cyprotex
AN EVOTEC COMPANY

Drug-Induced Liver Injury (DILI)

Drug-induced liver injury (DILI) is a major cause of attrition, responsible for approximately 18% of drug withdrawals from the market. Early detection and reliable prediction are crucial for the success of your drug development program. We offer extensive and advanced technologies to evaluate DILI risk.

Your Partner in Predicting Hepatotoxicity

▶ **Extensive Experience:** Our team of experienced scientists and toxicologists are dedicated to ensuring the safety of your test articles and have decades of combined experience in hepatotoxicity and DILI research

▶ **State-of-the-Art Technologies:** Cutting-edge 3D microtissue models and transcriptomics services

▶ **Integrated Approach:** Comprehensive range of services from early discovery through clinical development

▶ **Regulatory Compliance:** Adherence to global regulatory standards and guidelines

Example DILI Testing Strategy:

Transporter Evaluation
- BSEP inhibition
- MRP2, MRP3 and MRP4 inhibition

2D Cytotoxicity Assessment
- Glutathione content (GSH), reactive oxygen species (ROS), mitochondrial membrane potential (MMP) & ATP content in human hepatocytes or HepG2 cells.

Mitochondrial Assessment
- High throughput - Glu/Gal or TMRE
- Seahorse - Mitochondrial stress test

DILI Assay in 3D Microtissues
- 3D culture approach with functional activity
- Measurement of mitochondrial function, ROS, GSH and ATP
- Allows for repeat longer term dosing
- Rapid and cost effective

DILI Flag – further characterization of DILI response

DILI Assay Combined with Transcriptomics:
- HT RNA-seq transcriptomics
- Mechanistic insight
- AI modelling

DILI Flag – follow up mechanistic assays

Mechanistic Insight Assays:
- Range of services and end points to investigate mechanism of toxicity
- Allows for understanding of mechanism of action and proposed pathways for toxicity e.g. transporter assays, time-dependent CYP inhibition, genotoxicity

Using our Transcriptomics Platform to Predict DILI

Our predictive DILI platform delivers superior predictive value versus traditional approaches, continuing to improve with the expansion of our safety database.

DILI Prediction Platform
- Human Liver Microtissues (2D Primary Human Hepatocytes or 3D hLiMTs)
- High-throughput Transcriptomics
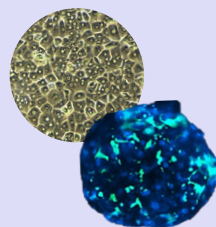
87%
Predictive accuracy

Cyprotex Europe
Tel (UK): +44 (0) 1625 505100
No. 24, Alderley Park, Mereside, Cheshire SK10 4TG, UK

Cyprotex US
Tel: +1-888-297-7683
200 Staples Drive, Framingham, MA 01702, USA