Figure S4

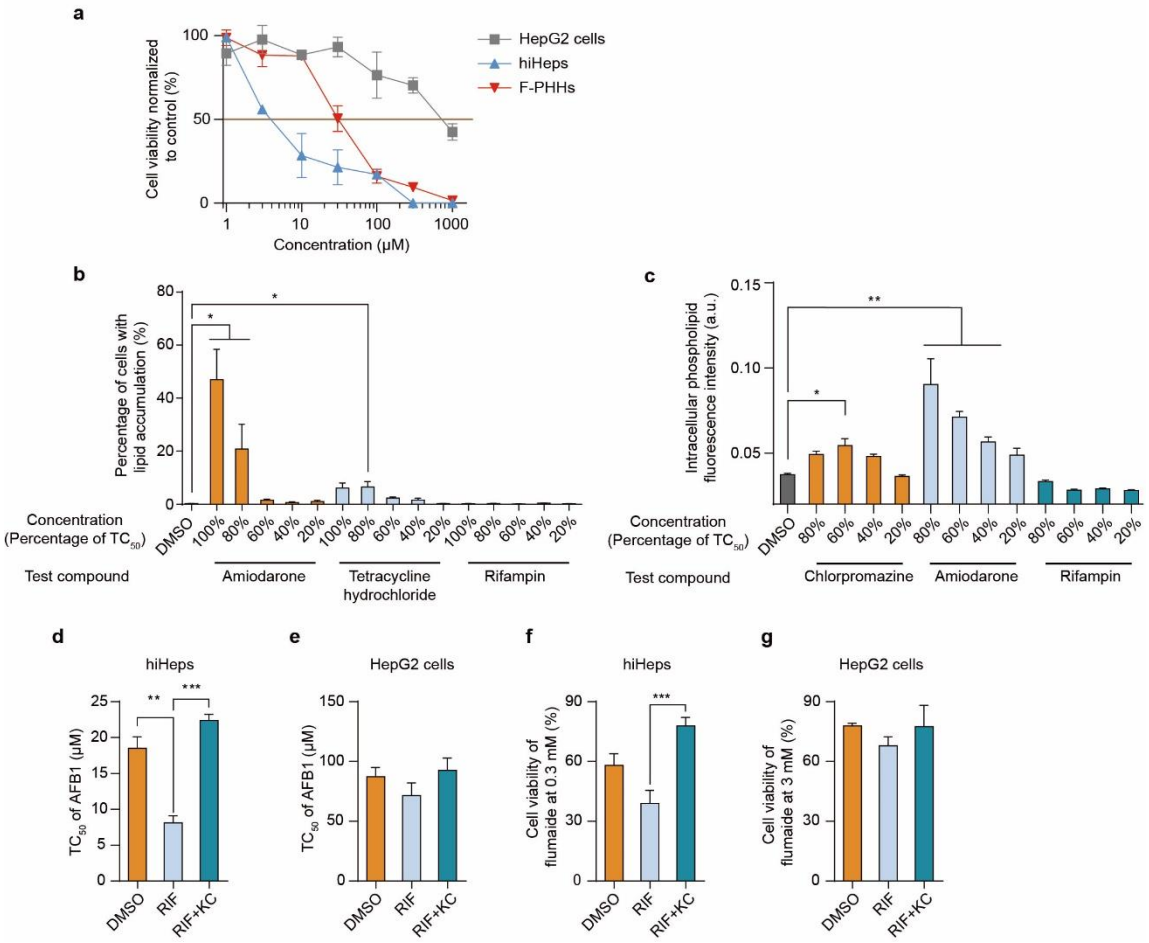
a
Cell viability normalized to control (%)
100
50
0
1
10
100
1000
Concentration (μM)
HepG2 cells
hiHeps
F-PHHs
b
Percentage of cells with lipid accumulation (%)
80
60
40
20
0
*
*
Concentration (Percentage of TC50)
DMSO
100%
80%
60%
40%
20%
Test compound
Amiodarone
Tetracycline hydrochloride
Rifampin
c
Intracellular phospholipid fluorescence intensity (a.u.)
0.15
0.10
0.05
**
*
Concentration (Percentage of TC50)
DMSO
80%
60%
40%
20%
Test compound
Chlorpromazine
Amiodarone
Rifampin
d
hiHeps
TC50 of AFB1 (μM)
25
20
15
10
5
0
**
***
DMSO
RIF
RIF+KC
e
HepG2 cells
TC50 of AFB1 (μM)
150
100
50
0
DMSO
RIF
RIF+KC
f
hiHeps
Cell viability of flumaide at 0.3 mM (%)
90
60
30
0
***
DMSO
RIF
RIF+KC
g
HepG2 cells
Cell viability of flumaide at 3 mM (%)
90
60
30
0
DMSO
RIF
RIF+KC

Figure S4. hiHeps show toxicity prediction ability, Related to Figure 5. (a) Dose-dependent viability curves of hiHeps, F-PHHs and HepG2 cells treated with Aflatoxin B1 (AFB1). The concentration that was calculated to cause a 50% decrease in cell viability (brown line) was determined as the TC_{50}. All data were normalized to cultures treated with vehicle control. **(b-c**) Quantification of dose-dependent steatosis and phospholipidosis in hiHeps after exposure to steatosis/phospholipidosis-causing compounds (Figure 5C), rifampin (non-steatosis/phospholipidosis-causing compound) or DMSO. $n = 4$; a.u., arbitrary units. **(d-g**) Drug-drug interactions mediated toxicity. Toxicity of AFB1 (presented by TC_{50} value) and flutamide (presented by cell viability at 0.3 mM or 3 mM) in hiHeps (d, f), and HepG2 cells (e, g) after treatment with DMSO, the CYP3A4 inducer rifampin (RIF) or the combination of RIF and CYP3A4 inhibitor ketoconazole (KC). $n = 3$ for AFB1 and $n = 6$ for flutamide in both cell types. Data are presented as mean ± SEM. One-way ANOVA was performed. *$P < 0.05$; ** $P < 0.01$; *** $P < 0.001$.