Patient-derived xenograft (PDX) tumors will allow for accurate analysis of drug response and preserve molecular signaling of parent tumors. Glioblastoma multiforme (GBM), the most common primary brain malignancy, is used to test our hypothesis. MicroTumors were evaluated by comparing kinetic mass spectrometry profiles of GBM-MicroTumors with corresponding parent orthotopically implanted PDX, and determining single and combination treatment effects of small molecules/inhibitors (SMI) on GBM MicroTumors.

**INTRODUCTION**

**MATERIALS AND METHODS**

**RESULTS**

**CONCLUSIONS**

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**REFERENCES**

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**DRUG SENSITIVITY TESTING**

**Patient-Derived MicroTumor Assay**

**KINOMICS**

**PROFILING DRUG SENSITIVITY AND KINOMIC PATHWAYS UTILIZING A NOVEL HUMAN TUMOR DERIVED MICROTUMOR ASSAY**

**Figure 1.** At present, drug screening studies are commonly performed using monolayer or spherical culture and xenograft models of tumor cell lines. However, these do not fully recapitulate the primary tumor’s microenvironment and fail to accurately predict clinical outcomes. Vivo Biosciences has developed a novel MicroTumor 3D matrix based assay system that offers a closer in vivo representation of tumor cells in their native microenvironment. Patient-derived xenograft (PDX) tumors will allow for accurate analysis of drug response and preserve molecular signaling of parent tumors. Glioblastoma multiforme (GBM), the most common primary brain malignancy, is used to test our hypothesis. MicroTumors were evaluated by comparing kinetic mass spectrometry profiles of GBM-MicroTumors with corresponding parent orthotopically implanted PDX, and determining single and combination treatment effects of small molecules/inhibitors (SMI) on GBM MicroTumors.