

SELECTED HEPATOPAC® AND HEPATOMUNE® PUBLICATIONS

Title/Citation	General Review	Metabolism	Tox	Disease Models	Gene Expression	Transporters
Klammers F, Goetschi A, Ekiciler A, et al. Estimation of fraction metabolized by Cytochrome P450 (Cyp) enzymes using long-term co-cultured human hepatocytes . <i>Drug Metab Dispos.</i> Published online March 4, 2022:DMD-AR-2021-000765.		✓				
Smith S, Lyman M, Ma B, et al. Reaction Phenotyping of Low-Turnover Compounds in Long-term Hepatocyte Cultures Through Persistent Selective Inhibition of Cytochromes P450. <i>Drug Metab Dispos.</i> 2021; 49(11):995-1002		✓				
Viney NJ, Guo S, Tai L, et al, Ligand conjugated antisense oligonucleotide for the treatment of transthyretin amyloidosis: preclinical and phase 1 data. <i>Esc. Heart Fail.</i> 2021;8: 652-661			✓		✓	
Chen YQ, Pottanat TG, Zhen EY, et al. Ligand conjugated antisense oligonucleotide for the treatment of transthyretin amyloidosis: preclinical and phase 1 data. <i>J. Lipid Res.</i> 2021;62: 100068		✓				
Kamel A, Bowlin S, Hosea N, Arkilo D, Laurenza A. In vitro metabolism of slowly cleared g protein-coupled receptor 139 agonist tak-041 using rat, dog, monkey, and human hepatocyte models (Hepatopac): correlation with in vivo metabolism. <i>Drug Metab Dispos.</i> 2021;49(2):121-132.		✓				
Docci L, Klammers F, Ekiciler A, et al. In vitro to in vivo extrapolation of metabolic clearance for ugt substrates using short-term suspension and long-term co-cultured human hepatocytes. <i>AAPS J.</i> 2020;22(6):131.		✓				
Ballard TE, Kratochwil N, Cox LM, et al. Simplifying the execution of hepatopac metid experiments: metabolite profile and intrinsic clearance comparisons. <i>Drug Metab Dispos.</i> 2020;48(9):804-810.		✓				
Chan TS, Scaringella Y-S, Raymond K, Taub ME. Evaluation of erythromycin as a tool to assess cyp3a contribution of low clearance compounds in a long-term hepatocyte culture. <i>Drug Metab Dispos.</i> 2020;48(8):690-697.		✓				
Chen YQ, Pottanat TG, Siegel RW, et al. Angiopoietin-like protein 8 differentially regulates ANGPTL3 and ANGPTL4 during postprandial partitioning of fatty acids. <i>Journal of Lipid Research.</i> 2020;61(8):1203-1220.		✓				
Monroe JJ, Tanis KQ, Podtelezhnikov AA, et al. Application of a rat liver drug bioactivation transcriptional response assay early in drug development that informs chemically reactive metabolite formation and potential for drug-induced liver injury. <i>Toxicological Sciences.</i> 2020;177(1):281-299.					✓	
Kang W, Podtelezhnikov AA, Tanis KQ, et al. Development and application of a transcriptomic signature of bioactivation in an advanced in vitro liver model to reduce drug-induced liver injury risk early in the pharmaceutical pipeline. <i>Toxicological Sciences.</i> 2020;177(1):121-139.			✓			
Hafey MJ, Houle R, Tanis KQ, et al. A two-tiered in vitro approach to de-risk drug candidates for potential bile salt export pump inhibition liabilities in drug discovery. <i>Drug Metab Dispos.</i> 2020;48(11):1147-1160.						✓
Mancio-Silva L, Fleming HE, Miller AB, et al. Improving drug discovery by nucleic acid delivery in engineered human microlivers. <i>Cell Metabolism.</i> 2019;29(3):727-735.e3.		✓				

