



CYTOTOXICITY

Overview

- Possible cellular toxicity is the first step in evaluating the potential of drug candidates.
- Fundación MEDINA has a cell line panel designed for two distinct objectives: Cytotoxicity studies and preliminary oncology studies.
- The MTT test is based on the reduction of the yellow, water-soluble dye 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazoliumbromide (MTT) into a blue-violet, water-insoluble formazan by mitochondrial succinate dehydrogenases.

Protocols

Fundación MEDINA offers the study of the cellular toxicity using MTT test

Instrument

Victor2™ Wallac spectrofluorometer

Tumor cell lines:

breast (MCF-7, Hcc1954, Hs578t; BT549; Hcc1943; Hcc1937)
lung (A549, NCI 2126)
liver (HepG2)
colon (HT-29, CaCO2)
ovarian (MES-SA)
non resistant doxorubicin ovarian (MES-SA/Dx5)
urinary bladder (HT-1197, HT-1376),
skin (CRL-11147)
prostate (PC-3)
cervix (HeLa)
pancreas (MiaPaca-2, Panc-1, Panc-3, Panc-8, BxPC3)

Normal cell lines

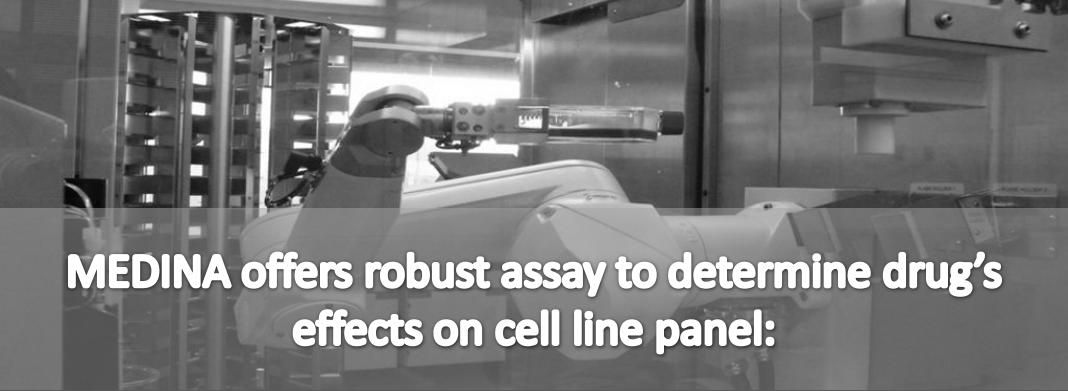
lung (CCD-16Lu)
breast (184A1, MCF10)
skin (CCD-25Sk)
hepatocytes

Test compounds

Fundación MEDINA offers different dilution patterns :
2 concentration points
6 concentration points
10 concentration points
All compounds are tested per triplicate

Data results

%Inh, dose –response curve, IC50

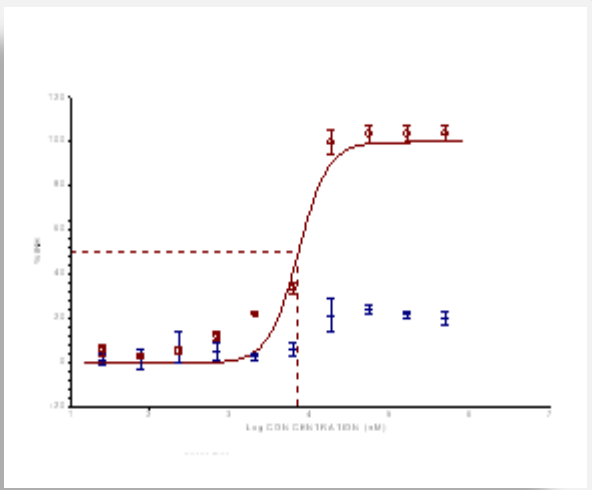
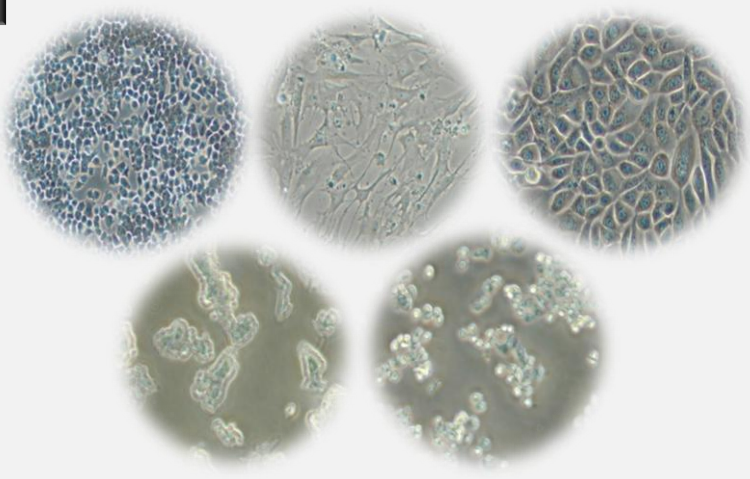


MEDINA offers robust assay to determine drug's effects on cell line panel:

Visual images

The drug behavior is analyzed in each cell line not only with the MTT assay but also with microscopy images.

Fundación MEDINA compares the results between tumor cell line and normal cell line.



Assays have been validated with a large number of standards and have been used as reference model in a pharmaceutical company .

All of the data are produced and analyzed in a high quality control environment.

Cell culture automation

Fundación MEDINA has a robotic system that allows for the maintenance of a large number of cell lines.

