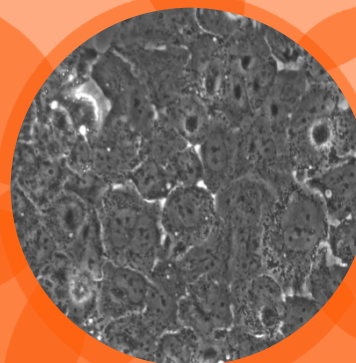


Assay-Ready Expanded (ARE) Human Hepatocytes

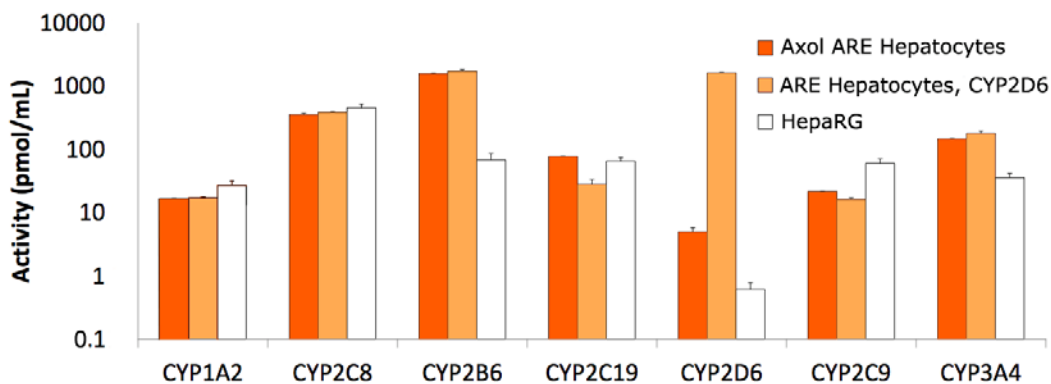
- Primary human hepatocytes that have been expanded *in vitro*
- Large batch sizes (up to 2000 vials) from the same donor for consistency from preliminary experiments to high-throughput screening
- Express CYP enzymes, are metabolically functional, polarized & can be infected by the Hepatitis C virus
- Ready-to-use directly in downstream applications



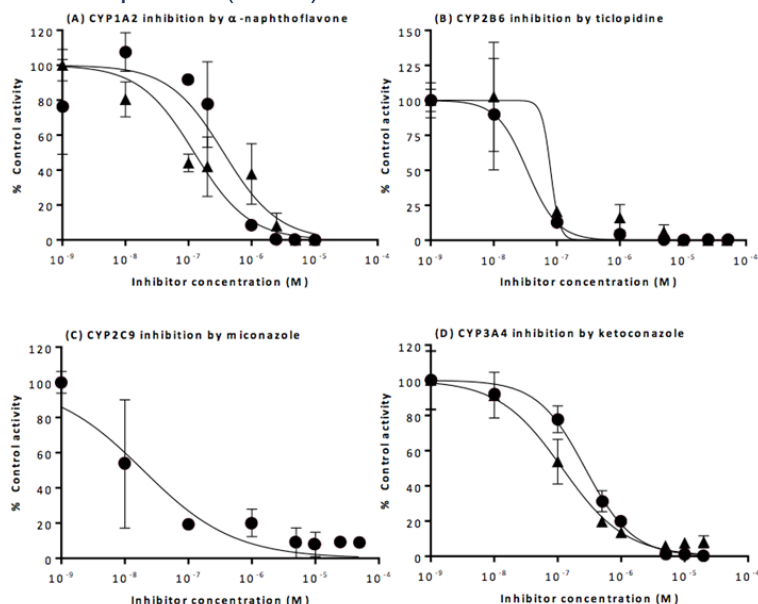
Hepatocyte morphology after 5 days in culture (40X)