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Underhill GH, Khetani SR. Emerging trends in modeling human liver disease in vitro. APL Bioengineering. 2019;3(4):040902.	✓					
Docci L, Parrott N, Krähenbühl S, Fowler S. Application of new cellular and microphysiological systems to drug metabolism optimization and their positioning respective to in silico tools. SLAS DISCOVERY: Advancing the Science of Drug Discovery. 2019;24(5):523-536.	✓					
Aleo MD, Ukairo O, Moore A, Irrechukwu O, Potter DM, Schneider RP. Liver safety evaluation of endothelin receptor antagonists using HepatoPac® : A single model impact assessment on hepatocellular health, function and bile acid disposition. J Appl Toxicol. 2019;39(8):1192-1207.	✓					
Da-silva F, Boulenc X, Vermet H, et al. Improving prediction of metabolic clearance using quantitative extrapolation of results obtained from human hepatic micropatterned cocultures model and by considering the impact of albumin binding. Journal of Pharmaceutical Sciences. 2018;107(7):1957-1972.		✓				
Kratochwil NA, Triyatni M, Mueller MB, et al. Simultaneous assessment of clearance, metabolism, induction, and drug-drug interaction potential using a long-term in vitro liver model for a novel hepatitis b virus inhibitor. J Pharmacol Exp Ther. 2018;365(2):237-248.		✓		✓		
Mosedale M, Eaddy JS, Trask OJ, et al. Mir-122 release in exosomes precedes overt tolavaptan-induced necrosis in a primary human hepatocyte micropatterned coculture model. Toxicological Sciences. 2018;161(1):149-158.			✓			
Davidson MD, Kukla DA, Khetani SR. Microengineered cultures containing human hepatic stellate cells and hepatocytes for drug development. Integr Biol. 2017;9(8):662-677.				✓		
Kratochwil NA, Meille C, Fowler S, et al. Metabolic profiling of human long-term liver models and hepatic clearance predictions from in vitro data using nonlinear mixed-effects modeling. AAPS J. 2017;19(2):534-550.		✓				
Takahashi RH, Shahidi-Latham SK, Wong S, Chang JH. Applying stable isotope labeled amino acids in micropatterned hepatocyte coculture to directly determine the degradation rate constant for CYP3A4. Drug Metab Dispos. 2017;45(6):581-585.					✓	
Ware BR, McVay M, Sunada WY, Khetani SR. Exploring chronic drug effects on microengineered human liver cultures using global gene expression profiling. Toxicological Sciences. 2017;157(2):387-398.					✓	
Ballard TE, Wang S, Cox LM, et al. Application of a micropatterned cocultured hepatocyte system to predict preclinical and human-specific drug metabolism. Drug Metabolism and Disposition. 2016;44(2):172-179.		✓				
Dixit V, Moore A, Tsao H, Hariparsad N. Application of micropatterned cocultured hepatocytes to evaluate the inductive potential and degradation rate of major xenobiotic metabolizing enzymes. Drug Metabolism and Disposition. 2016;44(2):250-261.		✓				
Aratyn-Schaus Y, Ramanathan R. Advances in high-resolution MS and epatocyte models solve a long-standing metabolism challenge: the loratadine story. Bioanalysis. 2016;8(16):1645-1662.		✓				
Rose K, Wolf KK, Ukairo O, et al. Nuclear receptor-mediated gene expression changes in a human hepatic micropatterned coculture model after treatment with hepatotoxic compounds. Applied In Vitro Toxicology. 2016;2(1):8-16.					✓	

