



Literature HepatoSys Competence Network

Date: 2009, 16th of January



Year	Network(s)	Authors	Reference	Title
2009	Platform Modeling	Bulik S , Grimbs S, Huthmacher C, Selbig J, Holzhütter HG	FEBS Journal, 276:410-424	Kinetic hybrid models composed of mechanistic and simplified enzymatic rate laws: A promising method for speeding up the kinetic modelling of complex metabolic networks
2009	Network Regeneration	Gnad F, Oroshi M, Birney E, Mann M.	Nucleic Acids Res	MAPU 2.0: high-accuracy proteomes mapped to genomes
2009	Network Detoxification	Langenfeld E , Zanger UM , Jung K, Meyer HE , Marcus K	Proteomics. In press	Mass spectrometry-based absolute quantification of microsomal cytochrome P450 2D6 in human liver.
2009	Network Detoxification	Gomes AM, Winter S, Klein K, Turpeinen M, Schaeffeler E, Schwab M, Zanger UM	Pharmacogenomics. In press	Multifactorial Analysis of NADPH:Cytochrome P450 Oxidoreductase in Human Liver: Polymorphisms, Haplotype Structures, and Impact on Microsomal Drug Oxidation Activities
2009	Platform Modeling	Acikgöz A, Karim N, Giri S , Schmidt-Heck W , Bader A	Toxicology and Applied Pharmacology. 234(2):179-191	Two compartment model of diazepam biotransformation in an organotypical culture of primary human hepatocytes.
2008	Platform Modeling	Chauhan, A., Legewie, S., Westermark, PO., Lorenzen, S., Herzel, H.	Journal of Theoretical Biology, Jun 7;252(3):465-73. Epub 2008 Feb 1	A mesoscale model of G1/S phase transition in liver regeneration
2008	Platform Modeling	Sahle , Mendes, Hoops, Kummer	Phil. Trans. Royal Soc. B, in press	A new strategy for assessing sensitivities in biochemical models
2008	Platform Cell Biology	Riquelme P, Wundt J, Brulport M, Jun Y, Sotnikova A, Girreser U, Braun F, Soria B, Ungefroren H, Nussler AK , Fändrich F, Clement B, Hengstler JG, Hutchinson JA.	Differentiation in press	A refined characterisation of the NeoHepatocyte phenotype necessitates a reappraisal of the transdifferentiation hypothesis.

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2008	Network Detoxification	Hofmann MH, Blievernicht JK, Klein K, Saussele T , Schaeffeler E, Schwab M, Zanger UM .	J Pharmacol Exp Ther. Apr;325(1):284-92. Epub 2008 Jan 2	Aberrant Splicing Caused by Single Nucleotide Polymorphism c.516G>T [Q172H], a Marker of CYP2B6*6, Is Responsible for Decreased Expression and Activity of CYP2B6 in Liver.	
2008	Platform Modeling	M. Stein , R.R. Gabdoulline, R.C. Wade	Biochem Soc Trans, (2008), 36, 51-54.	Calculating Enzyme Kinetic Parameters from Protein Structures	view
2008	Network Iron Regulation	Ferring-Appel, D., M.W. Hentze and B. Galy	Blood. In press	Cell autonomous and systemic context-dependent functions of iron regulatory protein 2 (IRP2) in mammalian iron metabolism.	
2008	Network Regeneration	Pan C , Kumar C, Bohl S , Klingmueller U , Mann M .	Mol Cell Proteomics	Comparative proteomic phenotyping of cell lines and primary cells to assess preservation of cell type specific functions.	view
2008	Network Iron, Platform Modeling	Katrin Hübner, Thomas Schwager, Karl Winkler, Jens-Georg Reich , Hermann-Georg Holzthütter	PLoS Computational Lipidology, May 23;4(5):e1000079	Computational Lipidology: Predicting Lipoprotein Density Profiles in Human Blood Plasma	view
2008	Network Regeneration	Salazar, C., Politi, A.Z. and Höfer , T.	Biophysical Journal 94, 1203-1215	Decoding of Calcium Oscillations by Phosphorylation Cycles: Analytic results	view
2008	Network Detoxification	Redlich G, Zanger UM , Riedmaier S, Bache N, Giessing AB, Eisenacher M, Stephan C, Meyer HE, Jensen ON, Marcus K .	J Proteome Res. 2008. [Epub ahead of print]	Distinction between Human Cytochrome P450 (CYP) Isoforms and Identification of New Phosphorylation Sites by Mass Spectrometry.	
2008	Platform Modeling	Gille G, Hoppe A, Holzthütter HG	Genome Informatics. In press.	Documenting protein alignments	

