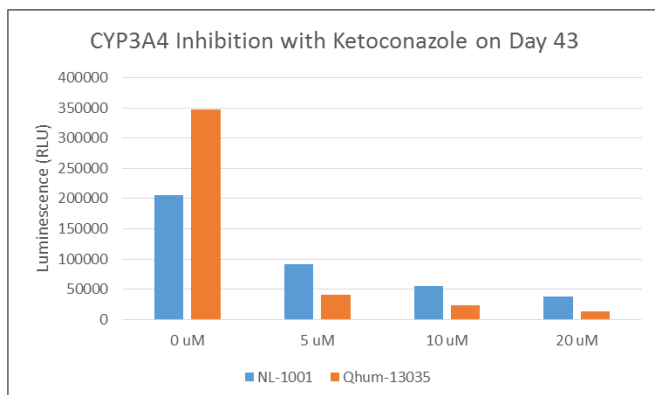
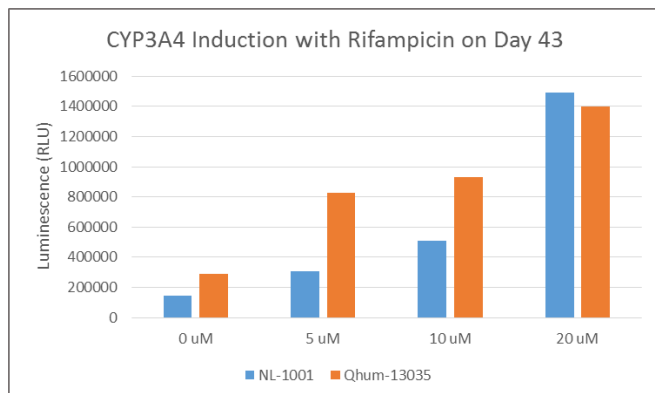
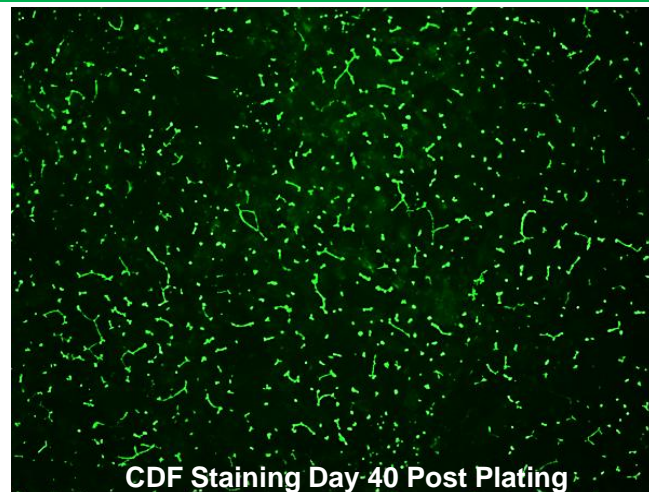
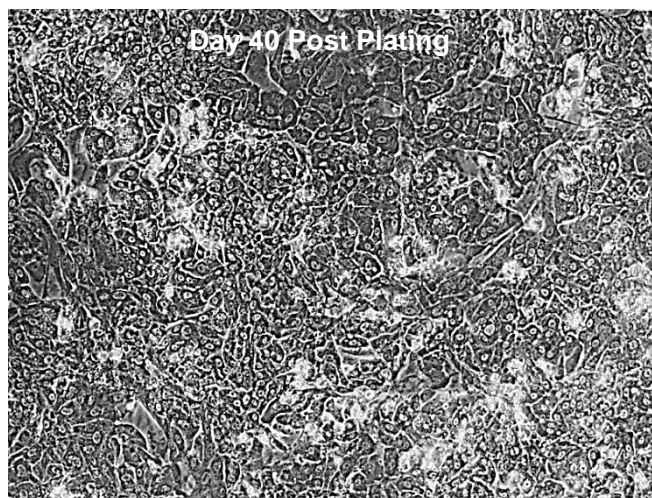


