

3D Cell Culture

Three dimensional cell cultures are rapidly becoming the method of choice for modeling cell behavior.¹ These 3D cell culture formats, with novel attachment surfaces such as extracellular matrix (ECM), allow cells to form multi-layered structures called spheroids. For many cell types, this environment more accurately replicates molecular and morphogenic behavior in comparison to 2D surfaces.² Asterand provides 3D cell culture services to scientists to accelerate their life science research efforts. We have validated 3D cell culture models for measuring:

- Cell proliferation
- Total cell death
- Apoptosis
- Immunohistochemical (IHC) analysis of client specified markers

We have a depth of experience in this area and will also design customized assays and readouts to meet your specific needs.

The Benefits of Asterand's 3D Cell Culture

- **Accuracy:** 3D provides more accurate analysis of cell growth behavior and response to treatment
- **Reliability:** More reliable results due to 3D culture similarity to original tissue and better cell-to-cell interaction and cross talk
- **Authenticity:** Use of primary cells provides closest representation of human tissue response
- **Quick Turnaround:** Asterand has excellent access to large human fresh tissue supply network
- **Expertise:** Depth of scientific experience allows a customized approach to meet your research needs

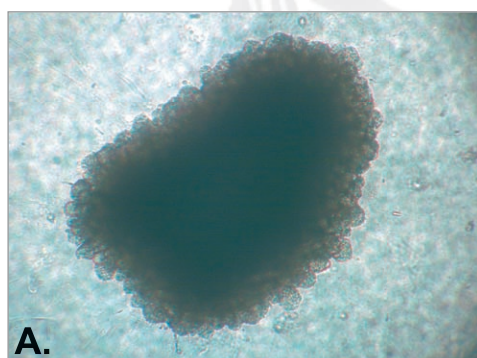
With Asterand's 3D cell culture services, clients will receive electronic and hard copy versions of the full study report, as well as raw data, regarding cell response to compounds, including microscopic images of live cultures and Hematoxylen and Eosin (H&E) stained sections or images of cells.

In addition, clients may choose to receive some or all of the following deliverables for each study:

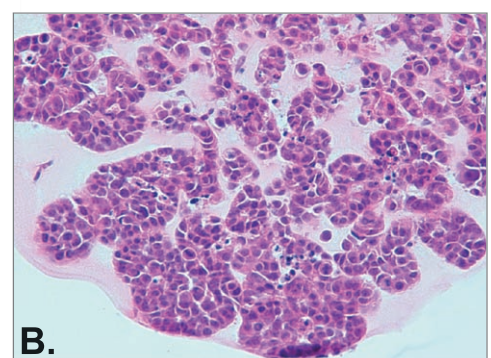
- FFPE block of 3D cultures which can be sectioned and used for IHC studies or used in Tissue Microarray (TMA) construction
- Cell culture supernatants, or cell derivatives like RNA, genomic DNA and total cell lysate
- ELISA test results on different secreted molecules, comparing secretion by treated and untreated cultures
- Gene expression analysis using qRT-PCR and /or whole genome direct hybridization

¹ Kenny P et al Mol Oncol.184-96 (2007)

² Gupta P et al. Drug Discovery, 1: 9-16 (2004)



A.



B.

A. Microscopic images of live 3D cultures of human colon cancer primary cells.

B. H & E stained section of formalin fixed paraffin embedded (FFPE) culture A.

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COMPOUNDS FASTER

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