BIODURO

Study Design: CYP450 Induction using Human hepatocytes

Test System	Cryopreserved human hepatocytes (3 donors recommended)
Test Article Concentration	0.1, 1, 10 µM (dependent upon unbound C_{max}, dose, solubility and cytotoxicity) plus vehicle control, in triplicate Or 6 concentrations (Calculate EC_{50})
CYP Isoforms	CYP1A2, CYP2B6 and CYP3A4
Positive Control	Omeprazole (CYP1A2); Phenobarbital (CYP2B6); Rifampicin (CYP3A4)
Test Article Requirements	Dependent on top concentration (recommend 0.1% DMSO of final concentration)
Exposure Period	48-72 hr (Media changed every 24 hrs)
Probe Substrates for Catalytic Activity	Phenacetin (CYP1A2) Bupropion (CYP2B6) Midazolam (CYP3A4)
Analysis Method	LC-MS/MS quantification of acetaminophen (CYP1A2), hydroxybupropion (CYP2B6) and 1-hydroxymidazolam (CYP3A4) qRT-PCR for relative mRNA expression levels