

# DMPK – Discovery through Clinical

Pharmaron's DMPK services support the needs for preclinical candidate (PCC) identification and nomination, Investigational New Drug (IND) enabling and New Drug Application (NDA) packaging for regulatory submission.

## Capabilities

- Discovery *in vitro* ADMET for compound screening, PCC identification and nomination, including *in vitro* toxicity assays
- Discovery *in vivo* PK (in rodent and large animals) for compound screening, PCC identification and nomination
- PK/PD correlation
- GLP-like *in vitro* ADME for IND enabling
- GLP-like *in vivo* ADME for IND enabling
- GLP-compliant bioanalysis of samples from GLP safety assessment
- GCP-compliant bioanalysis of clinical samples
- Clinical metabolism for NDA submission
- Clinical absolute bioavailability using <sup>14</sup>C-microtracer/AMS platform
- <sup>14</sup>C and <sup>3</sup>H radiolabelling of small molecule compounds and biologics

## Specialties

- Microdialysis for measurement of unbound compound concentration
- Comprehensive transporter studies including P-gp, BCRP, BSEP, MRP2, OATP1B1, OATP1B3, OAT1, OAT3, OCT1, OCT2, MATE1, MATE2K
- *in vitro* toxicity: Liver toxicity package (general and mechanistic toxicity evaluation), cardiotoxicity, genotoxicity, etc.
- BCS-based classification and biowaiver support
- Clinical absolute bioavailability using <sup>14</sup>C-microtracer/AMS platform
  - <sup>14</sup>C-labelled material synthesis - <sup>14</sup>C-microtracer
  - <sup>14</sup>C-microtracer dosed IV to human subject
  - Corresponding 'cold' compound dosed orally to same human subjects
  - AMS analysis of 'hot' compound and LC/MS/MS of the 'cold' compound in same samples
- AMS analysis of very low level of <sup>14</sup>C-labelled compounds in various bio-matrices
- Integration of DMPK functions across discovery, preclinical and clinical development phases