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Moore A, Chothe PP, Tsao H, Hariparsad N. Evaluation of the interplay between uptake transport and cyp3a4 induction in micropatterned cocultured hepatocytes. Drug Metab Dispos. 2016;44(12):1910-1919.						✓
Lin C, Shi J, Moore A, Khetani SR. Prediction of drug clearance and drug-drug interactions in microscale cultures of human hepatocytes. Drug Metabolism and Disposition. 2015;44(1):127-136.		✓				
Nguyen TV, Ukairo O, Khetani SR, et al. Establishment of a hepatocyte-kupffer cell coculture model for assessment of proinflammatory cytokine effects on metabolizing enzymes and drug transporters. Drug Metab Dispos. 2015;43(5):774-785.				✓		
Ramsden D, Zhou J, Tweedie DJ. Determination of a degradation constant for cyp3a4 by direct suppression of mrna in a novel human hepatocyte model, hepatopac. Drug Metab Dispos. 2015;43(9):1307-1315.		✓				✓
Davidson MD, Lehrer M, Khetani SR. Hormone and drug-mediated modulation of glucose metabolism in a microscale model of the human liver. Tissue Engineering Part C: Methods. 2015;21(7):716-725.		✓		✓		
Ramsden D, Tweedie DJ, St. George R, Chen L-Z, Li Y. Generating an in vitro-in vivo correlation for metabolism and liver enrichment of a hepatitis c virus drug, faldaprevir, using a rat hepatocyte model(Hepatopac). Drug Metab Dispos. 2014;42(3):407-414.	✓	✓				
Ramsden D, Tweedie DJ, Chan TS, Taub ME, Li Y. Bridging in vitro and in vivo metabolism and transport of faldaprevir in human using a novel cocultured human hepatocyte system, hepatopac. Drug Metab Dispos. 2014;42(3):394-406.	✓	✓				
Ramsden D, Tweedie DJ, Chan TS, Tracy TS. Altered cyp2c9 activity following modulation of cyp3a4 levels in human hepatocytes: an example of protein-protein interactions. Drug Metab Dispos. 2014;42(11):1940-1946.		✓				
Li Y, Zhou J, Ramsden D, et al. Enzyme-transporter interplay in the formation and clearance of abundant metabolites of faldaprevir found in excreta but not in circulation. Drug Metab Dispos. 2014;42(3):384-393.		✓				
Trask OJ, Moore A, LeCluyse EL. A micropatterned hepatocyte coculture model for assessment of liver toxicity using high-content imaging analysis. ASSAY and Drug Development Technologies. 2014;12(1):16-27.			✓			
March S, Ng S, Velmurugan S, et al. A microscale human liver platform that supports the hepatic stages of plasmodium falciparum and vivax. Cell Host & Microbe. 2013;14(1):104-115.				✓		
Chan TS, Yu H, Moore A, Khetani SR, Tweedie D. Meeting the challenge of predicting hepatic clearance of compounds slowly metabolized by cytochrome p450 using a novel hepatocyte model, hepatopac. Drug Metab Dispos. 2013;41(12):2024-2032.		✓				
Ukairo O, McVay M, Krzyzewski S, et al. Bioactivation and toxicity of acetaminophen in a rat hepatocyte micropatterned coculture system: rat hepatic micropatterned cocultures. J Biochem Mol Toxicol. Published online July 2013;n/a-n/a.			✓			
Khetani SR, Kanchagar C, Ukairo O, et al. Use of micropatterned cocultures to detect compounds that cause drug-induced liver injury in humans. Toxicological Sciences. 2013;132(1):107-117.			✓			

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Ukairo O, Kanchagar C, Moore A, et al. Long-term stability of primary rat hepatocytes in micropatterned cocultures: rat hepatic micropatterned cocultures. <i>J Biochem Mol Toxicol.</i> 2013;27(3):204-212.			✓			
Ploss A, Khetani SR, Jones CT, et al. Persistent hepatitis C virus infection in microscale primary human hepatocyte cultures. <i>PNAS.</i> 2010;107(7):3141-3145.				✓		
Wang WW, Khetani SR, Krzyzewski S, Duignan DB, Obach RS. Assessment of a micropatterned hepatocyte coculture system to generate major human excretory and circulating drug metabolites. <i>Drug Metab Dispos.</i> 2010;38(10):1900-1905.		✓				
Khetani SR, Bhatia SN. Microscale culture of human liver cells for drug development. <i>Nat Biotechnol.</i> 2008;26(1):120-126.	✓					

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