)



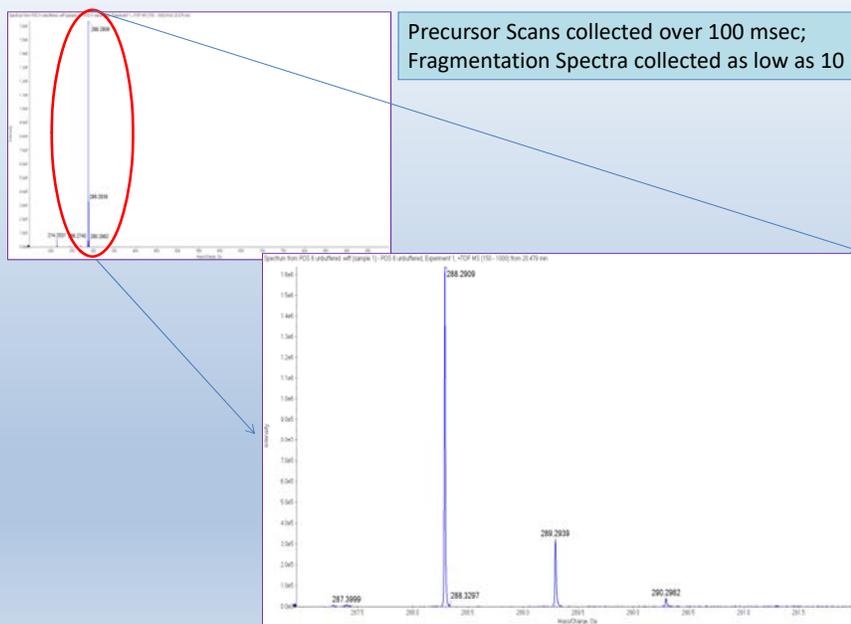
### Instrument Configuration

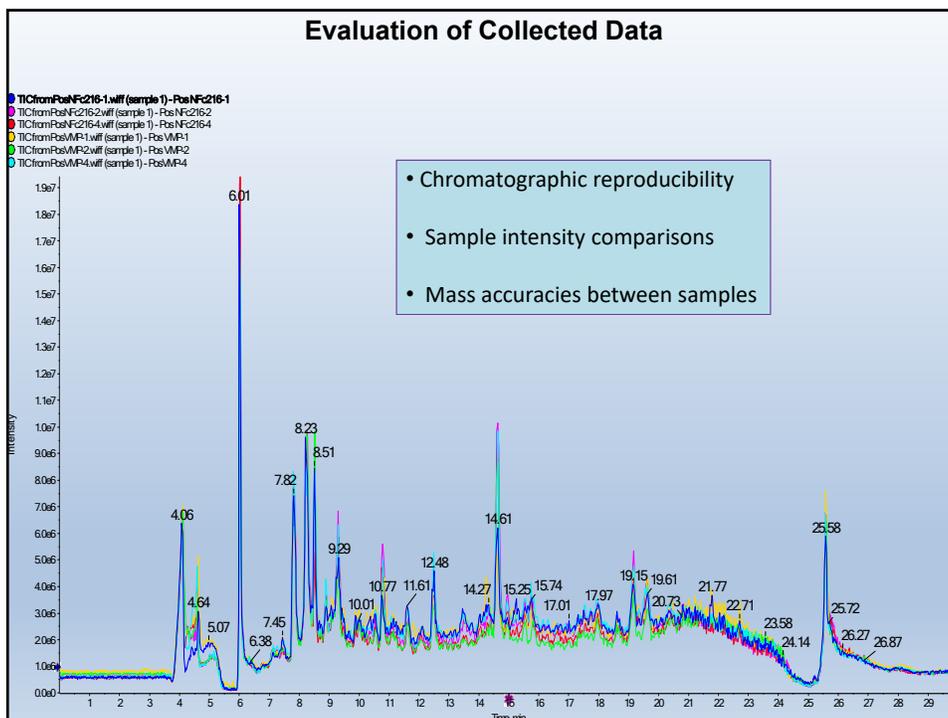
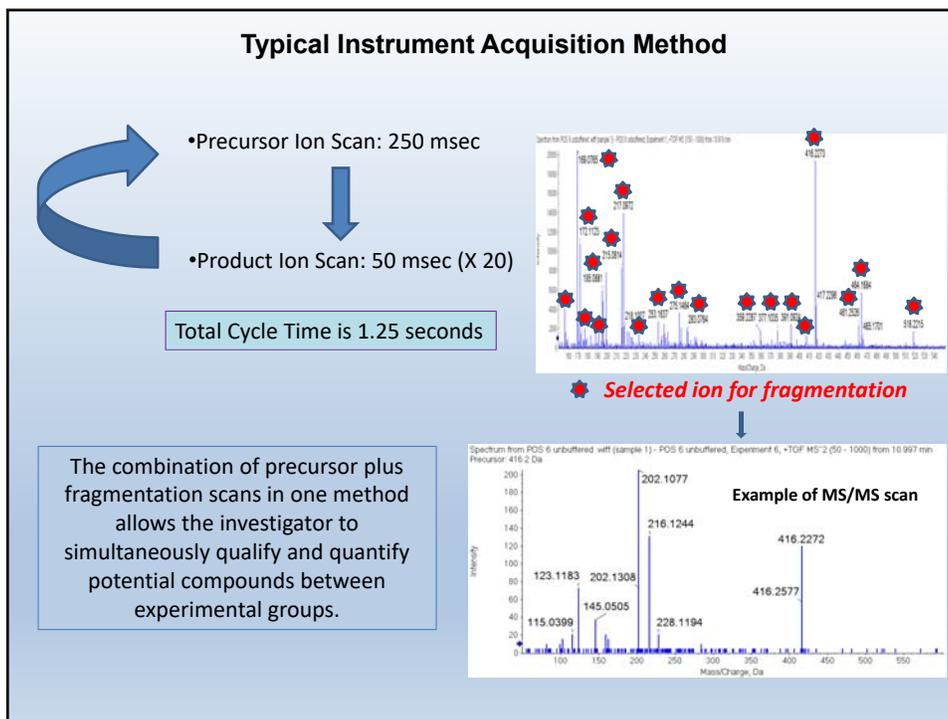
#### AB Sciex 5600 Triple ToF Mass Spectrometer (Q-ToF MS)