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2008	Platform Modeling	Conzelmann, H., Gilles, E.D.	Humana Press, Functional Proteomics, Book Chapter	Dynamic Pathway Modelling	view
2008	Network Regeneration	Maiwald T., Timmer, J.	Bioinformatics, Sep 15; 24 (18) 2037-43	Dynamical modelling and multi-experiment fitting with PottersWheel	view
2008	Platform Cell Biology	Dong J, Mandenius CF, Lübbert M, Urbaniak T, Nussler AK , Knobeloch D, Gerlach JC, Zeilinger K.	Cytotechnology in press	Evaluation and optimization of hepatocyte culture media factors by Design of Experiments (DoE) methodology.	
2008	Network Regeneration	C. Kreutz, J. Timmer	FEBS Journal, in press	Experimental Design for Systems Biology	
2008	Network Iron Regulation	Muckenthaler M	Cell Metabolism. In press	Fine Tuning of Hepcidin Expression by Positive and Negative Regulators	
2008	Network Endosys	Dooley S , Hamzavi J, Ciucan L, Godoy P , Ilkavets I, Ehnert S, Ueberham E, Gebhardt R , Kanzler S, Geier A, Breitkopf K , Weng H and Mertens PR	Gastroenterology, Aug;135(2):642-59. Epub 2008 May 15	Hepatocyte specific Smad7 expression attenuates TGF- β mediated fibrogenesis and protects against liver damage.	view
2008	Platform Modeling	Franke R, Muller M, Wundrack N, Gilles ED , Klamt S , Kahne T, Naumann M	BMC Systems Biology, Jan 14;2:4	Host-pathogen systems biology: Logical modelling of hepatocyte growth factor and Helicobacter pylori induced c-Met signal transduction	view
2008	Network Regeneration	Cox J, Hubner NC, Mann M.	J Am Soc Mass Spectrom	How much Peptide sequence information is contained in ion trap tandem mass spectra?	

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2008	Platform Cell Biology	Albrecht W, Unger A, Nussler AK, Laufer S	Drug Metabolism and Disposition. In press	In vitro Metabolism of Licofelone (ML3000), an Inhibitor of Cyclooxygenases-1 and -2
2008	Platform Cell Biology	Albrecht W, Unger A, Nussler AK, Laufer S	Drug Metabolism and Disposition, May 2008; 36(5): 894-903.	In vitro Metabolism of Licofelone (ML3000), an Inhibitor of Cyclooxygenases-1 and -2
2008	Network Regeneration	Götschel , F., Kern , C., Lang , S., Sparna , T. Markmann, C., Schwager, S., McNelly , S., von Weizsäcker , F., Laufer, S., Hecht , H., Merfort , I.	Exp. Cell Res. 2008 Apr 1; 314 (6): 1351-66	Inhibition of GSK3 differentially modulates NFkB, CREB, AP-1 and β -catenin signaling in hepatocytes, but fails to promote TNF- α -induced apoptosis
2008	Network Detoxification	Seithel A, Klein K, Zanger UM, Fromm MF, König J.	Mol Genet Genomics. 2008; 279(2): 149-157.	Non-synonymous polymorphisms in the human SLCO1B1 gene: an in vitro analysis of SNP c.1929A>C.
2008	Platform Modeling	S. Heinrich, S. Richter and R.Wade	ChemMedChem, Mar;3(3):413-7	On the Use of PIPSA to guide target-selective drug design
2008	Network Detoxification	Langenfeld E, Meyer HE, Marcus K.	Anal Bioanal Chem. 2008. [Epub ahead of print]	Quantitative analysis of highly homologous proteins: the challenge of assaying the "CYP-ome" by mass spectrometry.
2008	Network Regeneration	Pan C, Gnad F, Olsen J, Mann M	Proteomics, 2008 Nov;8(21):4534-46.	Quantitative phosphoproteome analysis of a mouse liver cell line reveals specificity of phosphatase inhibitors. view
2008	Network Detoxification	Dräger, A.; Hassis, N.; Supper, J. Schröder , A. and Zell	BMC Systems Biology April 30; 2; 39.	SBMLsqueezer: A CellDesigner plug-in to generate kinetic rate equations for biochemical networks

