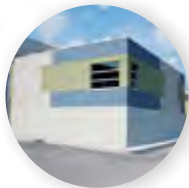


citoxlab
Safety and Health Research

Your partner for
radiation safety studies



www.citoxlab.com

Your partner for radiation safety studies

Citoxlab North America provides industry-leading expertise in the conduct of GLP-compliant irradiation services. Our experts are abreast of the evolving regulatory requirements and are able to offer guidance in study and program design under the animal rule (21 CFR 314.600 through 314.650 or 21 CFR 601.90 through 601.95).



Species

- NHP (Cynomolgus and Rhesus)
- Dog
- Mouse
- Minipig/pig
- Rabbit



Irradiation sources

- Cobalt-60 (Theratron 1000)
- LINAC (Varian 6MV Model CLINAC-6X)
- Cesium-137 (JL Shepherd Model MK I-68A)



Immunology support

- Blood and bone marrow collections for mechanism of action investigations
- Flow cytometry
- Cytokines and biomarkers (CRP, TNF- α , IL-6, IL-10, etc.)
- Anti-drug antibodies
- Customized ELISA
- Cell-based assays
- qPCR and qRT-PCR
- Immunophenotyping
- Stem cell Colony Forming Units (CFU)



Historical Database

- Heme-ARS, GI-ARS, Lung-ARS (Acute Radiation Syndrome)
- Combined injury with thermal burn
- Whole body/partial shielding
- High and low radiation dose rates



Pharmacokinetics

- Flow cytometry
- Cell based assays

Procedures

Qualified radiophysicists (certified in TBI patients)

- Dosimetry
- Prior to irradiation
 - Measurement of individual body dimensions for individual exposure times
 - State-of-the-art solid water phantoms
 - Laser positioning
- During TBI
 - Scanned inLight[®] Nanodot dosimeters
 - GafChromic[™] films
 - OneDose[™] dosimeter

Clinical pathology support

- Standardized procedures for blood collection (hemostasis and aseptic techniques)
- Hematology (2 Advia[®])
- Board certified veterinary clinical pathologists
- Complete clinical chemistry (Cobas[®])
- Coagulation panel
- Citrulline by LC-MS/MS for GI-ARS

Transfusion and supportive care

- Standard criteria
- Blood transfusion
- Colony of blood donors
- CPD blood transfusion
- Parenteral fluids
- Antibiotherapy
- Anti-emetics
- Analgesia
- NSAIDs
- Mucosa protectors

Diagnosis procedures

- Complete necropsy and histology
- ACVP certified pathologists on-site
- Full tissue list (assessment of > 40 organs per animal)
- Hemoculture and sensitivity testing
- Organ microbiology

TOXICOLOGY SERVICES

- General toxicology in all species
- Special toxicology
 - infusion, Inhalation, Dermal, Ocular
- Immunotoxicology
- Regenerative medicine
- Reproductive toxicology including minipigs and NHPs
- Carcinogenicity studies also in rasH2 and p53+/- mice
- Genetic toxicology: ICH compliant package
- *In vitro* toxicology: BCOP, h-CLAT, KeratinoSens™, DPRA, Photo 3T3-NRU, Episkin™, chicken eye test
- Agrochemical / chemical / REACH
- QSAR
- Physico-chemical testing
- Ecotoxicology: wide range of test species

SAFETY PHARMACOLOGY

- Integrated safety pharmacology in toxicology studies
 - CV (JET), BP
 - Respiratory (JET), plethysmography
 - CNS (FOB) and JET-EEG
- Safety pharmacology core battery
- *In vitro* assays

- GLP compliant ion channel testing panel (hERG +5)
- CNS *ex vivo* models for seizure liability screening
- Screening and follow-up models
 - Rodent and non-rodent LVP telemetry
 - Anesthetized models
 - Polysomnography
 - Gastrointestinal motility

DMPK, BIOANALYSIS, BIOMARKERS

- ¹⁴C and ³H ADME studies in all species
- *In vitro* metabolic clearance, metabolite ID and profiling, DDI package (metabolism and transporters)
- Bioanalysis: LC-MS/MS, GC-MS/MS, LC-ICP/MS, LC-Radiodetection, ELISA, RIA
- Toxicogenomics, miRNA: Affymetrix™ accredited service provider, next generation sequencing (Illumina®)
- Immunology: 10-color flow cytometer, Luminex, Meso Scale

MEDICAL DEVICE

- Biocompatibility testing
- Cardiovascular stents, electrophysiology

- and structural heart studies
- Long-bone defects and craniomaxillofacial/dental models
- Spinal fusion models
- Joint and cartilage repair models
- Regenerative medicine (growth factors, biomaterials, cell and gene therapy)

SPECIALIZED EXPERTISE

- Juvenile studies including minipigs
- Ototoxicity in rats
- Fertility studies in rodents and NHPs
- Radiation safety and efficacy studies
- Drug transporter studies and Drug-Drug Interactions
- Tissue Cross Reactivity (TCR): human and animal tissue banks
- Gene therapy vector biodistribution via qPCR
- ES cell testing: devTOX™ and cardioTOX™ (with Stemina)
- Lead optimization and predictive toxicology services: Leadscreen™



GLP CERTIFIED

Citoxlab France

+33 2 32 29 26 26
contact.france@citoxlab.com

Citoxlab North America

+1 888 353 2240
contact.northamerica@citoxlab.com

Citoxlab USA / Xenometrics

+1 913 850 5000
info@xenometricsllc.com
www.xenometricsllc.com

AccelLAB

+1 450 435 9482
info@accellab.com
www.accellab.com

Citoxlab Denmark

+45 56 86 15 00
contact.scantox@citoxlab.com

Citoxlab Hungary

+36 88 545-300
contact.hungary@citoxlab.com

Atlanbio

+33 2 51 10 01 00
atlanbio@atlanbio.com
www.atlanbio.com

SOLVO Biotechnology

+36 62 424 729
sales@solvo.com - www.solvo.com

Media Services Ltd (Japan)

+81 3 3666 9915
citoxlab@mediaservices-jp.com