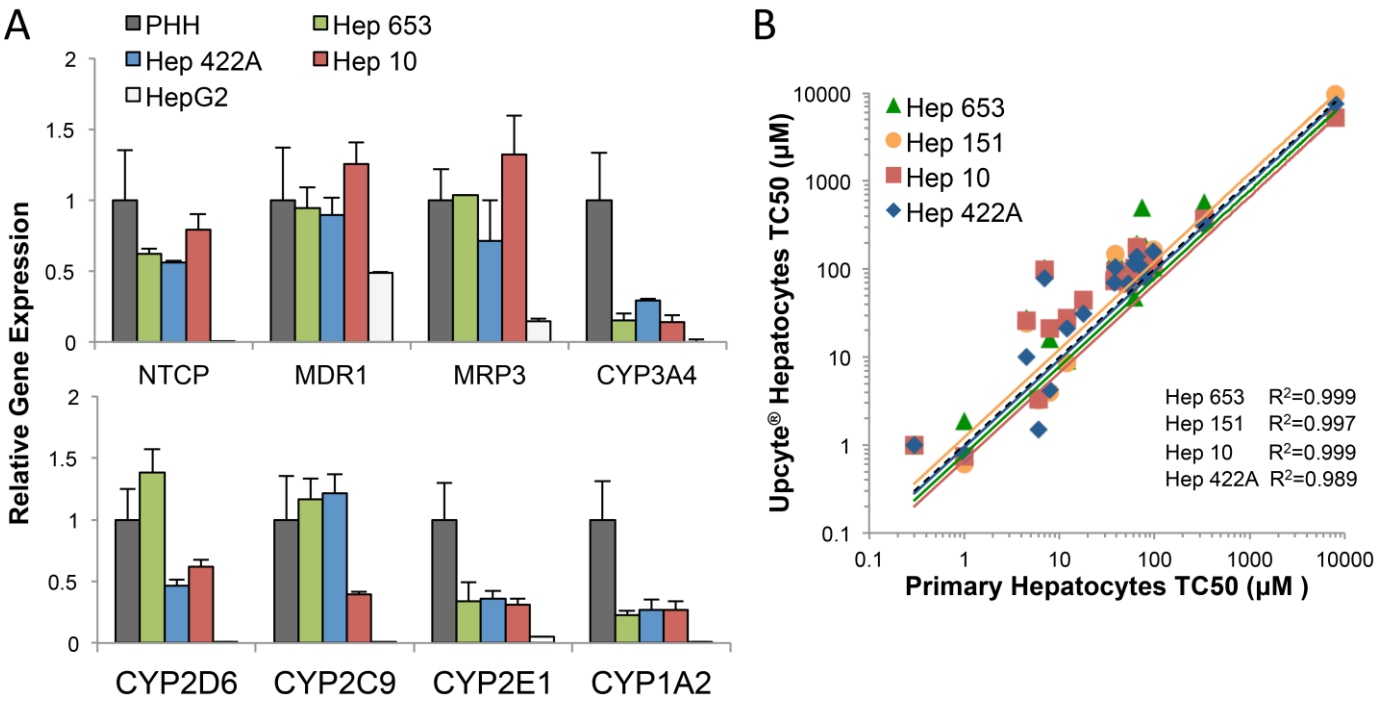

Supplementary Figure 3

Variability between different hepatocyte donors in CYP450 expression and drug toxicity.

(A) Quantitative gene expression analysis of primary human hepatocytes and HepG2 cells compared with differentiated hepatocyte from donors 653, 422A, and 10. All three lines show comparable levels of gene expression. (B) Graph comparing the TC_{50} of 18 compounds (**Supplementary Table 1**) in differentiated hepatocytes from donors 653, 151, 10, and 422A against TC_{50} values for primary human hepatocytes. Toxicity was measured using the MTS assay. All donors showed an R^2 correlation of 0.99 (n=3). Values presented in Log scale.

	Compound	Reported IC50	Hep 653	Hep 151	Hep 422A	Hep 10
Toxic	α-Amanitin	0.1-2 μM (H)	1.9	0.6	0.8	0.75
	Methotrexate	0.3 μM (HepG2)	1	1	1	1
	Astemizole	2-6 μM (HepG2)	3.5	3.2	1.5	3.3
	Cerivastatin	1-8 μM (H), 3 μM (HepG2)	16	4	4.2	21
	Irinotecan	4-5 μM (HepG2)	28	24	10	26
	Aflatoxin B1	12 μM (H)	9.2	8.5	21	28
	Chlorpromazine	2-18 μM (H)	45	44	31	45
	Flutamide	6-100 μM (H)	100	73	68	69
	Nefazodone	38 μM (HepG2)	94	73	70	74
	Danazol	74 μM (HepG2)	>500	82	103	90
	Tacrine	81 μM (H)	182	141	79	91
	Furazolidone	28-50 μM (H)	146	147	106	94
	Imipramine	3-7 μM (H), 85 μM (HepG2)	103	91	78	98
	Ketoconazole	62 μM (R), 80 μM (HepG2)	48	100	114	104
	Troglitazone	52-143 μM (H)	123	165	159	121
	Quinidine	65 μM (HepG2), 244 μM (R)	195	183	139	179
	Diclofenac	331 μM (H)	575	329	322	374
	Acetaminophen	8000 μM (H)	6200	9700	7500	5300
Non-toxic	Trazodone	>200 μM (HepG2)	>200	>200	>200	>200
	Amoxicillin	N/A	>200	>200	>200	>200
	Omeprazole	>200 μM (H)	>200	>200	>200	>200
	Buspirone	>200 μM (H)	>200	>200	>200	>200
	Thioacetamide	>200 μM (H)	>200	>200	>200	>200

Supplementary Table 1

Variability between different hepatocyte donors in drug toxicity.

Table comparing the TC_{50} of differentiated hepatocytes from donors 653, 151, 422A and 10 treated with known toxic compounds compared with reported TC_{50} values for cultures of primary human hepatocytes (H), primary rat hepatocytes (R), and HepG2 cells. Toxicity values were evaluated using the MTS assay.