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2008	Platform Cell Biology	Boini KM, Graf D, Kuhl D, Häussinger D, Lang F.	Pflugers Arch, Epub ahead of print	SGK1 dependence of insulin induced hypokalemia	view
2008	Network Regeneration	Walter, D., S. Vogel, K. Schmich, R. Pick, T. Kaufmann, F. C. Hochmuth, R. Nitschke, A. Haber, K. Neubert, S. McNelly, F. von Weizsäcker, J. Silke, I. Merfort, A. Strasser and C. Borner	Hepatology, Dec;48(6):1942-53	Switch from type II to I Fas/CD95 death signaling upon in vitro culturing of primary hepatocytes	view
2008	Platform Modeling	Andreas Weidemann, Stefan Richter, Matthias Stein, Sven Sahle, Ralph Gauges, Razif Gabdoulline, Irina Surovtsova, Nils Semmelrock, Bruno Besson, Isabel Rojas, Rebecca Wade and Ursula Kummer	Bioinformatics, June 15; 24 (12) 1463-4	SYCAMORE - A SYstems biology Computational Analysis and MOdeling Research Environment	view
2008	Platform Cell Biology	Nussler AK, Nussler NC, Merk V, Brulport M, Schormann W, Hengstler JG	In: Regenerative Medicine Today. Springer ed. M. Santin, University of Brighton) In press	The Holy grail of hepatocyte culturing and therapeutic use	
2008	Network Regeneration	Hanke S, Mann M.	Mol Cell Proteomics	The phosphotyrosine interactome of the insulin receptor family and its substrates IRS-1 and IRS-2	
2008	Network Endosys	Meindl-Beinker NM and Dooley S	J Gastroenterol Hepatol.	Transforming growth factor-beta and hepatocyte transdifferentiation in liver fibrogenesis	

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2008	Network Endosys	N. M. Meindl-Beinker and S. Dooley	Ruperto Carola - Forschungsmagazin der Universität Heidelberg, 2, in press	Verhängnisvolle Signale. Ein sensibler molekularer Schalter entscheidet über das Wohl und Wehe von Leberzellen
2008	Platform Modeling	Gille C and Holzhütter HG	Genome Informatics, Proceedings of the 8th Annual International Workshop on Bioinformatics and Systems Biology	Web-Links as a Means to Document Annotated Sequence and 3D- Structure Alignments in Systems Biology
2007	Platform Cell Biology, Platform Modeling	Toepfer S, Zellmer S, Driesch D, Woetzel D, Guthke R, Gebhardt R, Pfaff M	In: Scharff P: 52nd Internationales Wissenschaftliches Kolloquium, Universitaetsverlag Illmenau, ISBN 978-3-939473-17-6, pp. 107-112	A 2-compartment model of glutamine and ammonia metabolism in liver tissue
2007	Platform Modeling	Huthmacher, C., Gille C. & Holzhütter , H.G.	J Theor Biol. 5, Jun 7;252(3):456- 64. Epub 2007 Oct 5	A computational analysis of protein interactions in metabolic networks view reveals novel enzyme pairs potentially involved in metabolic channeling
2007	Network Detoxification	K.Klein, S. Tatzel , S.Raimundo, T.Saussele , E.Hustert, J.Pleiss , M.Eichelbaum , U.M.Zanger	Drug Metab Dispos., 35, 1247- 1250	A Natural Variant of the Heme-Binding Signature (R441C) Resulting in view Complete Loss of Function of CYP2D6
2007	Network Endosys	Breitkopf K, Gaitantzi H, Ciucian L, Godoy P, Singer MV and Dooley S	Z Gastroenterol, 45, 91, 1.07	Adult hepatocytes can undergo epithelial-to-mesenchymal transition (EMT) in culture
2007	Network Regeneration	C. Kreutz , M. M. Bartolomé Rodríguez , M. Seid, K. Stürmer,	Bioinformatics 2007; doi: 10.1093/bioinformatics/btm397	An error model for protein quantification view
2007	Platform Cell Biology	Gohla A, Klement K, Piekorz RP, Pexa K, vom Dahl S, Spicher K, Dreval V, Häussinger D, Birnbaumer L, Nürnberg B.	PNAS 104:3003-3008	An obligatory requirement for the heterotrimeric G protein Gi3 in the antiautophagic action of insulin in the liver. view

