Pharmacokinetic Services

Pharmaron offers complete study support from formulation to PK parameters, rapid turnaround to support drug discovery and an experienced team with more than 30 years supporting DMPK.

- **Type of Dose Routes:** Routine: IV, PO, SC, IM, IP; Standard: Ophthalmic, Dermal, IN, SL, Buccal; Specialty: GI (ID, IJ, IC), IT, Jugular Vein, Portal Vein
- **Biofluid Sampling:** Jugular vein Portal vein, bile cannula, ureteral catheters, lymph cannula (other suitable veins) and more
- **Test System:** Rodents, Rabbits, Sheep, Porcine, Dogs

Bioanalytical Capabilities

- Test Articles: Small and Large Molecules
- Matrices: Plasma, Tissue, Urine, Feces, Bile, Lymph, CSF
- Sample Analysis and Reporting: Measured concentrations and PK parameters
- 72-hour turnaround time for plasma sample BA
- Technical Platforms Include: Waters Xevo TQ Systems, Waters ACQITY UPLC Systems, Bertin Precellys® 24Tissue Homogenizer and VersaMax™ Microplate Readers

Toxicity & Tolerability

- Experts in Systemic and Specialty Tox
- Non-GLP Safety/Tolerability (MTD, DRF)
- GLP Toxicology – Local and Systemic
- Standard Species: Rodent, Rabbit, Dog, Minipig
- DRF/MTD: 7, 14, 28, and 90 day Chronic (6-9+ months)
- Standard Endpoints: Clinical Observations, Body Weights, Food Consumption, TK Analysis, Histopathology, Clinical Pathology

Benefits

- Dedicated Team
  - Study Directors (PhD, DVM)
  - Board Certified Veterinarians
  - Highly Trained Research Associates
  - Dedicated Study Managers
- State-of-Art Facilities
- FDA Inspected
- Quality standards (GLP/ISO) and SOP's
- In-house QA with regulatory experience

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Laboratory Services

Chemistry, Manufacturing and Control

Clinical Development

Biologics & CGT

Pharmaron is a premier R&D service provider for the life sciences industry that offers a broad spectrum of R&D and manufacturing service capabilities throughout the entire drug discovery, preclinical and clinical development process across multiple therapeutic modalities, including small molecules, biologics and CGT products.

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Pharmacokinetic Evaluation

Species	Mouse, Rat, Guinea Pig, Hamster
Standard Dose Routes	IV (bolus and infusion), PO, SC, IP, IM, Topical
Atypical Dose Routes	IA, IT, IN, SL, Intrathecal
Surgical Models	GI cannulations (ID, IC), Bile duct cannulation (BDC), lymph cannulation, Gastric bypass, Renal vessel
Specialty	CNS/Behavioral, Pain, Diabetes, Metabolic, Dermal (Psoriasis/Acne), Infectious
Sampling	Whole Blood (jugular vein, portal vein, sub-mandibular, retro-orbital, cardiac puncture), bile, lymph, urine, feces, CSF, synovial fluid, tissues
Formulation	Vehicle preparation, Formulation preparation
Bioanalytical (non-GLP)	Test Articles: Small Molecules, Proteins, and Peptides Matrices: Plasma, Tissues, Urine, Feces, Bile, Lymph, CSF Reporting: PK (NCA), TK
Regulatory	AAALAC, USDA, OLAW, DEA (Schedules 2-5), BSL2

Species	Rabbit, Dog, Minipig, Sheep, Cat (otic) , Farm Pig
Standard Dose Routes	IV (bolus and infusion), PO, SC, IP, IM, Topical
Atypical Dose Routes	IA, IN, Buccal, SL
Surgical Models	GI cannulations (ID, IJ, IC), Bile Duct Cannulation (BDC)
Specialty	Endoscope, Diabetes, Food Effect, Pentagastrin, Famotidine
Sampling	Whole Blood (jugular vein, femoral vein, portal vein), bile, urine, feces, tissues
Formulation	Vehicle preparation, Formulation preparation
Bioanalytical (non-GLP)	Test Articles: Small Molecules, Proteins, and Peptides Matrices: Plasma, Tissues, Urine, Feces, Bile, CSF Reporting: PK (NCA), TK
Regulatory	AAALAC, USDA, OLAW, DEA (Schedules 2-5), BSL2

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Specialized Animals Models

	Lymph Collection	Intraoral	Endoscopic & Surgical Gastrointestinal Dose Administration	Dermal
Species	Sprague-Dawley Rat	Rabbit, Rat, Dog, Minipig	Dog, Minipig, Rat (Surgical only)	Rat, Rabbit, Minipig (Yucatan or Gottingen)
Dose Route	Various routes including oral gavage, and intraduodenal infusion (ID)		Intraduodenal (ID) – endoscopic or surgical Intracolonic (IC) – endoscopic or surgical Intrajejunal (IJ) – surgical	
Standard Formulations	Solution/Suspension	Dissolving films, Sprays, Gel, Solution/Suspension	Liquid (ID & IC & IJ), Capsule (ID)	Patch, Gel, Cream
Collection Site	Mesenteric Thoracic			
Accumulation Assessment in Tissue				Punch Biopsies – varying sizes and depths
Irritation Assessments				Modified Draize Scoring (Erythema and Edema)
Outcome	Lymphatic Disposition	Comparing exposure to other administration routes and absolute and relative bioavailability	Regional absorption to assess GI effects on stability or as a barrier to bioavailability	Dermal and systemic disposition

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