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# 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.*

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## 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:

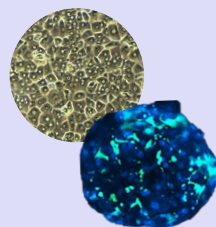
- ▶ Range of services and end points to investigate mechanism of toxicity
- ▶ Allows for understanding of mechanism of action and proposed pathways for toxicity e.g. transporter assays, time-dependent CYP inhibition, genotoxicity

## 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

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