

# 3D InSight™ Human Liver Microtissues

A more predictive 3D co-culture model incorporating multi-donor diversity

- Reflect the average response of a population better by pooling primary hepatocytes from 5 male and 5 female donors
- Achieve highest biological relevance with hepatocyte/Kupffer cell co-culture
- Test long-term effects of drug exposure in an organotypic, functional liver model

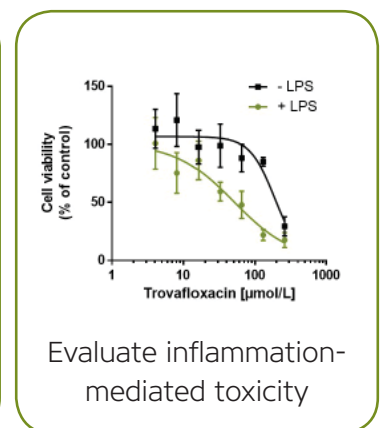
3D InSight™ Human Liver Microtissues provide a more diverse genetic background to help mitigate potential bias originating from CYP polymorphisms while offering the structural and functional robustness of a scaffold-free 3D model system. By pooling hepatocytes from 5 male and 5 female donors, these advanced microtissues more closely approximate the average human response, and extend donor lot availability to ensure a long-term supply of donor material. Available as hepatocyte/Kupffer cell co-cultures, or as hepatocyte monocultures, our next-generation multi-donor liver model is ideal for *in vitro* DILI detection and prediction, and investigation of mechanistic tox pathways, such as inhibition of bile acid secretion, idiosyncratic toxicity, and CYP-mediated toxicity.

Maintain organotypic morphology over weeks

Compound name	DILI positive or negative	Cmax [μM]	Tested Top concentration [μM]	IC50 [μM]	Margin of safety (IC50/cmax)	DILI prediction (P: MOS<30; N: MOS>30)
Ambrisentan	(5) N	0.79	50	> 50	> 63.1	N
Chlorpromazine	(3) P	0.94	100	13.37	14.2	P
Entacapone	(5) N	3.28	500	127.2	38.78	N
Ketoconazole	(1) P	11.30	100	4.28	0.4	P
Rosiglitazone	(2) P	1.00	200	64.63	64.6	N
Sitaxsentan	(1) P	28.58	167	124.8	4.4	P
Tolcapone	(1) P	47.60	200	9.3	0.2	P
Troglitazone	(1) P	6.40	100	7.8	1.2	P

DILI severity category:  
1: Severe clinical DILI 2: High clinical DILI concern 3: Low clinical DILI concern  
4: Enzyme elevations in clinic 5: No DILI

Predict DILI with high sensitivity and specificity



**Integrate Human Liver Microtissues into your DILI workflow**

# 3 Easy Steps to 3D Integration

The world's leading pharmaceutical companies have integrated InSphero 3D InSight™ Liver Microtissues into their DILI testing, now we've made it simple for you to do the same.

## Evaluate

With our 3D InSight™ DILI Evaluation Service, you evaluate multi-donor microtissues by letting our experts do all the work. We test 6 of your compounds and determine an  $IC_{50}$  using a 14 day, repeat dosing protocol with ATP endpoint. You get the results to compare to our reference compound data in just 3 weeks.



## Adopt

Our 3D InSight™ DILI Evaluation Kit provides six plates of human liver microtissues, optimized media, six reference compounds, ATP assay reagents, and a detailed protocol to simplify in-house adoption of InSphero microtissues. As you implement the 3D protocol, you'll also be validating the results of your evaluation project. You get the full support of our 3D experts, and in less than 3 weeks, you'll be ready to integrate.

## Integrate

Review our regular microtissue production schedule, and order plates of 3D InSight™ Microtissues as you need them. Enjoy the assay-ready convenience of standardized 3D liver models and optimized media delivered to your lab, and the satisfaction of knowing you're using the most biologically relevant *in vitro* DILI testing model available. Focus on the results, and leave the production and QC to InSphero.

## Two convenient ways to get started with Human Liver Microtissues

### DILI Evaluation Service | SP-02-121-02

Let our 3D experts do the evaluation work for you.

Service includes:

- Evaluation of 6 compounds
- $IC_{50}$  determination for each compound using Human Liver Microtissues (multi-donor, co-culture with Kupffer cells)
- 14 day, repeat-dosing protocol
- ATP endpoint (Promega CellTiter-Glo®)
- 3 week turnaround time

### DILI Evaluation Kit | KT-02-121-14

Bring 3D InSight™ Microtissues in-house.

Kit includes:

- 6x 96-well plates of Human Liver Microtissues (multi-donor, co-culture with Kupffer cells)
- 6 reference compounds
- Optimized maintenance and application-specific testing media
- 2x Cytotoxicity assay kits (Promega CellTiter-Glo®)
- 2.5 weeks (culture/dosing, assay, and data analysis)

## 3D InSight™ Liver Microtissues for Toxicology

Explore our entire portfolio of fit-for-purpose, assay-ready 3D liver microtissues: [www.insphero.com/microtissues](http://www.insphero.com/microtissues)



\*Beta models

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