

# Discovery Research

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## Discovery Toxicology



**Discovery Research**  
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# Overview



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Wherein toxicity studies are conducted on NCEs/NMEs at the early stage of discovery.  
The data is generated at extremely rapid pace with the highest quality and scientific integrity to make a go/no-go decision.

**4- Day Tox in 14 Days**

**7- Day Tox in 17 Days**

# Animal Facility



## Rodent Facility

- Vivarium spreading over 15000 sft
- Three floor facility with double corridor system
- House Rats, Mice, Guinea Pigs, and Rabbits



- Control environmental conditions
- HEPA filtered 100% clean air supply
- Individually ventilated cages
- Breeding nucleus from reputed vendors (CRL / Envigo)

# Animal Facility



## Non-Rodent Facility (Beagle Dogs)

- Spreading over 5000 sft
- Capacity to accommodate ~ 100 dogs
- Single or group housing
- Sick isolation kennels



- HEPA filtered 100% clean air supply
- Control environmental conditions
- Spacious play/exercise area
- Separate rooms for formulation, experiment, food preparation & storage



# Discovery Toxicology - Facilities



## Clinical Pathology Lab

- Hematology Analyzer
- Coagulometer



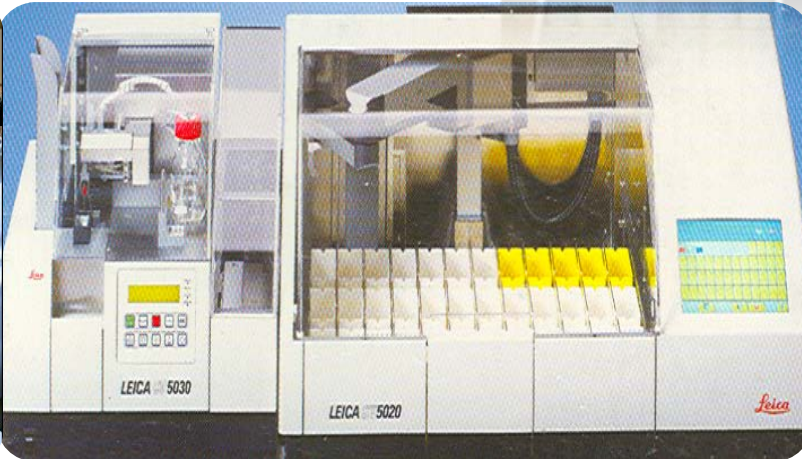
- Urine Analyzer
- Clinical Chemistry Analyzer

# Discovery Toxicology - Facilities



## Histology Lab

- Automatic Tissue Processor
- Embedding System



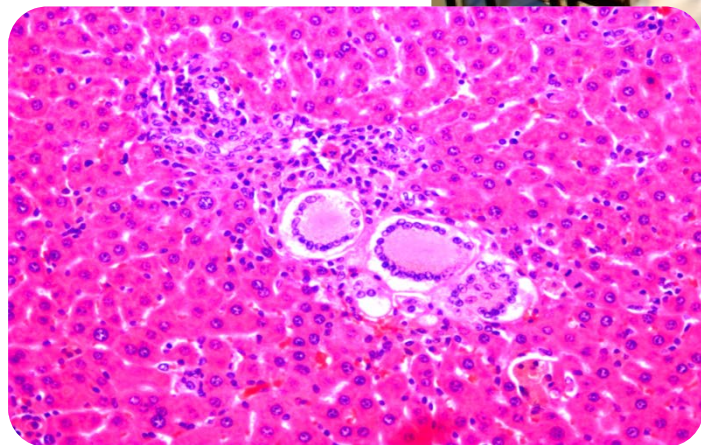
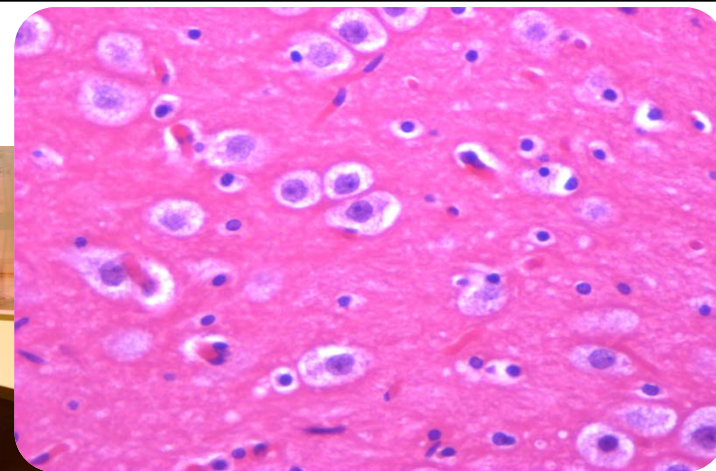
- Microtome
- Multi-stainer
- Cover-slipper



