

Disposition of Radiolabelled Large Molecules

Pharmaron performs ADME studies with a wide range of biopharmaceuticals including peptides, proteins, oligonucleotides, antibody-drug conjugates and other specialized constructs. Pharmaron can radiolabel large molecules with either $^{14}\text{C}/^3\text{H}$ and we also offer a proprietary rapid tritium tagging technique. Once the molecules are radiolabelled, we provide an extensive range of ADME and PK studies to support development of $^{14}\text{C}/^3\text{H}$ biologics.

Capabilities

- ^{14}C and ^3H radiolabelling of biologics
- Non-clinical ADME
- Non-clinical pharmacology
- *in vitro* metabolism/DDIs
- QWBA/MARG
- Immunotoxicity/immunogenicity
- Metabolite profiling
- Metabolite identification
- Bioanalysis

Services

Synthesis of Radiolabelled Biologics

- Radiolabelling of peptides, proteins, oligonucleotides & antibody-drug conjugates (ADCs) with $^3\text{H}/^{14}\text{C}$
- Covalent radioisotope tagging techniques with ^3H (RadioTag) for macromolecules
- ^3H oligonucleotide synthesizer

Non-clinical ADME

- *in vitro/in vivo* metabolism studies with ^3H & ^{14}C
- Tissue distribution imaging and quantitation with QWBA/MARG (microautoradiography)
- Disposition of potent biologics with quantitative analysis by AMS and LC-AMS
- Differential tissue distribution with BeaQuant® for dual $^3\text{H}/^{14}\text{C}$ radiolabelled macromolecules

Sample Analysis for Biologics

- GLP sample analysis to support toxicology (TK) and clinical studies (PK)
- Large molecule PK/PD, immunogenicity (ADA), biomarkers, and neutralizing antibody (NAb) assays
- Flow cytometry and immunophenotyping
- Ultra-sensitive analysis of ^{14}C biologics with AMS

Pharmacology Models with $^{14}\text{C}/^3\text{H}$ Compounds

- Disease models for oncology, CNS, pain, metabolic disease and inflammation
- Rapid RadioTag imaging techniques with ^3H to support pharmacology models