



Analytical / Phytochemical Services

Analytical Services

► Spectral Analyses and Secondary Metabolites Structure Elucidation:

- UV-Vis spectrum
- FT-IR, UV-Vis-NIR
- 1H, C13, 2D NMR
- GC-MS, ESI-MS, Maldi-ToF MS,
- LC-MS, LC-MS/MS
- HPLC
- HPTLC

► Purification of Active molecules and Enzymes

Phytochemical Services

► Phytochemistry:

- Phytochemical Screening (qualitative)
- Phytochemical quantification.
- Vitamins and minerals content.
- Nutritional analysis.
- Extraction and Isolation
- Chromatographic & Spectrophotometric Analysis
- NMR analysis
- FTIR Analysis

► Physicochemical Tests/ Drug Preformulation studies:

- Identification by Chemical and UV Spectrophotometer
- pH
- Equilibrium Solubility Measurements
- Hygroscopicity and Lipophilicity
- pKa, partition coefficients
- Thermal properties
- Moisture Content Analysis (LOD)
- Disintegration & Dissolution

► Stability Studies

Biotech Services

► Invitro assays:

- In Vitro Toxicity Assays
- In vitro Bioassays
- Cell line based functional assay

► Microbiology Assay

- Bacterial identification
- Fungal Identification
- Plants Identification
- Animal Identification
- Isolation, culturing and media optimization of microbes
- Biochemical evaluation of microorganisms
- Metabolite screening and analysis

► Molecular Techniques

- DNA/ RNA/ protein Isolation & quantification
- cDNA conversion
- Flow cytometry
- Agarose Gel Electrophoresis
- PCR
- ELISA
- Western Blot
- Real-Time PCR

► Anti-sera Production

- Polyclonal, Monoclonal antibody development
- Purification of the antibodies
- Labelling of antibodies

► Genomic assay

- Microarray-based analysis
- NGS services
- DNA cloning assay
- Custom gene synthesis
- Identification and phylogenetic services

► Proteomics services

Lab animal & Zebrafish Supply

- Zebrafish
- Zebrafish Embryo
- SD Rat
- Wistar rat
- Swiss albino mouse
- Balb-c mouse
- C57BL mouse
- Guinea pig
- NZW rabbit
- Hamster
- Cannulated rats

Customized Disease Models are available in both Zebrafish and Rodents

Biocompatibility Testing – ISO 10993 / ASTM

We offer, but are not limited to, the following main services:

- Chemical Characterization- Extractable & Leachables (E&L)
- Physical Characterization
- Cytotoxicity test

The above analysis will be performed according to the ISO 10993 guidelines.

Medical Device Risk Assessment / Biosafety Risk Assessment Report

AKCP evaluates the biological risk associated with a product or material, as required by ISO 10993-1.



TOXICITY TESTING



PHARMACOLOGY DISEASE MODELS



HISTOLOGY, IHC & BIOCHEMISTRY



ANALYTICAL / PHYTOCHEMICAL SERVICES



BIOTECH SERVICES



LAB ANIMAL & ZEBRAFISH SUPPLY



BIOCOMPATIBILITY TESTING – ISO 10993 / ASTM



CONTENT WRITING



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Toxicity Testing

Rodents & Non-Rodents
Toxicology - GLP & Non- GLP

► General Toxicology:

- ▶ Single Dose / Acute Toxicity
- ▶ Repeated Dose /subacute Toxicity -14/28/90/180 day
- ▶ Chronic Toxicity
- ▶ Skin & Eye irritation
- ▶ Skin sensitization
- ▶ Inhalation Toxicity
- ▶ Immunotoxicity

► Genetic Toxicology:

- ▶ Ames Test
- ▶ Micronucleus-in vivo /invitro
- ▶ Chromosomal aberration-invitro
- ▶ Mouse lymphoma assay
- ▶ Comet Assay

► Reproduction & Developmental Toxicity



Zebrafish Toxicology

► Systemic Toxicity:

- ▶ Acute Toxicity Test – OECD 203
- ▶ Prolonged Toxicity Test- OECD 204
- ▶ Embryo Acute Toxicity (FET) Test-OECD236
- ▶ Short Term Reproduction Assay-OECD 229
- ▶ Short-term Toxicity Test on Embryo and Sac-fry Stages- OECD 212
- ▶ Early-life Stage Toxicity Test- OECD 210

► Organ-specific Toxicity:

Cardiotoxicity, Genotoxicity, Hepatotoxicity, Hematotoxicity, Nephrotoxicity, Neurotoxicity Reproductive toxicity