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2007	Platform Modeling	M. Stein , R. R. Gabdoulline, R. C. Wade	Curr. Op. Struct. Biol. 17, 166-172	Bridging from molecular simulation to biochemical networks	view
2007	Network Regeneration	Politi, A.Z., Gaspers, L.D., Brümmer, A., Thomas, A.P., and Höfer , T.	Analysis and Control of Complex Nonlinear Processes, Schimansky-Geier, L. et al. (eds), World Scientific	Cellular calcium oscillations: from bifurcation analysis to experiment	
2007	Network Regeneration	Drasdo , D.	In Single-Cell-Based Models in Biology and Medicine, Anderson, A.R.A., Chaplain M.A.J., Rejniak K.A. (Eds), Birkhäuser, Basel	Center-based Single-cell Models: An Approach to Multi-cellular Organization Based on a Conceptual Analogy to Colloidal Particles.	
2007	Network Regeneration, Platform Cell Biology	Ehnert S, Müller A, Godoy P, Böcker U, Siegmund S, Singer MV, Breitskopf K, Nussler A and Dooley S	Z Gastroenterol, 45, 104, 2.13	Comparing cytochrome P450 activities of blood monocytes derived Neo-Hepatocytes and primary hepatocytes	
2007	Platform Cell Biology	Hutchinson JA, Riquelme P, Wundt J, Hengstler JG, Fändrich F, Ungefroren H, Clement B.	Am J. Hematol. 2007 Nov;82(11):947-8.	Could treatment with neohepatocytes benefit patients with decompensated chronic liver disease?	
2007	Platform Cell Biology	Carmo H, Brulport M, Hermes M, Oesch F, de Boer D, Remiao F, Carvalho F, Schon MR, Krebsfaenger N, Doehmer J, Bastos Mde L, Hengstler JG	Toxicology 229(3):236-44, 2007.	CYP2D6 increases toxicity of the designer drug 4-methylthioamphetamine (4-MTA)	
2007	Network Regeneration	Bartholomé K, Rius M, Letschert K, Keller D, Timmer J, Keppler D	Drug Metabolism and Disposition, Sep; 35(9):1476-81	Data-based mathematical modeling of vectorial transport across double-transfected polarized cells	view
2007	Network Regeneration	Hengl S., Kreutz C., Timmer J. Maiwald T.	Bioinformatics 23, 2007, 2612-2618	Data-based identifiability analysis of nonlinear dynamical models	

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2007	Platform Cell Biology	T. Timmel , L. Goubergrits, U. Kertzsch , K. Affeld	Biomed Tech 52 Suppl	Definierte Überströmung von Monolayer-Zellkulturen.
2007	Network Regeneration	Wöhrle, S., Wallmen, B. und Hecht, A.	Mol Cell Biol 27, 8164-8177	Differential control of Wnt target genes involves epigenetic mechanisms and selective promoter occupancy by TCFs
2007	Network Regeneration	Engblom, D., Kornfeld, J.-W., Schwake, L., Tronche, F., Reimann, A., Beug, H., Hennighausen, L., Moriggl, R., and Schütz, G.	Genes Dev., May 15;21(10):1157-62	Direct glucocorticoid receptor-Stat5 interaction in hepatocytes controls body size and maturation-related gene expression
2007	Platform Modeling, Platform Cell Biology	Schmidt-Heck W , Zellmer S , Gebhardt R , Guthke R	In: Allgöwer F, Reuss M: Foundation of Systems Biology in Engineering, pp. 129-134, ISBN: 978-3-8167-7436-5	Dynamic network reconstruction identified unexpected gene expression in primary hepatocytes after exchange of medium
2007	Network Detoxification	Supper, J. ; Strauch, M.; Wanke, D.; Harter, K. and Zell	BMC Bioinformatics	EDISA: A novel approach to extract gene modules from 3D gene-condition-time expression datasets view
2007	Network Endosys	Godoy P , Müller A, Stump C, Weng H, Breitkopf K and Dooley S	Z Gastroenterol, 45, 92, 1.12	Extracellular matrix configuration modulates TGF- β effects in primary heaptocytes
2007	Platform Cell Biology	Brulport M , Schormann W , Bauer A, Hermes M, Elsner C, Hammersen FJ, Beerheide W, Spitkovsky D, Härtig W, Nussler A , Horn LC, Edelmann J, Pelz-Ackermann O, Petersen J, Kamprad M, von Mach M, Lupp A, Zulewski H, Hengstler JG.	Hepatology. 2007;46(3):861-870.	Fate of extrahepatic human stem and precursor cells after transplantation into mouse livers.

