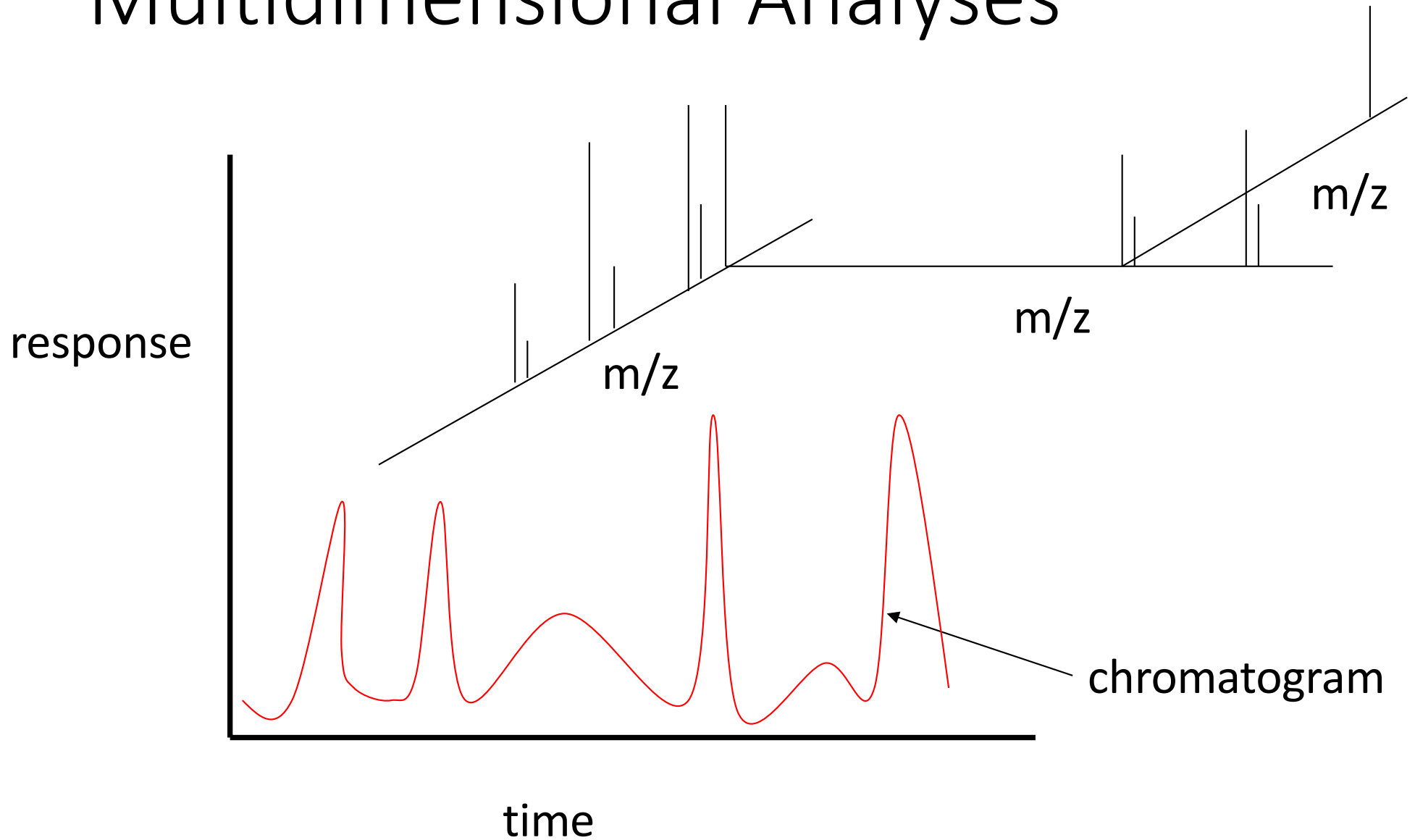
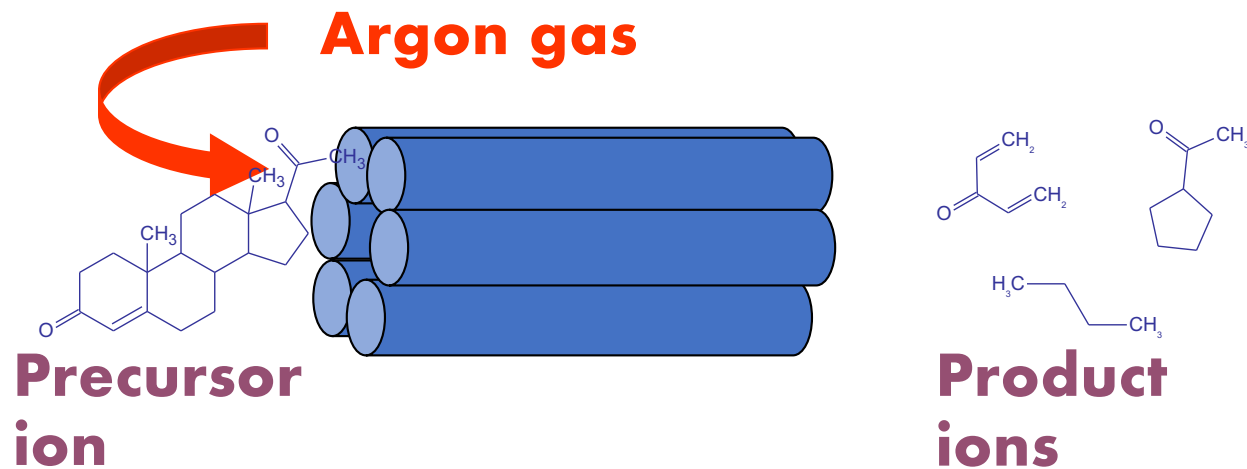


