Input Output **Process** Signal pre-CAD **Peaks** processing extraction **Peak-feature** attribution **Universal detectors** Major metabolome **Semi-quantitative Detection improvement** integration **Liquid chromatography Features Features Automated** Pseudoreport **Peak shape similarity** extraction annotation chromatogram 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**