CYP Metabolism Studies

Donor Information				CYP Basal Activity (pmol/min/mg)				Fold Induction			
ID	Gender	Age	Race	CYP1A2	CYP2B6	CYP2C9	CYP3A4	CYP1A2	CYP2B6	CYP2C9	CYP3A4
Donor 1	F	48	C	3.3 ± 0.4	40.3 ± 6.5	91.8 ± 5.5	21.4 ± 9.6	7.3	5.1	2.8	8.2
Donor 2	F	43	C	0.7 ± 1.4	71.1 ± 11.3	29.1 ± 21.4	77.8 ± 22.6	>5	24	1.4	2.3
Donor 3	M	0.25	H	2.3 ± 0.1	33.6 ± 11.4	4.8 ± 3.1	42.9 ± 6.3	9.9	3.5	5.6	3.1
Donor 4	F	9	C	17.1 ± 0.5	68.4 ± 18.4	16.2 ± 0.9	178.3 ± 17	>5	1.8	0.6	6.5

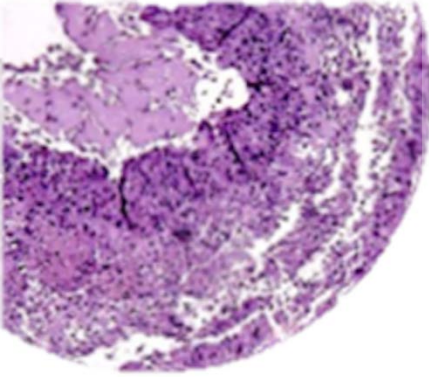


Comparison of the Phase I CYP enzyme activity between ARE Hepatocytes, ARE Hepatocytes (CYP2D6 Overexpressing) & HepaRG cells (above). Inhibition of CYP enzymes by various compounds (below).



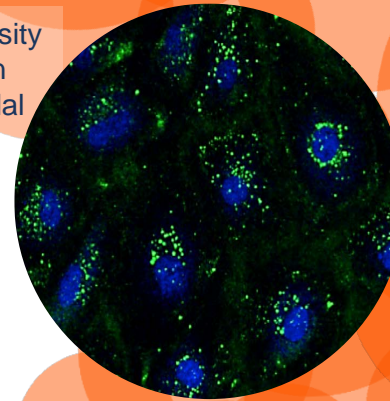
ax3701 ARE Hepatocytes
 ax3702 ARE Hepatocytes, CYP2D6 Overexpressing
 ax3703 ARE Hepatocytes, Genotoxicity Assay Validated

ax3720 ARE Liver Sinusoidal Endothelial Cells
 ax3721 ARE Liver Sinusoidal Epithelial Cell Culture Medium

