

# LC-MS Capabilities and Expertise

Supporting customers' development efforts with wide-ranging services and a dedicated team of 40 scientists with extensive experience

PPD® LABORATORIES

**PPD® Laboratories GMP Lab** combines industry-leading **instrumentation**, more than two decades of **LC-MS experience** and **high-quality spectrometry services** to support our customers' pharmaceutical development needs.



A culture of quality and service for 30 years



Extensive regulatory experience in the U.S., U.K., Ireland and the EU



Flexible, customized solutions to meet customer needs

## Comprehensive service offerings

- High-resolution mass spectrometry (HRMS) for biologics characterization, including but not limited to:
  - Monoclonal antibodies (mAb)
  - Adeno-associated virus (AAV)
  - Oligonucleotides
  - mRNAs
  - Polypeptides
  - Vaccines
- Multi-attribute method (MAM) to support critical quality attributes (cQAs) identification, quantitation and monitoring
- Accurate mass-based putative identification of drug-related impurities
- Quantitation of genotoxic impurities (nitrosamines, etc.), process impurities and high potency/low concentration drugs
- Stability-indicating assays for oligonucleotides and impurities
- LC-MS assays to measure *in vitro* efficacy of cell and gene therapy (CGT) products where applicable

## Advanced technologies

- Orbitrap mass analyzers
- Time of flight (TOF) mass analyzers
- Quadrapole mass analyzers
- Ion trap mass analyzers
- Two-dimensional liquid chromatography (2D LC)

## Instrumentation

- Thermo Scientific™ Q Exactive™ Plus
- Waters BioAccord and SYNAPT G2
- SCIEX TripleTOF 5600+, QTRAP® 6500+ and Triple-Quad 4500
- SCIEX API 4000 QTRAP
- Agilent 6130, 6135 and Agilent 6545 qTOF
- Waters SQD, TQD, SQD2 and QDA

## One lab, multiple locations



ATHLONE,  
IRELAND

More than  
**47,000 sq. ft.**  
and **340 staff**



MIDDLETON,  
WISCONSIN

More than  
**450,000 sq. ft.**  
and **2,000 staff**



FUNCTIONAL SERVICE  
PARTNERSHIPS

Multiple client locations in the  
**U.S. and Europe**  
with more than **370 staff**