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2007	Platform Cell Biology	Aurich I, Mueller LP, Aurich H, Luetzkendorf J, Tisljar K, Dollinger M, Schormann W , Walldorf J, Hengstler J , Fleig WE, Christ B	Gut. 56(3):405-415, 2007	Functional integration of human mesenchymal stem cell-derived hepatocytes into mouse livers
2007	Platform Cell Biology	Gebhardt R , Baldysiak-Figiel A, Krügel V, Ueberham E, Gaunitz F	Progr Histochem Cytochem, 41(4), 201-266	Hepatocellular expression of glutamine synthetase: An indicator of morphogen actions as master regulators of zonation in adult liver
2007	Network Detoxification	J.Pleiss	Modern Biooxidation: Enzymes, Reactions and Application (eds: R.D. Schmid, V.Urlacher), Wiley	Human cytochrome P450 monooxygenases – a general model of substrate specificity and regioselectivity
2007	Network Detoxification	Ute Hofmann, Klaus Maier , Anja Niebel , Matthias Reuss , Klaus Mauch	Biotechnology & Bioengineering	Identification of Metabolic Fluxes in Hepatocytes from transient ¹³ C Labeling Experiments: Part I Experimental Observations view
2007	Network Endosys	Weng H, Mertens PR, Gressner AM and Dooley S	J Hepatol, 46(2), 295-303	IFN-gamma abrogates profibrogenic TGF-beta signaling in liver by targeting expression of inhibitory and receptor Smads
2007	Platform Modeling, Network Regeneration	Schmitmeier S, Langsch A, Schmidt-Heck W , Jasmund I, Bader A	Journal of Membrane Science, 298, 30-40	Improvement of metabolic performance of primary hepatocytes in hyperoxic cultures by vitamin C in a novel small-scale bioreactor
2007	Platform Modeling	Hoppe A, Hoffmann S, and Holzhütter HG .	BMC Syst. Biol., 2007 Jun 1;1:23	Including metabolite concentrations into flux-balance analysis: Thermodynamic realizability as a constraint on flux distributions in metabolic networks
2007	Platform Cell Biology, Network EndoSys	Weng H, Gaitantzi H, Ciuculan L, Liu Y, Ueberham E, Gebhardt R , Kanzler S, Heuchel R, Breitkopf K and Dooley S	Z Gastroenterol, 45, 90, 1.03	Increased CTGF expression occurs in human and mouse hepatocytes of damaged livers and is mediated by TGF-β signaling

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2007	Network Detoxification	Terfloth L, Bienfait B, Gasteiger J	J. Chem. Inf. Model. (2007) 47, 1688-1701	Ligand-based Models for the Isoform Specificity of Cytochrome P450 3A4, 2D6, and 2C9 Substrates view
2007	Network Endosys	Purps O, Lahme B, Gressner AM, Meindl-Beinker NM and Dooley S	Biochem biophys Res Commun., 353(3), 841-847	Loss of TGF- β dependent growth control during HSC transdifferentiation
2007	Platform Cell Biology, Network Regeneration	Hohme S, Hengstler JG, Brulport M , Schafer M, Bauer A, Gebhardt R, Drasdo D.	Chem Biol Interact. 2007 May 20;168(1):74-93.	Mathematical modelling of liver regeneration after intoxication with CCl(4).
2007	Platform Modeling	Gille C, Hoffmann S, Holzhütter HG	BMC Syst Biol. 2007; Jan 9;1:5.	MetAnnoGen: Compiling features of biochemical Reactions needed for the reconstruction of metabolic networks view
2007	Network Regeneration	Kenzelmann, M., Hergenah, M., Maertens, S., Kueffer, S., Klären, R., Hotz-Wagenblatt, A., Ittrich, C., Li, L., Wang, S., Volz, M., Lemberger, T., Arribas-Prat, R., Jonnakuty, S., Hollstein, M., Schmid, W., Gretz, N., Gröne, H.-J., and Schütz, G.	Proc. Natl. Acad. Sci. USA, Apr 10;104(15):6164-9	Microarray analysis of newly synthesized RNA in cells and animals.
2007	Platform Cell Biology, Platform Modeling	Zellmer S , Toepfer S, Driesch D, Woetzel D, Guthke R, Pfaff M, Gebhardt R	In: Allgöwer F, Reuss M: Foundations of Systems Biology, pp. 183-187, ISBN: 978-3-8167-7436-5	Modelling of hepatic glutamine metabolism
2007	Network Detoxification	Tegude H, Schnabel A, Zanger UM , Klein K, Eichelbaum M, Burk O	Drug Metab Dispos 35:946-954	Molecular mechanism of basal CYP3A4 regulation by hepatocyte nuclear factor 4 α : evidence for direct regulation in the intestine view

