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Modeling metastasis *in vitro* within 3-D host tissue organoids

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Abstract

Cancer treatments have advanced in recent years, yet current models for drug discovery and metastasis exploration poorly mimic human cancer *in vivo*. Research generally relies on animal systems and two-dimensional (2-D) cultures, both of which suffer from inadequacies. Alternatively, 3-D systems of human-derived cells can promote cell-cell and cell-matrix interactions, resembling *in vivo* conditions, but unfortunately are largely underutilized for cancer research. Here we present multiple host tissue-tumor systems for *in vitro* modeling of colon carcinoma metastasis with implications in exploring cancer biology and the potential to streamline the drug development pipeline.

Biography

Aleksander Skardal received his Ph.D. at the University of Utah where he his research focused on hydrogel biomaterials and biofabrication techniques for engineering 3-D tissue constructs. He is currently at the Wake Forest Institute for Regenerative Medicine performing research in the areas of perinatal stem cell applications and the development of 3-D tissue models for *in vitro* biological exploration and drug screening.