# Discovery Toxicology - Facilities



## Microscopy and Image Analysis





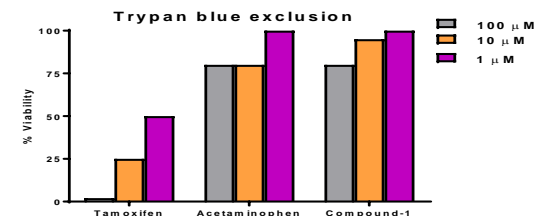
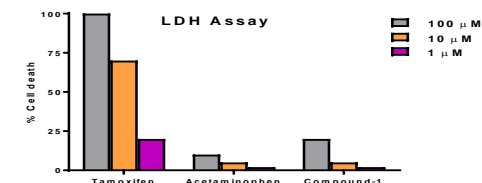
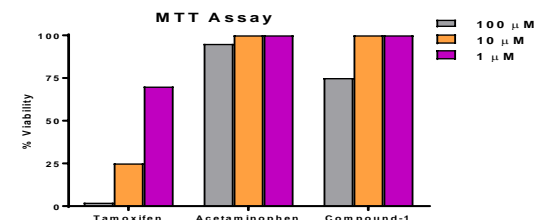
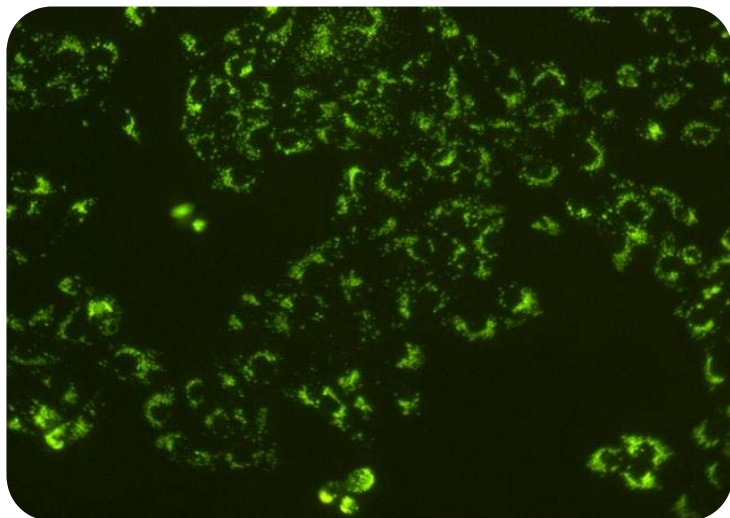


## In Vitro Toxicity studies

### ➤ Cytotoxicity assessment

- MTT (Cellular Metabolic Activity)
- LDH (Lactate Dehydrogenase Activity)
- Trypan blue (Cell Membrane Integrity)

Test System: HepG2 (Human hepatocellular carcinoma)  
HEK293 (Human embryonic kidney)  
IMR32 (Human neuroblastoma)



### ➤ Phospholipidosis

- Fluorescent Microscopy
- Fluorometry (Fluorescence Plate Reader)

Test System: CHO-K1 (Chinese Hamster Ovary cell line)  
CHL/IU (Chinese Hamster Lung cell line)

# Discovery Toxicology Capabilities



## ***In Vivo* Toxicity studies**

- **Single dose studies**
- **Repeat dose tox studies**

**Animal species:** Mice, Rats, Rabbits, Guinea pigs

**Routes of administration:** oral, *iv*, *im*, *sc*, *ip*, dermal



- **Custom design studies**



## Genetic Toxicity studies

- *In vitro* Genotoxicity studies
  - Bacterial reverse mutation test (Ames test)
  - Chromosomal aberration test
  - Micronucleus test



- *In vivo* Genotoxicity studies
  - Micronucleus test
  - Chromosomal aberration test



- Independent Quality Assurance team
- Quality System Procedures (QSP's) for Quality System Management and Standard Operating Procedures (SOP's) for Operation, Calibration, Maintenance of Equipment's
- Accredited by ISO/IEC 17025:2005 Quality System since 2005
- Document and Data Control, Conducting Internal Audits, Study Specific Audits
- Dedicated Archive facility for the retention of the records
- Facility audited and approved by many global pharmaceutical companies and majority of Indian Pharma Companies
- Integrity of studies is maintained by following critical components of GLP compliance like SOP, test and control article handling, data handling, training documents, archives etc.





# Advantages with Suven Discovery Toxicology

- *Expertise in discovery research*
- *Rapid turnaround time with quality results*
- *Flexibility in study conduct as per Sponsor's requirement*
- *Follow GLP principles*
- *Cost effective*



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