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2007	Network Regeneration	Drasdo, D., Hoehme, S., Block, M.	Journal of Statistical Physics, 128, 1-2	On the Role of Physics in the Growth and Pattern Formation of Multi-Cellular Systems: What can we Learn from Individual-Cell Based Models?
2007	Network Regeneration	Peifer M., Timmer J.	IET Systems Biology 1, 2007, 78-88.	Parameter estimation in ordinary differential equations for biochemical view processes using the method of multiple shooting
2007	Network Endosys	Ciucan L, Gaitantzi H, Breitkopf K, Singer MV and Dooley S.	Alcohol and Alcoholism, 42, Suppl 1, PA4-6, i66.	Participation of TGF- β signaling in alcohol-induced liver damage.
2007	Network Endosys	Jansen PL, Keuer M, Rosch R, Krott E, Jansen M, Alfonso- Jaume A, Dooley S, Klinge U, Lovett DH and Mertens PR	FASEB J, 21, 1047-1057.	Polymeric meshes induce zonal regulation of matrix metalloproteinase-2 gene expression by macrophages and fibroblasts.
2007	Platform Cell Biology	Hewitt NJ, Lechon MJ, Houston JB, Hallifax D, Brown HS, Maurel P, Kenna JG, Gustavsson L, Lohmann C, Skonberg C, Guillouzo A, Tuschl G, Li AP, LeCluyse E, Groothuis GM, Hengstler JG.	Drug Metab Rev. 2007;39(1):159-234.	Primary hepatocytes: current understanding of the regulation of metabolic enzymes and transporter proteins, and pharmaceutical practice for the use of hepatocytes in metabolism, enzyme induction, transporter, clearance, and hepatotoxicity studies.
2007	Platform Modeling	U. Kummer and S. Sahle	Proceedings of the 2nd International Symposium on Experimental Standard Conditions of Enzyme Characterizations	Problems of Currently Published Enzyme Kinetic Data for Usage in Modeling and Simulation
2007	Network Regeneration, Platform Cell Biology	Weng H, Ciucan L, Hamzavi J, Godoy P, Liu Y, Ueberham E, Gebhardt R, Kanzler S, Heuchel R, Breitkopf K and Dooley S	Z Gastroenterol, 45, 849, P359.	Profibrogenic TGF-beta/ALK5 signaling via CTGF expression in hepatocytes.

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2007	Network Endosys	H. Weng, L. Ciucian, P. Godoy , S. Kanzler, R. Heuchel, E. Ueberham, R. Gebhardt , J. Hamzavi, P. Mertens, K. Breikopf and S. Dooley .	Alcohol and Alcoholism, 42, Suppl 1, PA4-6, i55.	Pro-fibrogenic TGF- β /ALK5 signaling via CTGF expression in hepatocytes.
2007	Platform Cell Biology, Network Regeneration	Weng HL, Ciucian L, Liu Y, Hamzavi J, Godoy P, Gaitantzi H, Kanzler S, Heuchel R, Ueberham E, Gebhardt R, Breikopf K and Dooley S	Hepatology, 46, 1257-1270.	Profibrogenic transforming growth factor-beta/activin receptor-like kinase 5 signaling via connective tissue growth factor expression in hepatocytes.
2007	Network Endosys	Brusch , L., P. Del Conte-Zerial , J. Rink, B. Habermann Y. Kalaidzidis, M. Zerial and A. Deutsch	Mathematical Modeling of Biological Systems, Birkhäuser, Boston	Protein domains of GTPases on membranes: do they rely on Turing's mechanism?
2007	Platform Modeling	Hoffmann S, Hoppe A, Holzhütter HG	Genome Inform. 2007; 18(1): 308-19	Pruning genome-scale metabolic models to consistent ad functionem networks
2007	Platform Modeling	R. Gabdoulline, M. Stein and R. Wade	BMC Bioinformatics, 8, 373	qPIPSA: Relating enzymatic kinetic parameters and interaction fields view
2007	Platform Cell Biology	Ping Yao P, Nussler AK, Liu L, Hao L, Song F, Schirmeier A, Nussler N.	Journal of Hepatology. 2007; 47(2):253-261	Quercetin protects human hepatocytes from ethanol-derived oxidative stress by inducing heme oxygenase-1 via the MAPK/Nrf2 pathways
2007	Platform Modeling	Koschorreck, M.; Conzelmann, H.; Ederer, M.; Ebert, S. and Gilles , E.D.	BMC Bioinformatics, Sep 13;8:336	Reduced modeling of signal transduction - a modular approach view