► Submammalian and Subvertebrate Models

- ▶ Chick embryo chorioallantoic membrane (CAM)
- ▶ The Drosophila melanogaster Assay



Pharmacology Disease Models

Pharmacological Model – Lab Animals

► Cardiovascular Disorders:

- ▶ MI/arrhythmias
- ▶ Angina
- ▶ Heart failure
- ▶ Hypertension

► Pulmonary Disorders:

- ▶ Asthma
- ▶ COPD
- ▶ IPF
- ▶ Anaphylaxis/allergy

► Diabetic and Metabolic Models:

- ▶ Acute Model: Acute Dyslipidemia Model: corn oil / intralipid induced
- ▶ Chronic Model: High-Fat diet-induced obesity mouse model
- ▶ Streptozotocin-induced Diabetes model

► GI:

- ▶ Ulcers,
- ▶ GI transit,
- ▶ GI emptying

► Oncology:

In vivo – subcutaneous xenograft tumour models and chemical-induced carcinogenesis

- ▶ Ovarian, Breast, Lung, Prostate Brain, Gastric, Pancreatic, Colon Epidermoid carcinoma, Melanoma Leukaemia, etc.

Pharmacological Model - Zebrafish

- ▶ Anti-Inflammation Study
- ▶ Anti-Cancer Study
- ▶ Anti-Hyperlipidaemia Study
- ▶ Anti-Diabetes (Type I & II) Study
- ▶ Wound healing Study
- ▶ Anti-Obesity Study
- ▶ Anti-Alzheimer's Study
- ▶ Anti-Parkinson's Study

► CNS:

- ▶ Memory/cognition,
- ▶ Anxiety, Depression, Epilepsy,
- ▶ ADHD,
- ▶ Brain & Spine Injury Models
- ▶ Parkinson's Disease
- ▶ Cognition / Motivation
- ▶ Depression & Sexual Function
- ▶ Schizophrenia & Mania
- ▶ Alzheimer's Disease-Scopolamine Treated Mice
- ▶ Catalepsy
- ▶ Neuroinflammation
- ▶ Chemical-Induced
- ▶ Memory Impairment

► Arthritis

► Ophthalmology

► Drug Metabolism & Pharmacokinetics (DMPK):

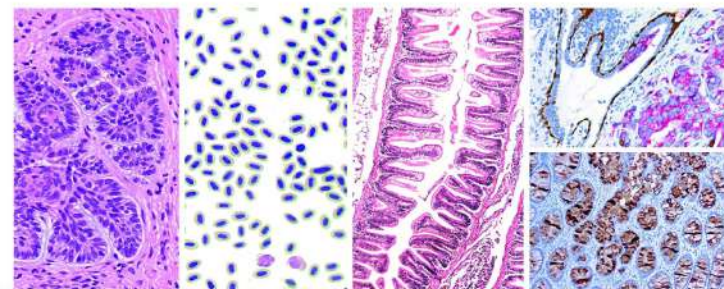
► Dermatology:

► Inflammation:

- ▶ TNBS, oxazolone, DSS induced colitis

► Obesity Model:

- ▶ Diet-induced obesity in rat, mice
- ▶ Fructose-induced hypertriglyceridemia in rats
- ▶ Hypercholesterolemia in rabbits



Histology, IHC & Biochemistry

Histology & Immunohistochemistry

WBR's Histology offers a full set of histology services ranging from the collection of tissue samples to delivering the detailed study reports that contain all experimental procedures and their outcome.

You have the option to select any entry point and exit point in our workflow.

We will handle the following species, irrespective of tissues and strains.

- ▶ Rats
- ▶ Mice
- ▶ Zebrafish
- ▶ Hamsters
- ▶ Beagles
- ▶ Guinea Pigs
- ▶ Rabbits
- ▶ Other fish, invertebrates and plant tissue

We provide fast in-house processing by experienced and well-trained staff and work with highly reliable shipping companies to guarantee safe transfer of your valuable samples.

Haematology & Biochemistry

In order to maximize the information gained per sample, WBR also offers Hematology and Biochemistry analytical services for zebrafish, rodents & Non-Rodents.

- Hematology (complete blood count (CBC)
- Complete Biochemical Profile
- Urinalysis
- Coagulation
- Urine Biomarker
- Lipid profile

Content Writing

WBR is happy to support and guide budding researchers to present and publish their research works.

- ▶ Manuscript editing
- ▶ Thesis Editing
- ▶ Plagiarism Checking
- ▶ Abstracts editing
- ▶ Scientific posters editing
- ▶ Literature review
- ▶ Journal selection and submission support