# Human Hepatic Co-Culture Model

## Human Hepatocytes with Human Liver Stromal Cells

### For all Long-Term Culture Needs



### Human Hepatic Model Highlights

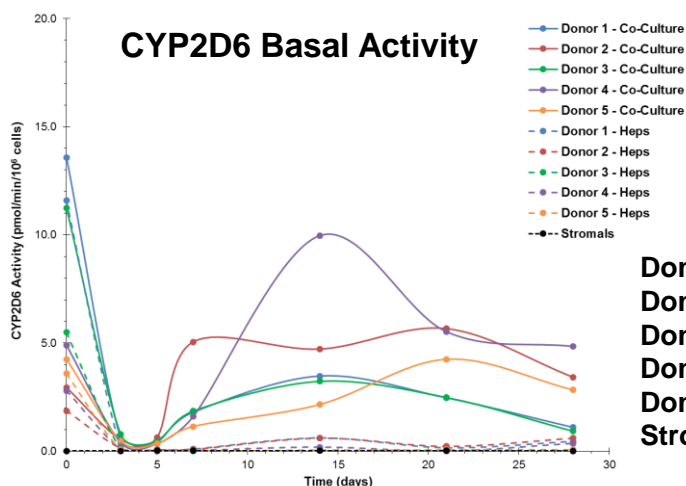
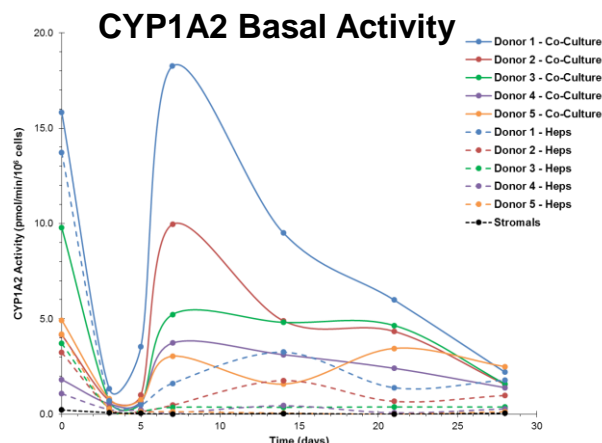
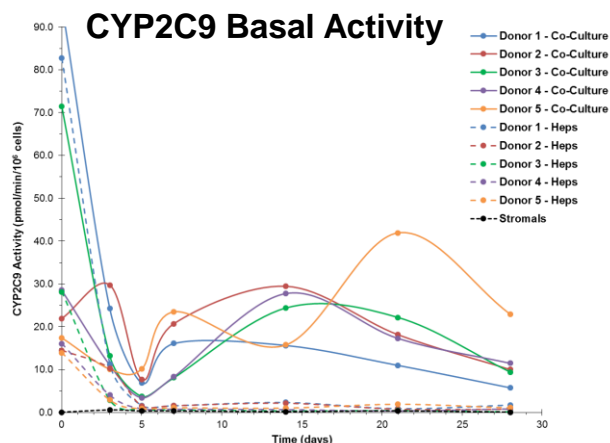
- Human hepatocytes and human liver stromal cells are plated together on Collagen I
- Stromal Cells provide hepatocytes with
  - Soluble Factors
  - Extracellular matrix
  - Cell-cell interactions
- Hepatocytes remain functional in culture beyond 40 days
- Hepatocytes in co-culture don't undergo epithelial to mesenchymal transition and maintain polarity
- Hepatocytes in co-culture have relevant physiological functions
- Assays can be repeated multiple times on the same cells

Promega CYP3A4-IPA assay was carried out  
Following Induction and Inhibition

[www.vestabiotx.com](http://www.vestabiotx.com)

# Cytochrome P450 Metabolism

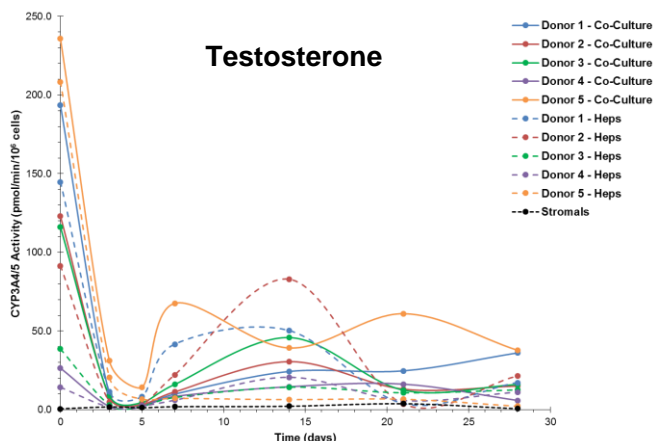
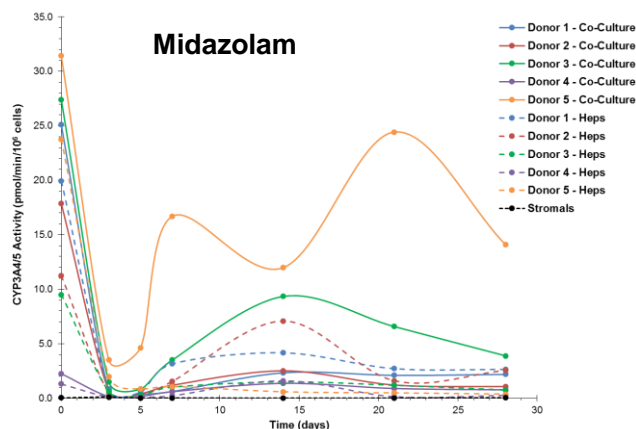
## Co-Culture vs. Hepatocytes Alone in 96-Well Format



