

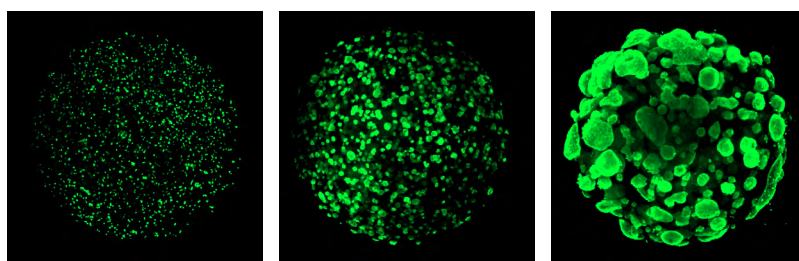
Oncology Testing Services

Advanced 3D Human Microtumor Bioassay System

LifeNet Health's LifeSciences Division is offering an early access opportunity to partner in the development of our advanced 3D human microtumor bioassay service. Partners provide client-furnished cells or cell lines that will form microtumors using our unique Extracellular Matrix (ECM), **HuBiogel™** — a natural, **human-derived** ECM that mimics the **biology** and **micro-environment** of **human tissues**.

Advantages of LifeNet Health's 3D Microtumor Bioassay:

- Mimics the tumorigenesis process *in vitro*
- Replicates *in vivo* like heterogeneous colony formation
- Allows for precise control of micro-environment



Day 1

Day 7

Day 14

Microtumors produced by embedding human colon tumor cells (HT-29) in HuBiogel.

Potential Applications:

- Investigations of tumor angiogenesis, hypoxia, and invasion
- Testing model for chemotherapeutic drug candidates
- Cellular studies complementing genomic and proteomic profiling and assessing biological activities of macromolecules
- Useful for primary cells, cell lines, or cells from patient-derived xenografts

This ECM is produced under controlled conditions from pooled, pathogen-free human amnions. The 3D human microtumor bioassay comes in a 96-well format suitable for robotic handling and robust analysis.

Key Components of HuBiogel:

- Collagen-I
- Collagen-III
- Laminin
- Entactin
- Collagen-IV
- Heparan Sulfate Proteoglycan

References

1. Gilbert, AN, Anderson, JC, Duarte, CW, Shevin, RS, Langford, CP, Singh, R, Gillespie, GY, and Willey, CD. Combinatorial Drug Testing in 3D Microtumors Derived from GBM Patient-Derived Xenografts Reveals Cytotoxic Synergy in Pharmacokinomics-informed Pathway Interactions. *Sci. Rep.* 8(1): 8412, 2018. DOI: 10.1038/s41598-018-26840-4.
2. Stackhouse, CT, Rowland, JR, Shevin, RS, Singh, R, Gillespie, GY and Willey, CD. A Novel Assay for Profiling GBM Cancer Model Heterogeneity and Drug Screening. *Cells* 8(7): E702, 2019. DOI: 10.3990/cells8070702.

For more information, please contact us at **800-847-7831** or **cells_tissues@lifenethealth.org**.