Multidimensional Analyses



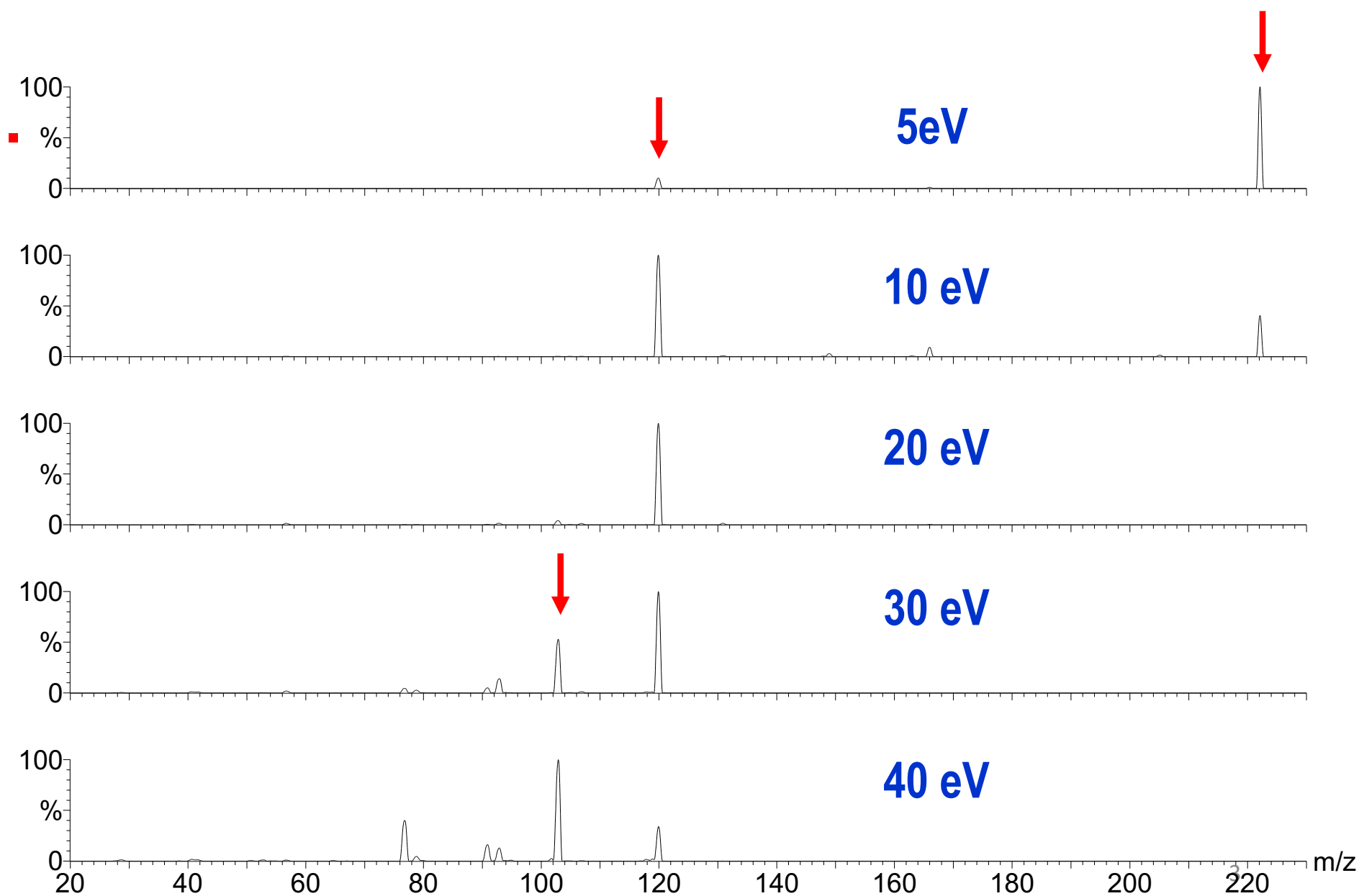
Collision induced dissociation



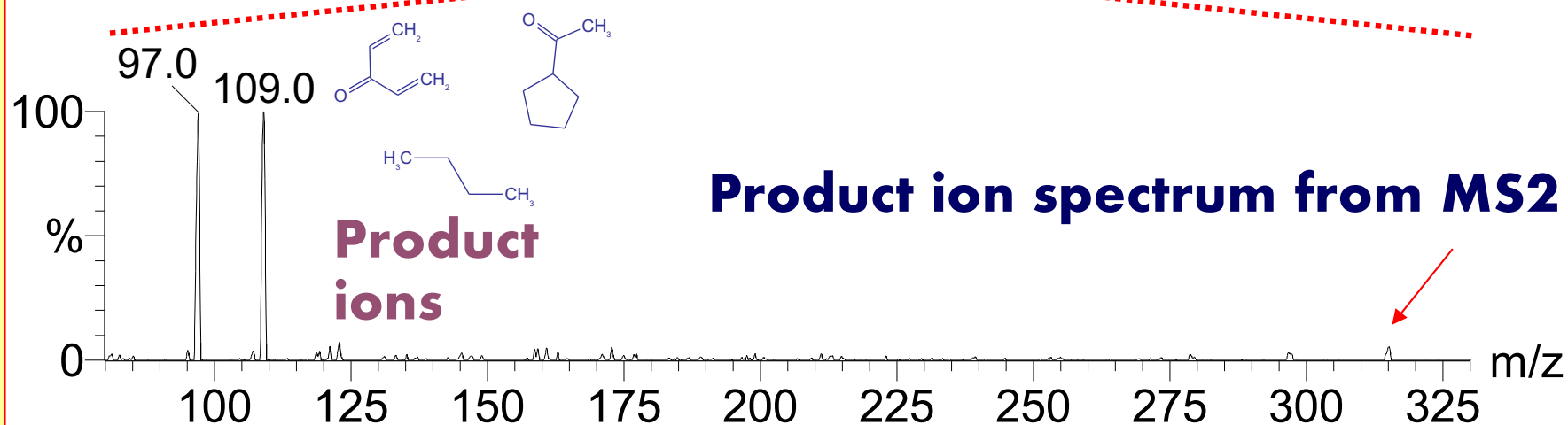
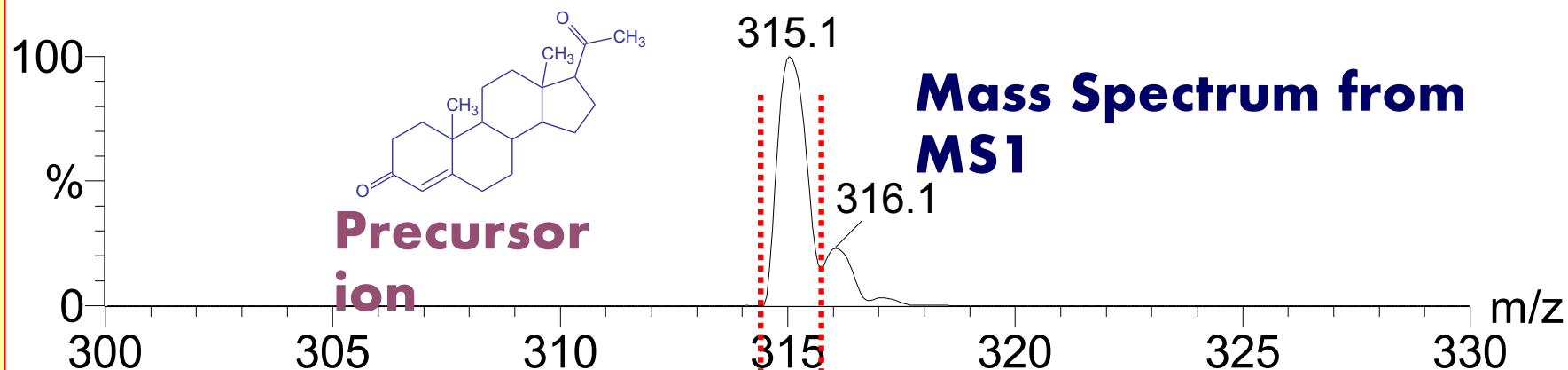
- In the collision cell, the **TRANSLATIONAL ENERGY** of the ions is converted to **INTERNAL ENERGY**.
- Collision conditions (**FRAGMENTATION**) is controlled by altering:
 - The collision energy (speed of the ions as they enter the cell)
 - Number of collisions undertaken (collision gas pressure)