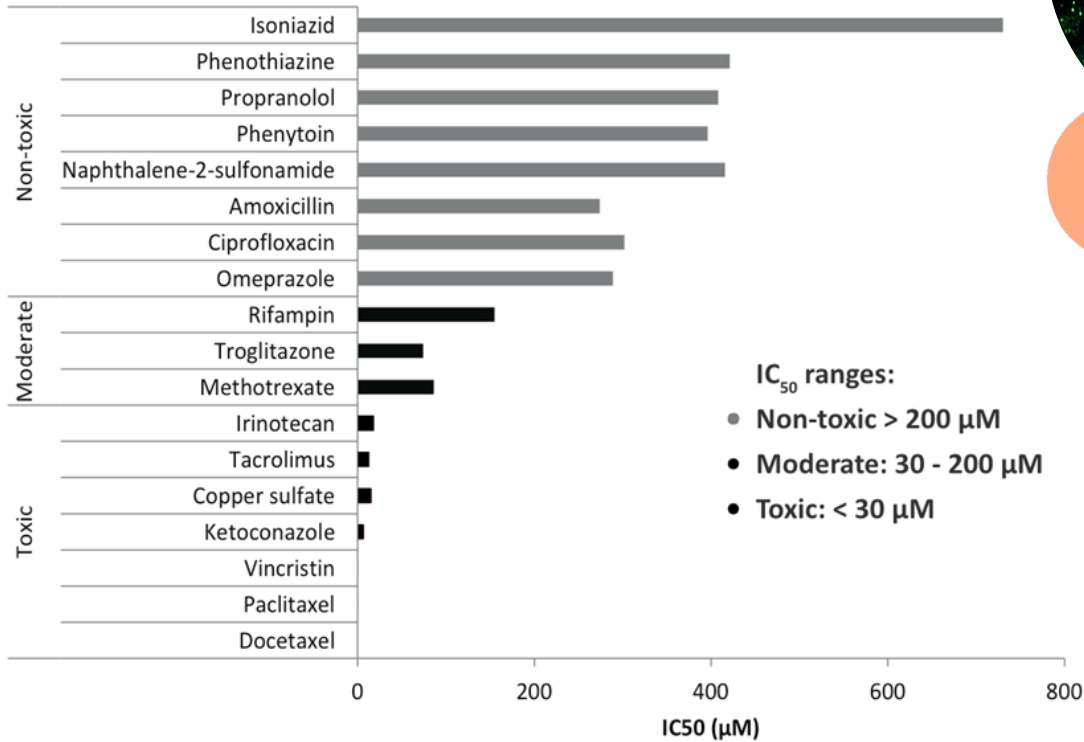


3D co-culture of ARE Hepatocytes & ARE Liver Sinusoidal Endothelial Cells permits formation of liver buds

Uptake of Low Density Lipoprotein (LDL) in ARE Liver Sinusoidal Endothelial Cells

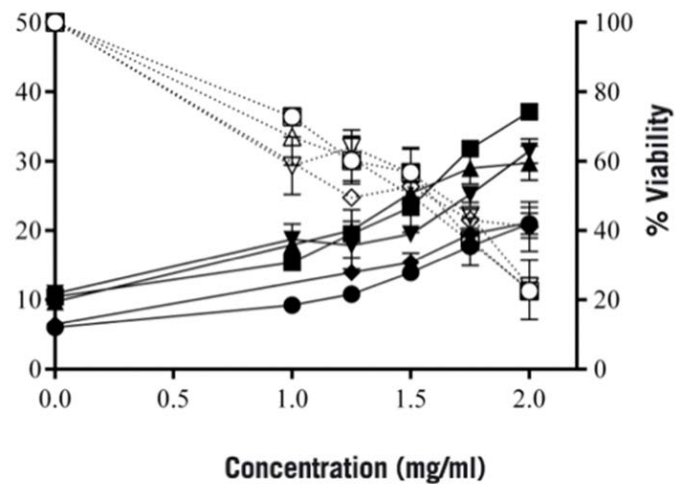
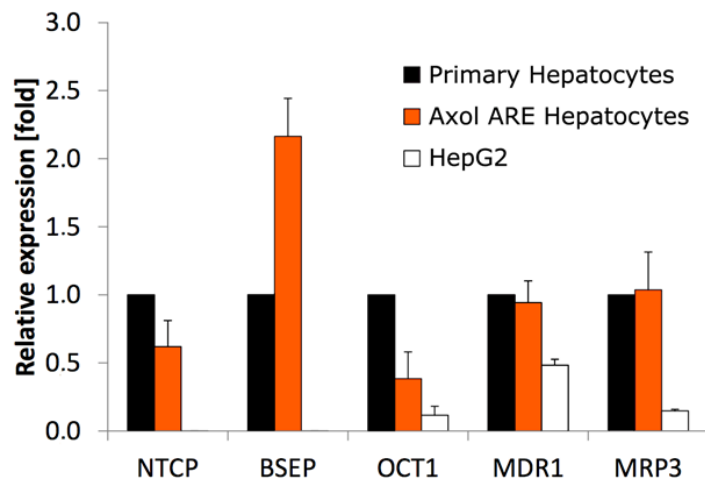


Hepatotoxicity Studies



Transporter Gene Expression

Genotoxicity Studies



Expression of hepatic transporter genes in primary hepatocytes, ARE Hepatocytes & HepG2 cells

Increasing cyclophosphamide concentration affects the percentage of cells with micronuclei (% MN) & cell viability