

don't miss your next screening hit ...

Screening & Profiling in 3D

The importance of 3D extracellular matrix on cellular function and behavior is clear from studies in differentiation, tissue engineering and even molecular pharmacology. BellBrook Labs is leveraging its unique iuvo™ Microconduit Array technology to provide high content cellular assays in 3D extracellular matrix.

Let BellBrook Labs Bring Its 3D Expertise & Experience to your Research!

SCREENING/PROFILING IN 3D BIOLOGICAL MATRIX

Replicates *in vivo* microenvironment and signaling pathways.

QUANTITATIVE COMPOUND DATA

Quantitative potency data including IC₅₀ and magnitude of effect. *In situ* molecular staining allows pathway and mechanism analysis. Final reports include raw image files, dose response curves, and IC₅₀ values.

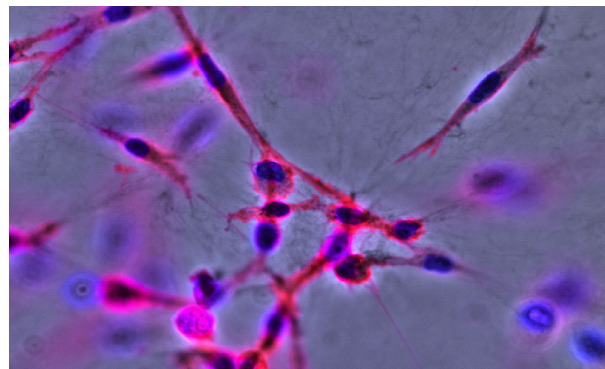
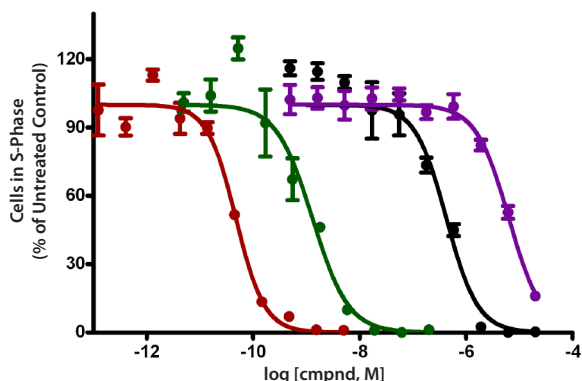
MULTIPARAMETRIC HIGH CONTENT PLATFORM

Allows a variety of assays, including viability, cell cycle, apoptosis, and migration/invasion.

RAPID TURN-AROUND TIME

Data delivered within three weeks.

Miniaturized, Automated Assays in Biological 3D Extracellular Matrix

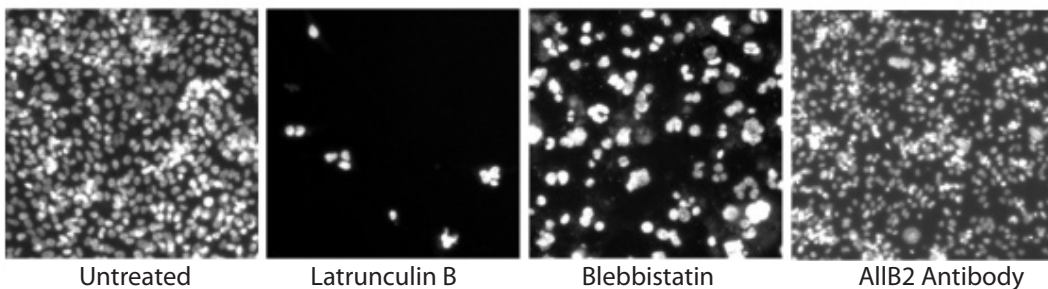
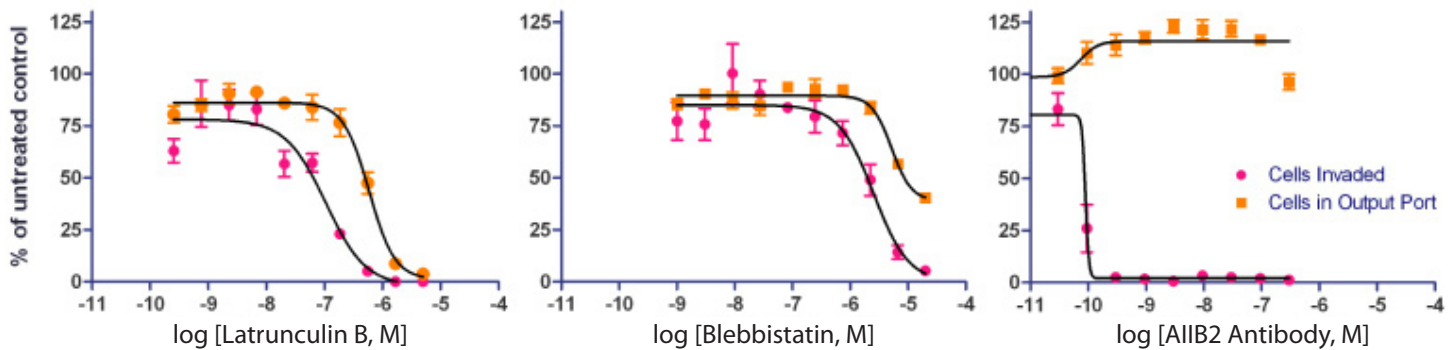


BxPC3 cells were incubated overnight with titrated compounds. Click-iT® EdU assay was performed 16 hours post-compound treatment. Plate channels were imaged for both nuclei and S-phase. Images were analyzed and the percentage of cells in S-phase was reported (values normalized to the untreated controls).

- Cell Cycle Assays
- Apoptosis Assays
- Cell Invasion Assays
- Custom Assay Development

3D Cell Migration/Invasion

Invasion of tumor cells through ECM is one of the hallmarks of cancer, yet the process is poorly modeled *in vitro*, especially in an automated format. BellBrook Labs is now offering compound profiling services for information rich, 3D tumor cell invasion assays. The fully automated assay uses microscopic imaging of cell movement through horizontally-oriented, collagen filled microchannels to provide quantitative data on cell number and distance traveled. Bellbrook's new service is unique in providing quantitative potency measurements on cell migration in a 3D matrix, as well as information on the effect of inhibitors on cell health.



PC3-M cells were allowed to migrate into type I collagen-filled microchannels over 5 days and media containing a titrated dose of inhibitor was replenished daily. The number of cells that migrated greater than 150 μm was quantified and shown normalized to the untreated control ($n = 4$). Cells remaining in the output port (origin) were also counted to provide information on the toxicity of test compounds. Images of Hoechst stained cells in the output port at the end of the assay indicate the degree of cytotoxicity.

True ECM Migration

Different colors are used to show migration of cells in three dimensions after entering the ECM.



Ordering Information

Please Call or Email to Inquire Into the Pricing for the iuvo™ 3D Cell-Based Assay Service.