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2007	Platform Modeling	Rojas I, Golebiewski M, Kania R, Krebs O, Mir S, Weidemann A, Wittig U	Proceedings of the 2nd International Symposium on Experimental Standard Conditions of Enzyme Characterizations	SABIO-RK (System for the Analysis of Biochemical Pathways-Reaction Kinetics) view
2007	Network Detoxification, Platform Cell Biology	Saussele T, Burk O, Blievernicht JK, Klein K, Nussler A, Nussler N, Hengstler JG, Eichelbaum M, Schwab M, Zanger UM.	Clin Pharmacol Ther. 2007; 82(3): 265-274.	Selective Induction of Human Hepatic Cytochromes P450 2B6 and 3A4 by Metamizole. view
2007	Network Detoxification	Schirmer M, Rosenberger A, Klein K, Kulle B, Toliat MR, Nürnberg P, Zanger UM, Wojnowski L.	Pharmacogenomics. 2007; 8(5): 443-53.	Sex-dependent genetic markers of CYP3A4 expression and activity in human liver microsomes. view
2007	Platform Modeling	Rojas I, Golebiewski M, Kania R, Krebs O, Mir S, Weidemann A, Wittig U	In Silico Biology, 7(2 Suppl):S37-44	Storing and annotating of kinetic data view
2007	Platform Modeling	Klamt S, Saez-Rodriguez J, Gilles ED	BMC Systems Biology, Jan 8;1:2	Structural and functional analysis of cellular networks with CellNetAnalyzer view
2007	Platform Modeling	Behre J, Wilhelm T, von Kamp A, Ruppig E, Schuster S	Journal of Theoretical Biology (in press)	Structural robustness of metabolic networks with respect to multiple knockouts view
2007	Network Regeneration, Platform Cell Biology	Dooley S, Ciucan L, Godoy P, Kanzler S, Heuchel R, Ueberham E, Gebhardt R, Hamzavi J, Mertens P and Breitkopf K.	Z Gastroenterol, 45, 732, PP03.	TGF-beta and hepatocyte transdifferentiation in liver fibrogenesis

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2007	Network Endosys	Ciucan L, Godoy P , Ehnert S, Weng H, Singer MV, Breitkopf K and S. Dooley S	Z Gastroenterol, 45, 89-142,1.10.	TGF-beta interference with MEOS and ADH metabolising systems may promote alcohol dependent liver damag
2007	Network Endosys	Meindl-Beinker NM and Dooley S	J Gastroenterol Hepatol, Mar;23 Suppl 1:S122-7	TGF-• and hepatocyte transdifferentiation in liver fibrogenesis
2007	Network Endosys	Meindl-Beinker NM, Dooley S	Bioforum 6, 30-32	TGF-• Signaltransduktion in Hepatozyten – Bedeutung für die Leberfibrogenese
2007	Network Detoxification	M.Fischer, M.Knoll, D.Sirim, F.Wagner, S.Funke, J.Pleiss	Bioinformatics, 23(17): 2015-7	The Cytochrome P450 Engineering Database: A Navigation and Prediction Tool for the Cytochrome P450 Protein Family view
2007	Platform Modeling	Toepfer S, Guthke R , Driesch D, Woetzel D, Pfaff M	Lecture Notes in Bioinformatics, 4366, 119-130.	The NetGenerator Algorithm: Reconstruction of Gene Regulatory Networks
2007	Platform Modeling	Grimbs, S., Selbig, J., Bulik, S. , Holzhütter , H.G. & Steuer, R.	Mol Syst Biol 3, 146	The stability and robustness of metabolic states: identifying stabilizing sites in metabolic networks view
2007	Platform Modeling	Chaurasia G, Iqbal Y, Hanig C, Herzel H , Wanker EE, Futschik ME	Nucleic Acids Res. 35, D590-594	UniHI: an entry gate to the human protein interactome
2007	Platform Modeling	U. Kummer	In Silico Biology, 7, S65-71	Usage of reaction kinetics data stored in databases - a modeler's point of view

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2007	Platform Cell Biology	Ullrich A, Berg C, Hengstler JG, Runge D.	ALTEX. 2007;24(1):35-40.	Use of a standardised and validated long-term human hepatocyte culture system for repetitive analyses of drugs: Repeated administrations of acetaminophen reduces albumin and urea secretion.
2006	Platform Modeling	Ebenhöh , O., Handorf, T., and Heinrich , R.	Genome Informatics, 16(1):203-13	A Cross Species Comparison of Metabolic Network Functions.
2006	Platform Modeling	Conzelmann , H., Saez-Rodriguez, J., Sauter, T., Kholodenko, B.N. and Gilles , E.D	BMC Bioinformatics, Jan 23;7:34	A domain-oriented approach to the reduction of combinatorial complexity
2006	Network Endosys	S. Schmitmeier, A. Langsch, A. Bader	Desalination 199:258-260	A membrane-based small scale bioreactor for accelerated in vitro drug screening with primary hepatocytes
2006	Platform Modeling	Kremling A , Zeilinger K, Gerlach JC, Gilles ED.	Proceedings of the IEEE München, 1725-1729	A reduced stoichiometric model to describe metabolism in hepatocytes.
2006	Network Endosys	E. Schmelzer, A. Acikgoez, N.R. Fruehauf, O. Crome, J. Klemnpauer, U. Christians, A. Bader	Xenobiotica. 36:693-708	Biotransformation of cyclosporin in matrix overlaid primary rat, porcine, and human hepatocytes
2006	Network Endosys	Ciuclan L , Godoy P , Singer MV, Dooley S and Breitkopf K	Z Gastroenterol, 44: 773, P203	Characterization of antagonistic properties of Ski, SnoN and Smad7 in primary mouse hepatocytes
2006	Platform Cell Biology, Network Regeneration	Ehnert S, Böcker U, Siegmund S, Breitkopf K, Nüssler A and Dooley S	Alcoholism: Clinical and Experimental Research, 30 (9), 857	Common morphologic and metabolic features of blood monocyte derived neohepatocytes from patients with alcoholic liver disease and corresponding controls