Product ion scanning

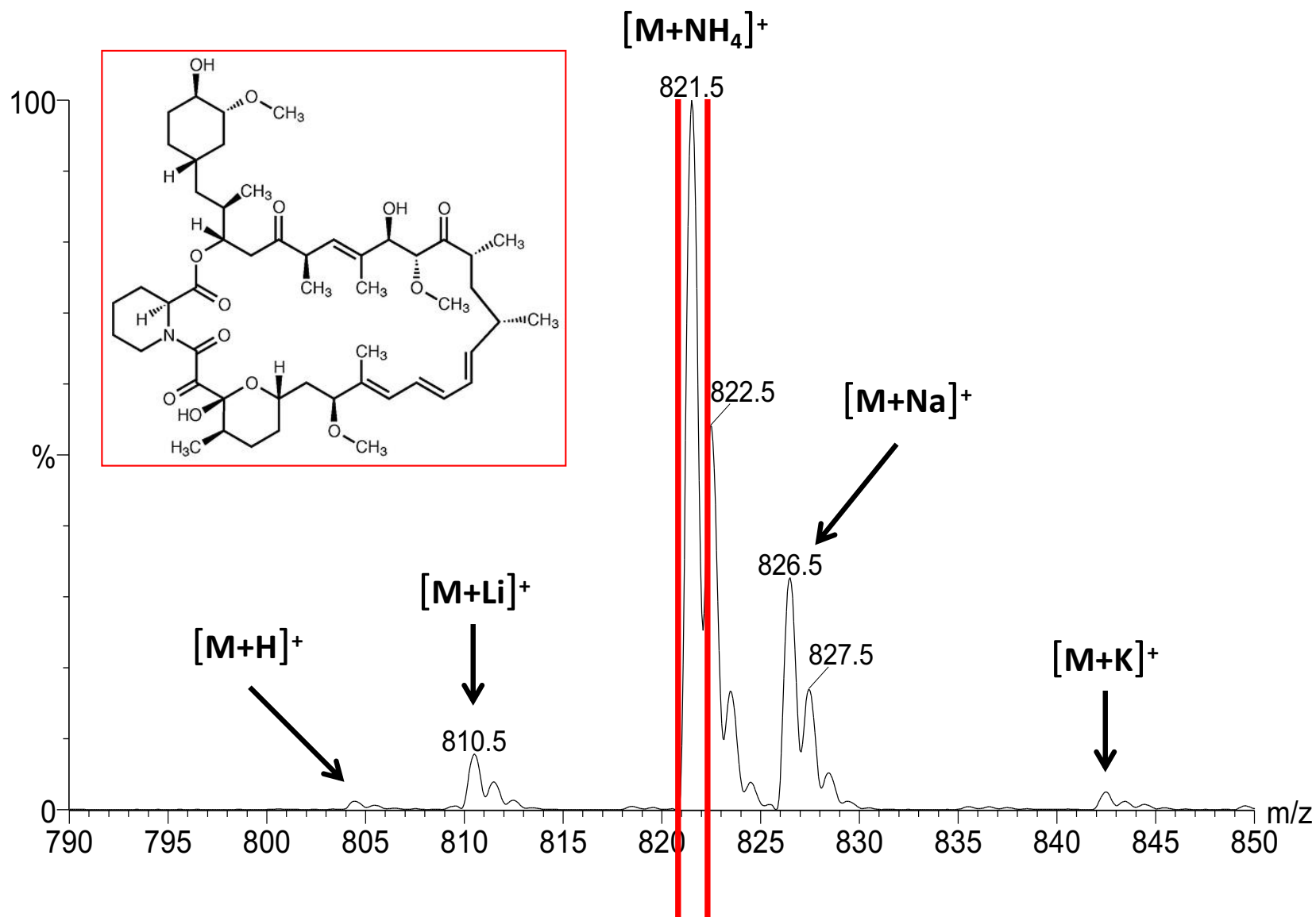
↑ collision energy > ↑ fragmentation



Product Ion Spectrum: Progesterone



Sirolimus: MS Spectrum



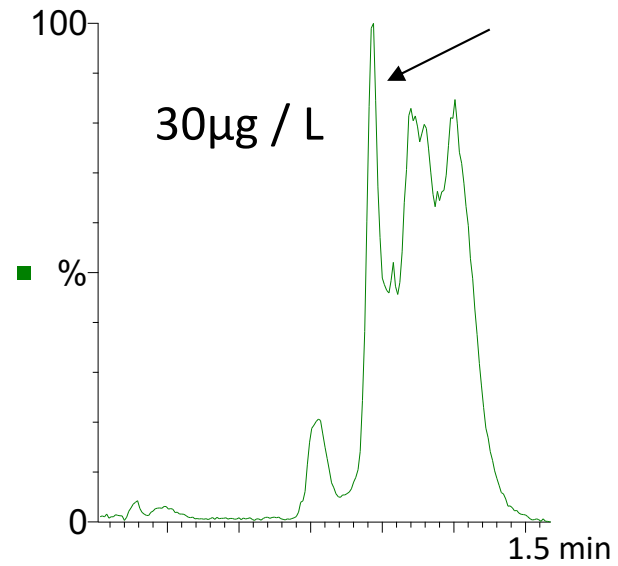
Single ion monitoring (MS)

Sirolimus:

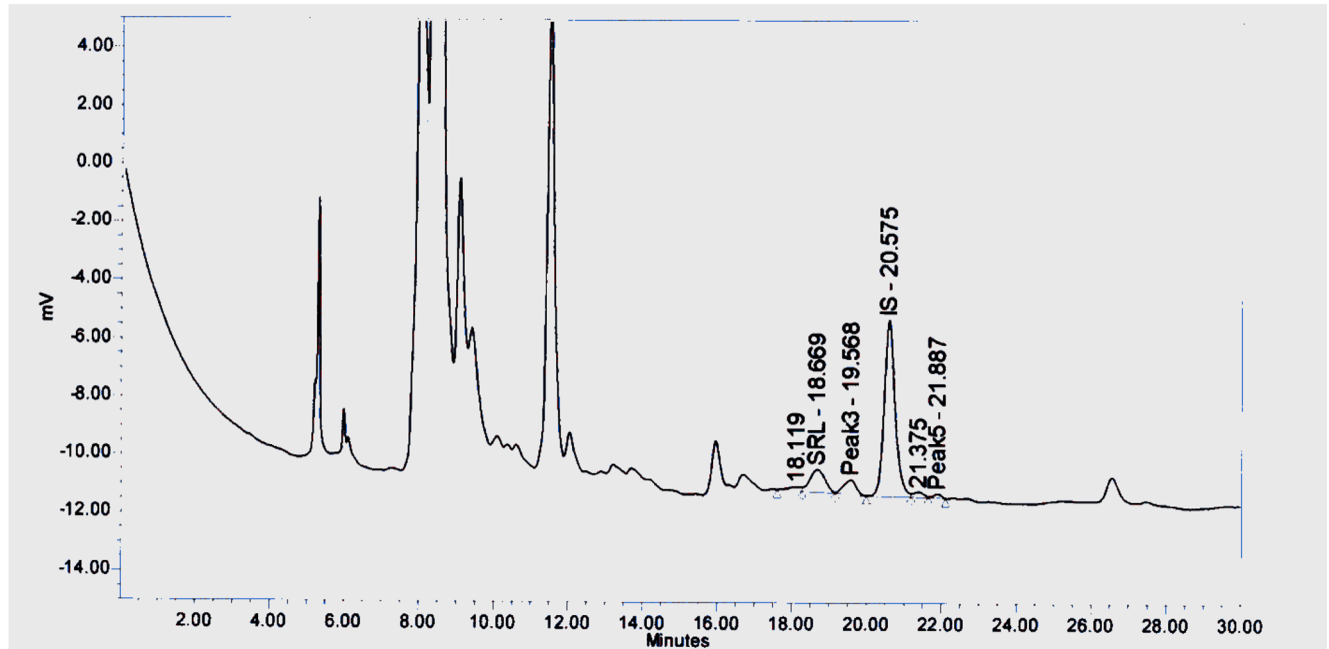
LC-MS (SIM) vs LC-UV

HPLC-MS

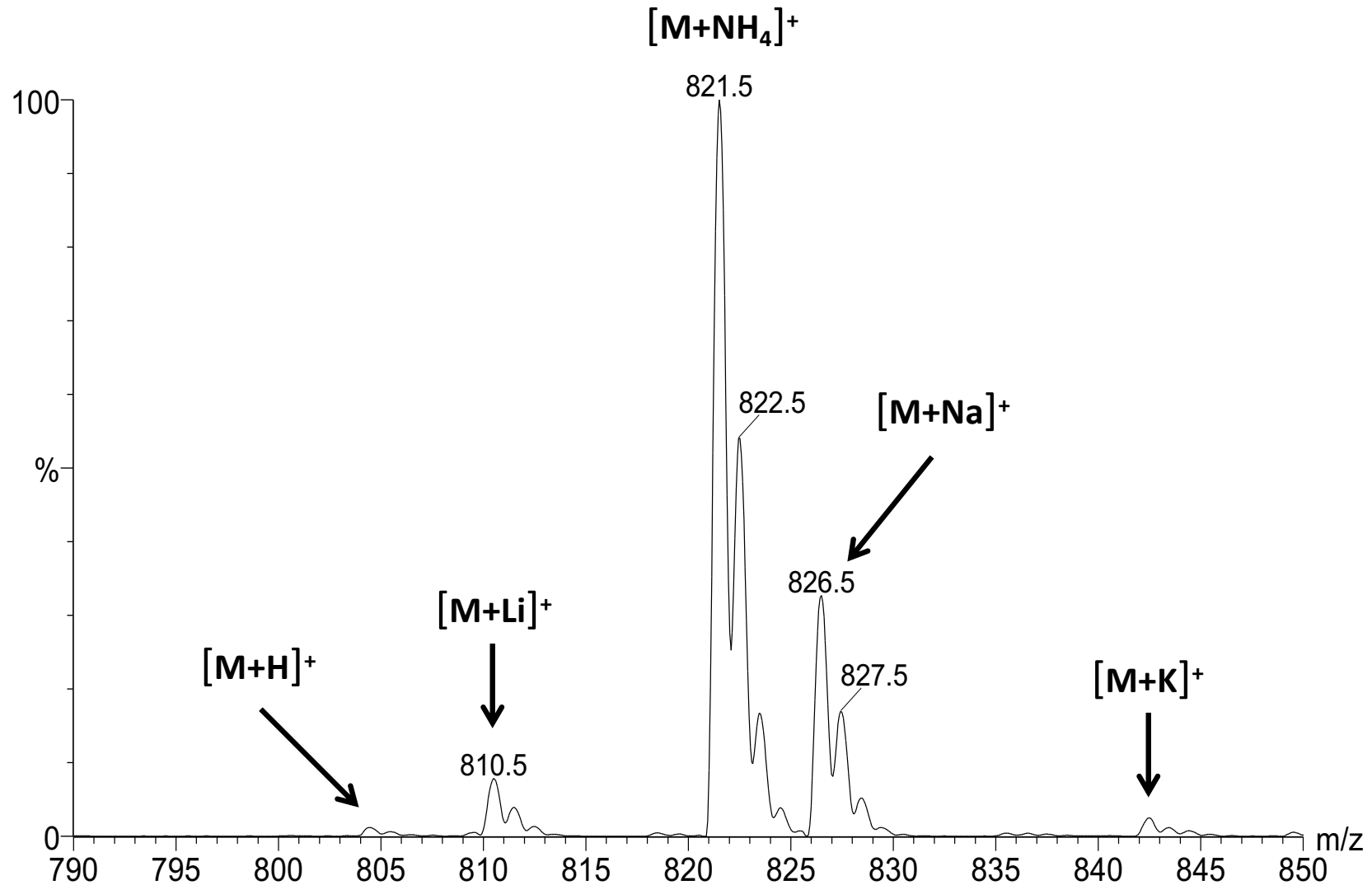
SIR m/z 821



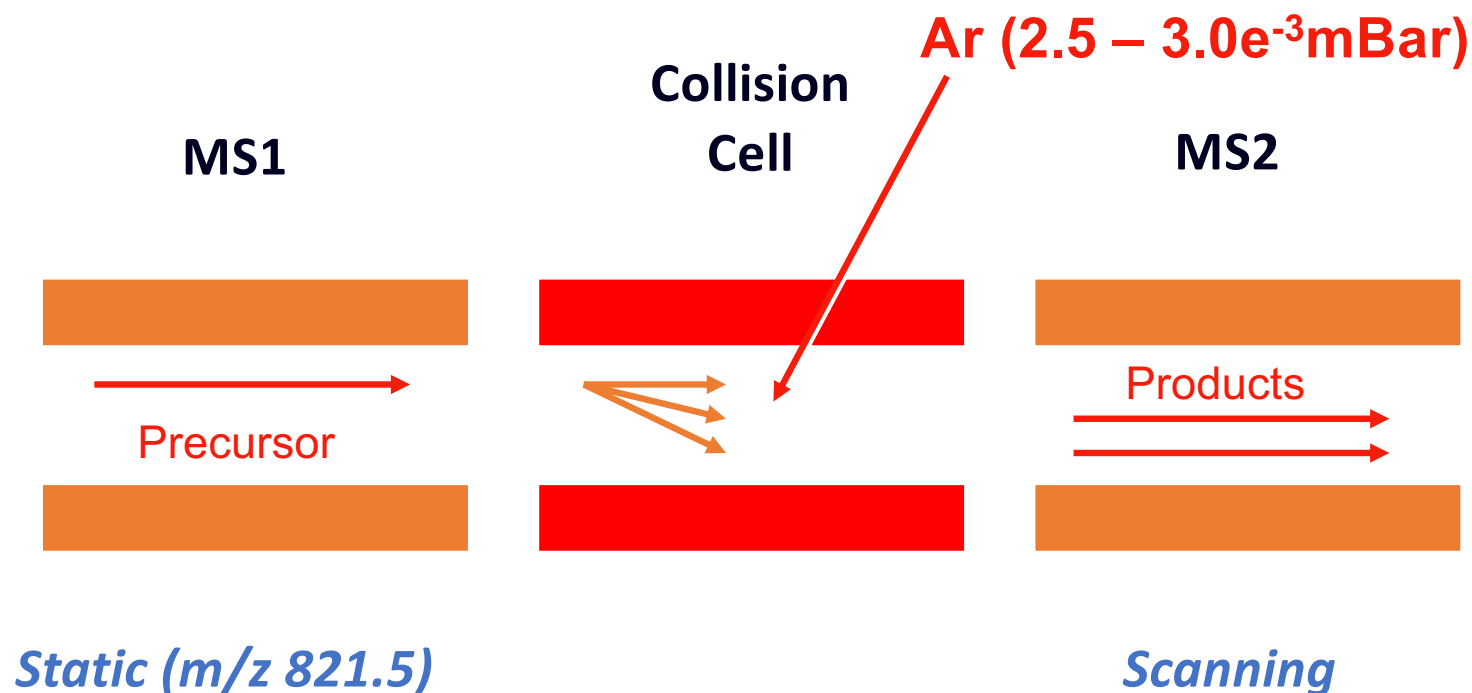