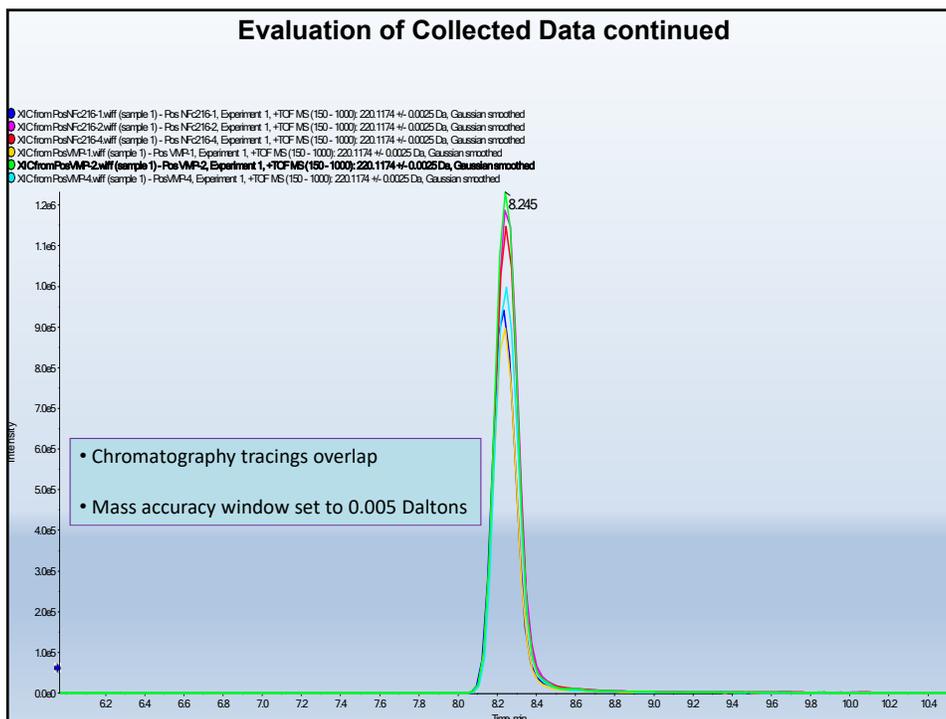


The Time of Flight (ToF) chamber allows for rapid detection and high mass accuracy as compared to traditional triple quadrupole instrumentation. All fragments are detected simultaneously instead of a precursor (parent ion) > fragment (daughter ion) pair.

### High Resolution and Acquisition Speed



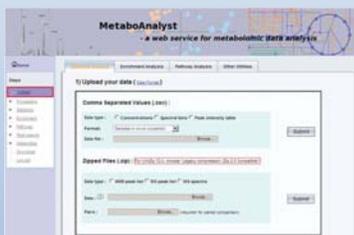




### Exporting Data to Statistical Programs

Programs like MS Convert can transform instrument raw files (.wiff, .dta, etc) in usable formats such as mzXML. Keep in mind when transforming the raw data, the size of the files can increase significantly.

## Data Analyses Software



There are a host of software platforms ranging from free online resources to company specific programs.

## Data Analyses Software continued



XCMS Online aligns chromatography and outputs user friendly schematics from uploaded data including PCA graphs, t-test, etc.

