KiYATEC® Advanced 3D Co-Culture Technologies

Our scientists are focused on developing and validating the most advanced primary tumor cell culture systems in the pharmaceutical industry. Recent projects and NCI-funded contracts include:

**In Vitro maintenance and robust viability of clinically-sourced, primary Triple Negative Breast Cancer (TNBC) co-cultures for 64 days**

**In Vitro culture and drug response assay systems using Patient Derived Xenograft (PDX) tissues**

**Tri-culture perfusion systems for investigating primary Glioblastoma Multiforme (GBM) drug response**

**Penta-culture (5 cell types) perfusion systems for investigating primary Breast Cancer drug response**

**Co-Culture perfusion systems for investigating primary Non-Small Cell Lung Cancer (NSCLC) and Pancreatic Cancer drug response**

**Cancer Stem Cell (CSC) and Circulating Tumor Cell (CTC) isolation, expansion and Small Cell Lung Cancer (SCLC) microtumor model development**

**Long-term effects of targeted drugs (i.e. epigenetic modulators, PARP inhibitors) may be assessed in vitro**

**Long-term viability in culture enables modeling of resistance mechanisms and combination dosing**

**In Vitro 3D modeling for immuno-oncology applications**

The KiYATEC® Advantage

KiYATEC’s expertise in 3D co-culture techniques, scaffold material selection and complex tissue microenvironment biology has allowed the company to create the most advanced *in vitro* cancer models in the industry. We have successfully created high-throughput screening platforms (Ex Vivo 3D, EV3D) to rapidly assess drug response in as little as 7 days. We also have maintained viable TNBC microtumors for 64 days in culture. Most recently, we have developed and tested complex tri-, tetra-, and penta-culture microtumor models which incorporate immune components.

Our goal is to further develop and validate the most clinically relevant tumor models in the industry. In the near future, we will enable researchers as well as clinicians the ability to create patient-matched tumor/immune models to assess immune modulating agents, including antibody drug conjugates, checkpoint inhibitors and adoptive T Cell therapies.

**Immuno-oncology drug testing and assessment of CAR-T therapy efficacy**

**Modeling of primary tumor/immune cell interactions**

**Patient-specific ex vivo tumor models including matched immune components**

New Dimensions in Cancer Diagnostics & Services™
KIYATEC has created in vitro tumor models which incorporate freshly isolated immune components. Currently, tumor associated macrophages (TAMs) are being used to monitor M1/M2 transition and their effect upon tumor viability. Ongoing work will allow KIYATEC to assess the effects upon tumor drug response, morphology, epigenetics, protein expression and biomarker profiles. Our modular development platform will eventually enable researchers to incorporate additional immune components (NK cells or T-Cells) into the culture system. Using our perfusion platform, models can be developed which include CAR-T therapeutics.

KIYATEC’s 3D co-culture systems and in vitro phenotypic Drug Response Profiling (DRP) services enable our clients to select and advance only their most promising and clinically relevant drug candidates. We seek to address your most challenging drug development issues. Whether preclinical candidate selection, poor in vitro to in vivo correlation, drug resistance, combination dosing, immune-oncology modeling or overall poor clinical performance, KIYATEC provides a cost effective and efficient solution to minimize risk and maximize clinical performance across your drug development pipeline.

Breast Cancer Model Development
Funded by NCI

Penta-Culture Immuno-Oncology Models

KINATEC INC.
900-B West Faris Rd. • Greenville, SC 29605
864.502.2013

KIYATEC.COM
New Dimensions in Cancer Diagnostics and Services™
customer.service@kiyatec.com