HPLC-UV



Sirolimus: MS Spectrum

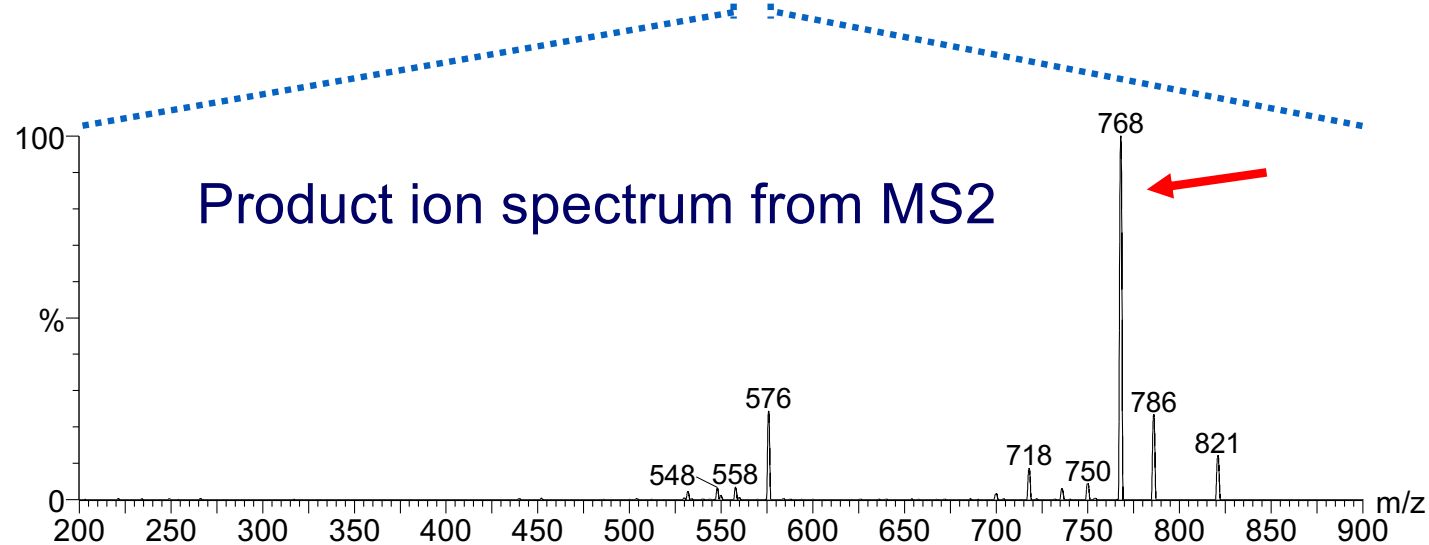


Product ion scanning

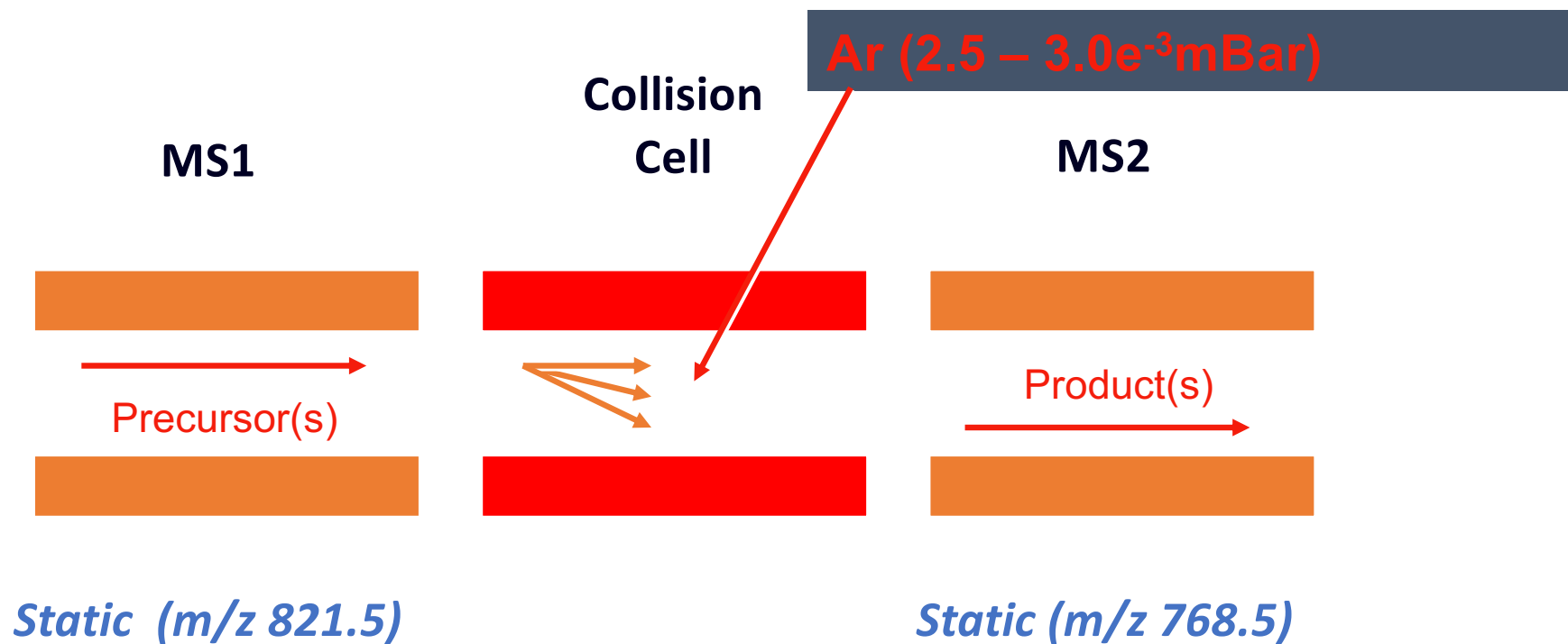


The first quadrupole mass analyzer is fixed, or **Static**, at the mass-to-charge ratio (*m/z*) of the precursor ion to be interrogated while the second quadrupole is **Scanning** over a user-defined mass range.

Product ion scanning



Multiple Reaction Monitoring



MS/MS : Compound-Specific Monitoring

Sirolimus

LC-MS(SIM) vs LC-MS/MS (MRM)

