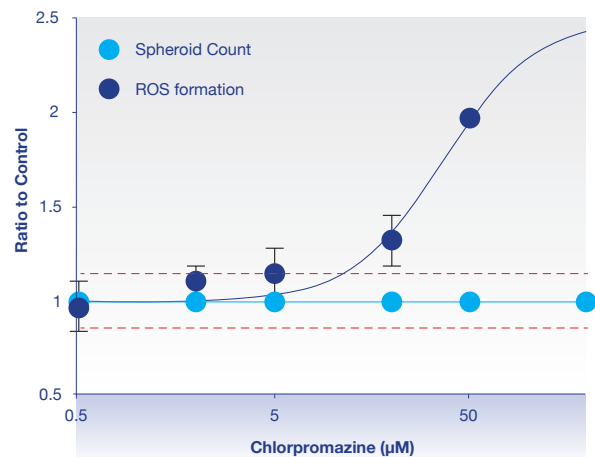
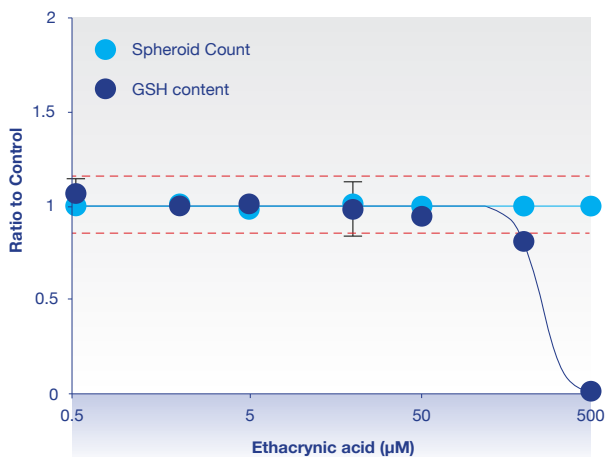
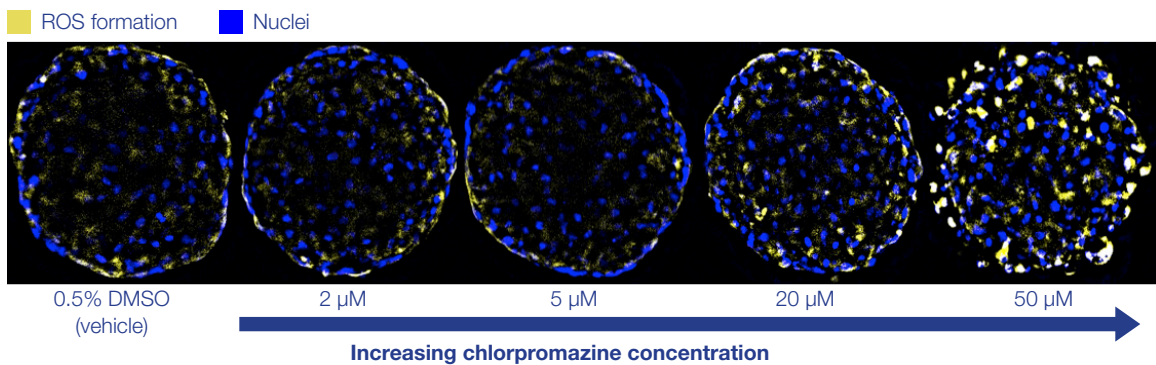
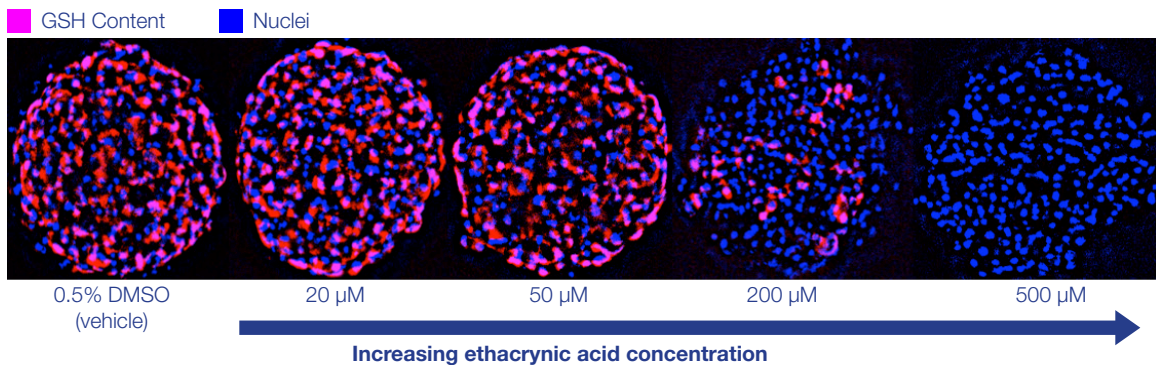
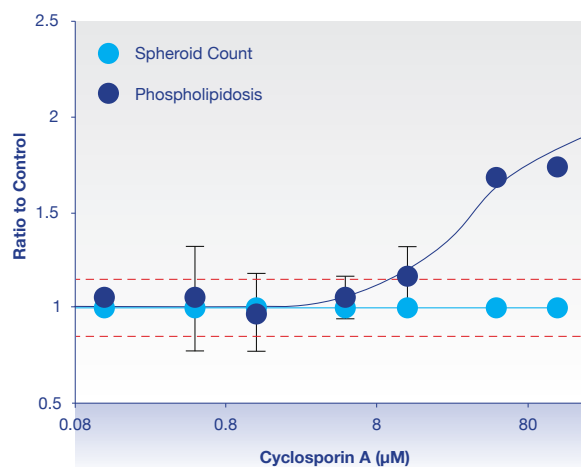
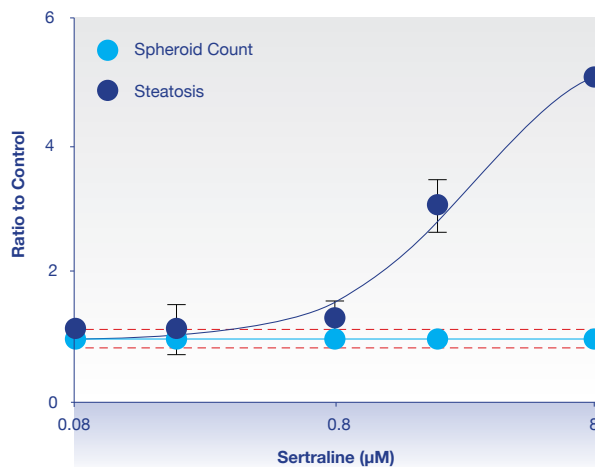
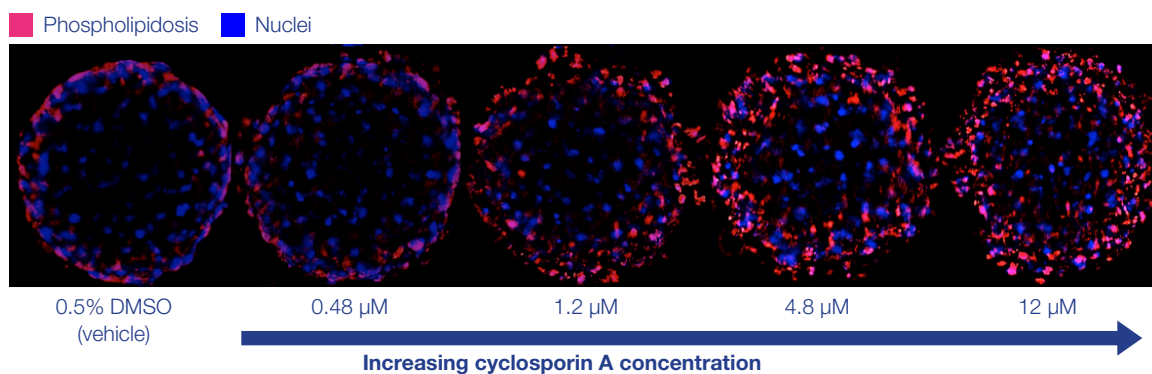
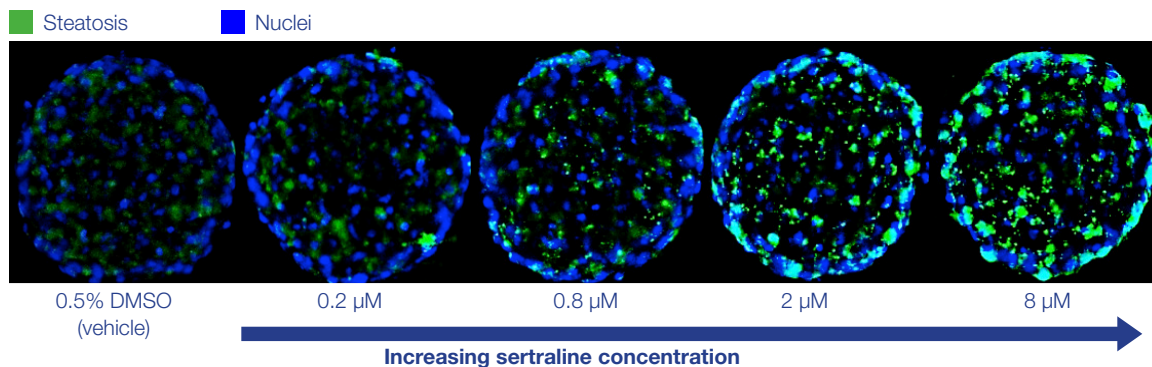


# High content analysis of three-dimensional (3D) models

## Background Information

- The environment created by a 3D culture model allows reconstitution of the natural cellular physiology by promoting the complex cell-cell and cell-matrix network communications found *in vivo*.
- Microtissues are formed using round bottom ultra-low adhesion cell culture plates which promote aggregation of cells into functional 3D microtissues. Microtissues can be formed from single or co-cultured cell populations and their longevity permits use in long-term repeat dose toxicity studies to investigate any cumulative effect.
- The combination of biologically relevant *in vitro* 3D models with multiparametric HCS assays presents a viable screening strategy for the detection of novel therapeutics that cause toxicity early in drug development.





## Protocols

### Microtissues\*

HepaRG, liver, spontaneously beating cardiac (mono- and co-cultures available)

### Endpoints\*

GSH content, ROS formation, phospholipidosis, steatosis, mitochondrial membrane potential, ATP content, LDH release

### Time Points\*

4 hr, 16 hr, 72 hr and 14 day repeat dose

\*others available on request