

Our novel invasion plate design and methods enables increased throughput, standardization and quantification of cell invasion

Background

The ability of cancer cells to invade into surrounding matrices is a critical determinant of metastasis and failure to prevent metastasis has reinforced the unmet need of targeting cancer invasion. To expedite the overall drug screening process, considerable efforts have been focused on development of practical 3D cell culture platforms for drug discovery. However, current 3D cell-based assays have not yet been incorporated into drug development programs that target metastatic process due to long incubation time requirement, lack standardization, or do not permit standardization for high- throughput screening.

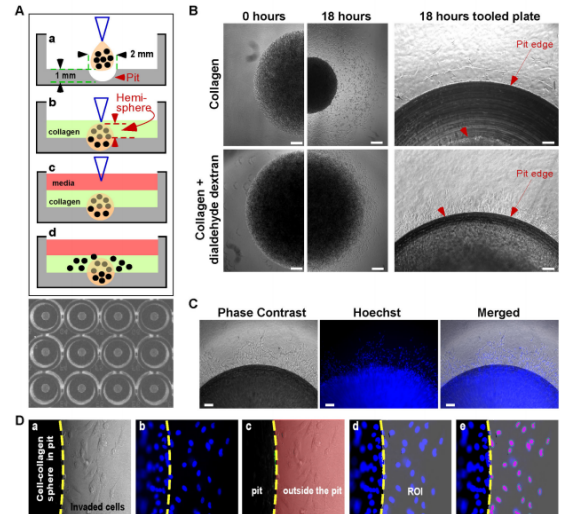
Technology

Dr. Cao, Professor of Medicine at Stony Brook University has developed a novel collagen gel spheroid-based 3D invasion High Throughput (HT) screening tool for identifying drugs that show anti-invasion capabilities. This novel 3D invasion assay permits standardization and automated readout, which are key requirements for HT screening. Dr. Cao provides evidence that his 3D invasion assay is reproducible, effective, easy and rapid to perform, and sensitive enough to identify compounds that inhibit cancer cell invasion. His cost effective 3D HTS invasion assay will accelerate drug discovery not only for cancer metastasis but also vascular and inflammatory diseases

Patent number/Publication:

Evensen. 2013, PLoS One. 8(12)

Issued Patent: 8,900,851 & Pending Application



Standardization and automation of 3-D invasion assay. **Evensen (2013)**

Advantages

- Permits standardized High Throughput Drug Screening
- Effective and Reproducible
- Can be used with multiple cell types
- Enables automated screening

Applications

- Research
- Drug Discovery

Stage

- Prototype available

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