

Key Capabilities

formulation development • method development or transfer of analytical methods • GLP validation

Lovelace Biomedical has **extensive expertise in analytical chemistry**, with specialized laboratories and experienced analysts in chromatography, mass spectrometry and solid-state analysis. Whether working with a small molecule, protein, peptide, RNA, oligonucleotide, antibody or other agent, Lovelace has experience developing new assays or transferring existing methods. These methods can support pharmacokinetic, toxicokinetic and in vivo metabolism studies, and analyses can be conducted to evaluate parent molecules or metabolites in a full range of matrices, including blood, plasma, serum, urine, CSF, pleural fluid and tissue.

Instrumentation

- Gas chromatography
 - Agilent 7890 and 6890, MS, FID, TCD and ECD detectors, liquid and head space autosampler
- Liquid chromatography
 - Agilent 1100 / 1200; DAD, VWD, RID, FLD detectors
 - UPLC Acquity PDA; FLD, ECD detectors
- Mass spectrometer systems
 - API 5000 – Waters/Shimadzu UPLC
 - API 4000 – Waters UPLC
- Molecular devices and biotek plate readers
- Spectrophotometers
- Solid state analysis
 - TA Instruments TGA
 - Thermo FTIR
- Tecan/Eppendorf liquid handlers
- TomTec Quadra extraction system
- Quantitative PCR

General Expertise

- Analytical/Bioanalytical Chemistry
- Animal model development, including small and large animal surgical models
- Carcinogenicity/GenTox
- Chronic infusion
- Cytokine/chemokine assays
- DMPK
- Drug delivery by IV, IM, IP, SC, PO, IT, IN, ocular, inhalation, local delivery and other specialized routes
- Histopathology, immunohistochemistry and histomorphometry
- IND-enabling toxicology
- IV, intrathecal, ICV catheterization (for delivery and collection)
- Mathematical modeling
- Pharmacology
- Serum and tissue-based biomarkers
- Telemetry (heart rate, blood pressure, respiratory rate, ECG, EEG, temperature, activity, etc.)