

Title:

Expanding Live-cell Imaging Capability at Charnwood Molecular – Investigating 3D Tumour Spheroids and Immune Cell Models with the IncuCyte SX5

Abstract:

At Charnwood Molecular we use the IncuCyte SX5 for all our real-time live-cell imaging needs. This instrument unlocks the ability to investigate cell behaviour in a kinetic manner for extended time periods, from simple confluency monitoring to experiments including multiple cell dyes and labels. This capability is essential when developing novel compounds screened in *in vitro* culture to fully understand how cells react and add value to client projects.

Some recent projects at Charnwood Molecular have required the use of advanced live-cell imaging techniques to support the drug discovery process alongside orthogonal assays, these include:

- Monitoring spheroid formation and health
- Primary T-cell mediated killing of 2D and 3D cancer cultures
- Phagocytosis of *E. coli* labelled bioparticles by monocytes
- Disentangling cytotoxic and cytostatic compound effects by multiplexing cell health dyes