Donor 1 = QHum13035  
 Donor 2 = QHuf15028  
 Donor 3 = LHum16081  
 Donor 4 = LHuf15908B  
 Donor 5 = NL-1001  
 Stromal = LMSC-1006



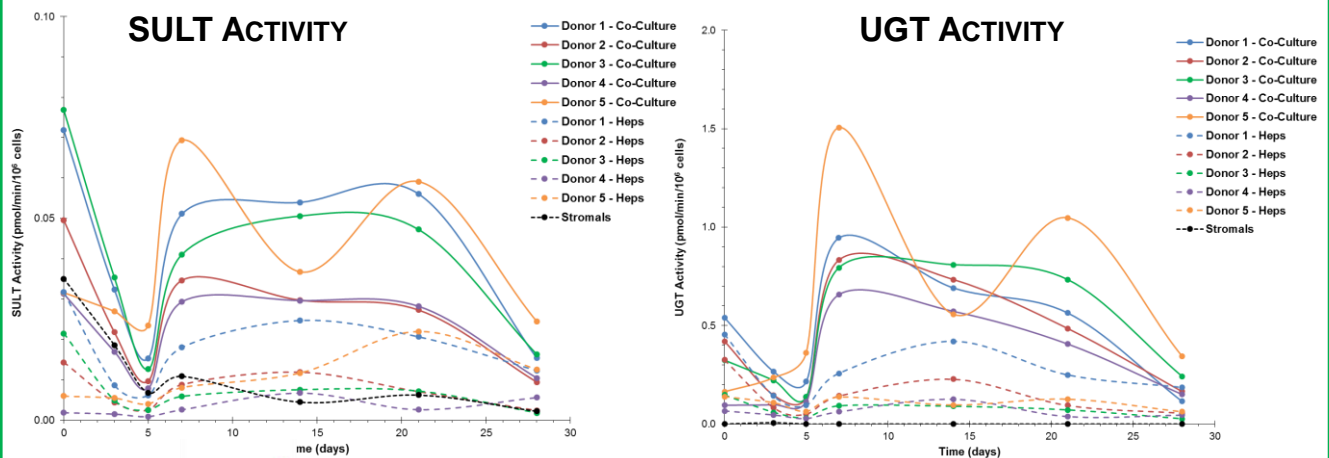
### CYP3A4/5 Basal Activity





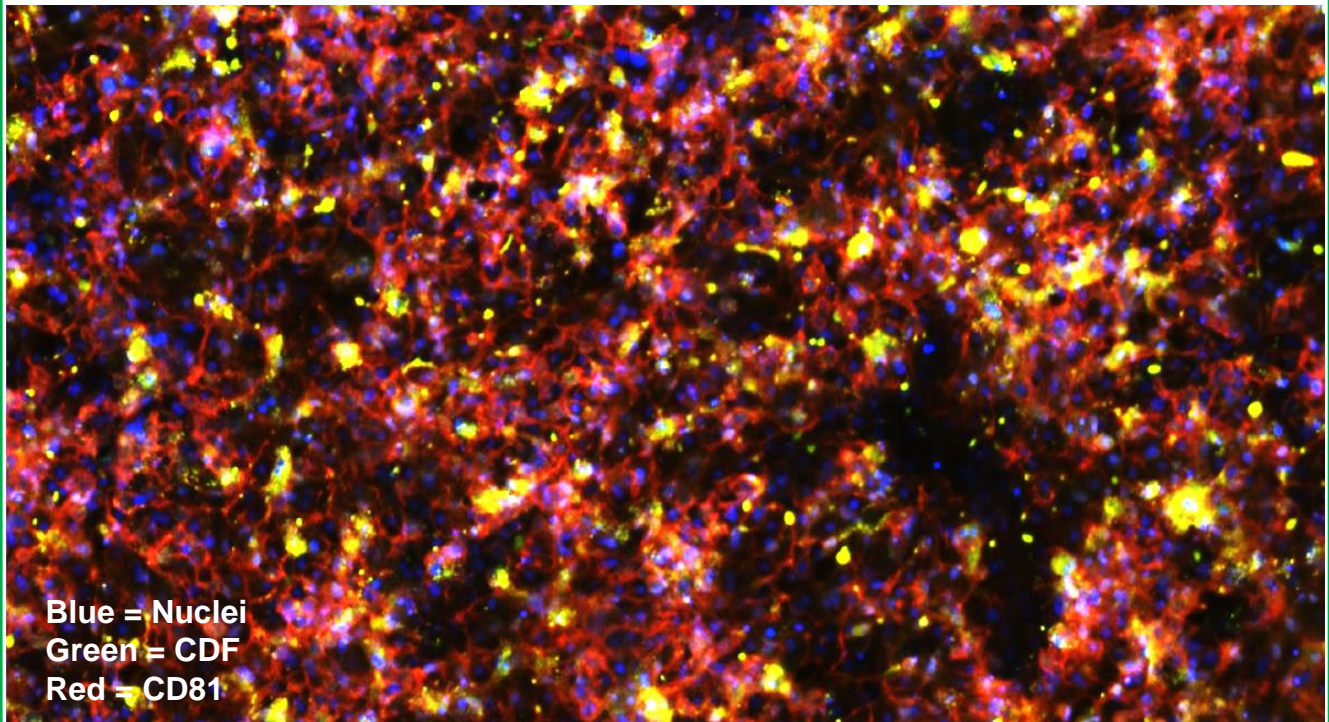
# Phase II Metabolism

## Co-Culture vs. Hepatocytes Alone in 96-Well Format



Donor 1 = QHum13035  
Donor 2 = QHuf15028  
Donor 3 = LHum16081  
Donor 4 = LHuf15908B  
Donor 5 = NL-1001  
Stromal = LMSC-1006

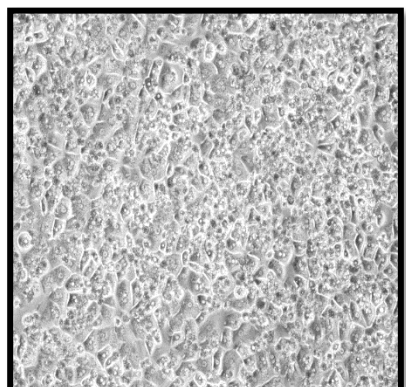
## Bile Canaliculi Formation In Co-Culture



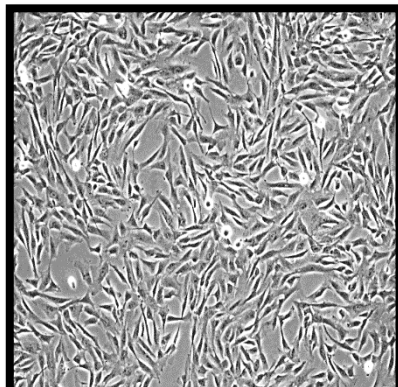
Blue = Nuclei  
Green = CDF  
Red = CD81

CELIGO IMAGING OF QHUM-13035 ON DAY 25 POST PLATING

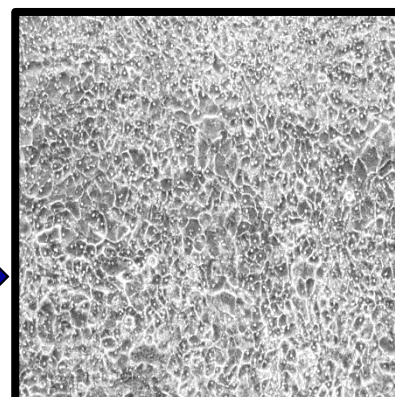
Vesta Bio has developed a new hepatic co-culture model that includes human hepatocytes, human liver stromal cells and hepatocyte media for recovery of cryopreserved hepatocytes, media for thawing the stromal cells and plating of both hepatocytes and stromal cells and media for the maintenance of fresh and cryopreserved hepatocytes that when cultured together in co-culture with liver stromal cells can maintain hepatocyte function beyond 40 days in culture.



**Hepatocytes**



**Liver Stromal**



**Co-Culture Model**

