3D Cell Culture Platforms and Services

- Innovative in vitro platforms for 3D cell culture
- Custom platform development for cell line, stem cell, primary tumor cells and primary cell culture
- Cell-based assays: DMPK, in vitro toxicology, oncology, infectious disease

3D Cell Culture Platforms
Innovative in vitro platforms for 3D cell culture
- Excellent maintenance of 3D cell morphology, viability, and functions
- Compatible with imaging and routine downstream assays
- Easily scalable for high throughput screening

Cell-Based Assays & Services
Customized, high quality assays for your R&D needs
- In vitro DMPK and toxicity services
- Services for consumer healthcare and cosmetics industry
- Patient-derived organoids (oncology)
- Efficacy assays for disease modelling and infectious disease applications
3D Cell Culture Platforms

3D Cellulose Sponge Series – Novel in vitro Platform Technology

3D Cellulose Sponge
- Suitable for cancer cell lines, mouse fibroblasts (NIH-3T3), and human foreskin fibroblasts (HFF)

Collagen Conjugated Scaffold
- Collagen conjugated
- Suitable for hepatic progenitor cells and human mesenchymal stem cells (hMSC)

Galactose Conjugated Scaffold
- Galactose conjugated
- Suitable for primary hepatocytes & hepatic cell lines

HepatoCue Platform
- Transparent PET film conjugated to varying ratios of RGD peptide and GAL bioligand
- Tunable cellular 3D morphology (monolayer, spheroid, tethered spheroid)

Salient Features
- Macroporous (pore size 80-150 µm)
- Homogenous distribution of spheroids
- Long term maintenance of cellular function and viability
- Compatible with different imaging modalities
- Compatible with multi-well plates, inserts, and fluidic devices
- Compatible with standard downstream analytical techniques

Applications
- 3D cell culture
- Hepatocyte culture
- In vitro DMPK assays
- In vitro toxicology
- Stem cell differentiation
- Patient-derived organoids (PDOs)
- Pathogen infection and efficacy studies
Cell-Based Assays & Services

**Hepatocyte Services**
- CYP 450 induction by mRNAs and activities measurement
- Induction/inhibition of other CYPs and enzymes such as Glucuronosyltransferases (UGTs) and Glutathione-S-Transferases (GSTs)
- Metabolite identification (MET ID) and clearance

**Reactive Acyl Glucuronides (RAGs)**
- Compound ranking of drugs that form reactive acyl glucuronides
- High throughput screening for RAG activity

**In Vitro Toxicology Services**
- Steatosis
  - Nile red
  - LAMP-1
- Oxidative stress reporter
- Viability
  - ATP content
  - Cell leakage
  - Cell proliferation
  - Resazurin assay

**Customized drug discovery solutions**

**Infectious Disease**
- Model development for studying pathogen life cycles
- Drug screening
- Example: Malaria, HCV, HBV

**Salient Features**
- Assays routinely run on primary cells, cell lines, and tumor samples
- Customized model development and customized assays with proprietary 3D cell models
- Partnerships with leading pharmaceutical companies

**Consumer Healthcare**
Customized *in vitro* assays for validating and supporting cosmetic and consumer healthcare products
- *In vitro* skin wound healing model
- *In vitro* infection model

**Patient-Derived Organoids (PDOs)**
- Organoids from patient tumors
- Patient-specific disease modelling *in vitro*
- Enables high-throughput drug screening and evaluation of drug responses
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