## Output Input **Process** Signal pre-Peaks CAD extraction processing Peak-feature attribution **Universal detectors** Major metabolome **Semi-quantitative Detection improvement** integration Liquid chromatography **Features** Features **Automated** report **Peak shape similarity** annotation chromatogram extraction calculation **Combined qualitative and Alkaloids** semi-quantitative **Pseudoalkaloids** information Purine alkaloids **Knowledge based** Mass spectrometry prioritization Minor metabolome MS Clustering and Structural annotation and Ion Identity Networking Compound class annotation