

Instrumentation

- Quadrupole Ion Trap: LCQ and ITMS, Thermo Finnigan; 1100 MSD/SL and Ultra, Agilent
- Hybrid Triple Quadrupole/Linear Ion Trap, 4000 QTRAP, Applied Biosystems
- Time of Flight: Voyager DE-RP and STR, Applied Biosystems; ESI-TOF, Agilent
- Triple Quadrupole: TSQ 700, Thermo Finnigan; API III, API 4000, API 5000, Applied Biosystems
- Ion Sources: PicoView, New Objective, Inc.; AP/MALDI Source, Mass Tech, Inc.; Nanospray, AP-MALDI, HPLC-Chip, Agilent
- HPLC Pumps: Eksigent, Eldex, Shimadzu, Michrom BioResources, Applied Biosystems, Agilent

Biological Mass Spectrometry

- Chemical Derivatization of Peptides
- Data Analysis and Validation
- De novo Peptide Sequencing
- HPLC-Chip MS
- In Gel Digestion and Peptide Mapping
- Mass Spectrometer Design, Construction and Maintenance
- Matrix-assisted Laser Desorption Ionization (vacuum and atmospheric pressure)
- Micro-capillary LC/MS
- Micro-scale Sample Handling
- Microspray Ionization
- Nanospray Ionization
- Peptide Sequencing by MS/MS (manual and automated)
- Phosphopeptide Analysis
- Reversed-phase HPLC of Peptides and Proteins (1 and 2D LC)

Molecular Biology

- Flow Cytometry
- One and Two-Dimensional Gel Electrophoresis
- Immunoprecipitation
- Protein Production and Purification
- Tissue Culture
- Western Blot Analysis