Year	Network(s)	Authors	Reference	Title	
2006	Platform Modeling	Hoffmann S , Hoppe A, Holzhütter HG	Genome Inform. 2006; 17(1): 195-207	Composition of Metabolic Flux Distributions by Functionally Interpretable Minimal Flux Modes (MinModes)	view
2006	Network Endosys	S. Schmitmeier, A. Langsch, I. Jasmund, A. Bader	Biotechnol. Bioeng. 95:1198-1206	Development and characterization of a small-scale bioreactor based on a bioartificial hepatic culture model for predictive pharmacological in vitro screenings	
2006	Network Detoxification, Network Regeneration	Wagner S, Hofmann A, Siedle B, Terfloth L , Merfort I , Gasteiger J	J Med Chem (2006) 49, 2241-2252	Development of a structural model for NFkappaB inhibition of sesquiterpene lactones using self-organizing neural networks	view
2006	Platform Modeling, Platform Cell Biology	Guthke R , Schmidt-Heck W , Pless G, Gebhardt R , Pfaff M, Gerlach JC, Zeilinger K.	In: M. Maglaveras et al. (Eds.): ISBMDA 2006, LNBI 4345, pp. 137-149. Springer-Verlag Berlin Heidelberg	Dynamic Model of Amino Acid and Carbohydrate Metabolism in Primary Human Liver Cells.	
2006	Platform Modeling, Platform Cell Biology	Guthke R , Schmidt-Heck W , Pless G, Gebhardt R , Pfaff M, Gerlach JC, Zeilinger K.	Lect Notes Bioinformatics 4345; 137-149.	Dynamic model of amino acid and carbohydrate metabolism in primary human liver cells.	
2006	Platform Modeling	Guthke R , Zeilinger K, Sickinger S, Schmidt-Heck W , Buentemeyer H, Iding K, Lehmann J, Pfaff M, Pless G, Gerlach JC	Bioprocess Biosyst Eng 28(5):331-40	Dynamics of amino acid metabolism of primary human liver cells in 3D bioreactors	
2006	Network Endosys	Godoy P , Ehnert S, Seine B, DiFiore S , Dooley S and Breitkopf K	Z Gastroenterol, 44: 785, P238	Endocytosis regulates TGF- β -induced Akt signal transduction in hepatocytes	
2006	Platform Cell Biology	Kafert-Kasting S, Alexandrova K, Barthold M, Laube B, Friedrich G, Arseniev L, Hengstler JG	Toxicology 220:117-25, 2006.	Enzyme induction in cryopreserved human hepatocyte cultures	

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2006	Platform Modeling	Ebenhöh , O., Handorf, T. and Kahn, D.	Syst Biol (Stevenage), Sep;153(5):354-8	Evolutionary changes of metabolic networks and their biosynthetic capacities.
2006	Platform Cell Biology	Bauer M, Herbarth O, Aust G, Hengstler JG, Dotzauer A, Graebisch C, Schmuecking E	Cell Tissue Res. 324(3):423-32, 2006.	Expression patterns and novel splicing variants of glutathione-S-transferase isoenzymes of human lung and hepatocyte cell lines
2006	Network Detoxification	Schirmer M, Toliat MR, Haberl M, Suk A, Kamdem LK, Klein K, Brockmöller J, Nürnberg P, Zanger UM, Wojnowski L.	Pharmacogenet Genomics. 2006;16(1):59-71.	Genetic signature consistent with selection against the CYP3A4*1B allele in non-African populations
2006	Platform Cell Biology	Werth M, Gebhardt R, Gaunitz F	Hepatology, 44(4), 967-975	Hepatic glutamine synthetase is controlled by the interaction of STAT5 and TCF transcription factors.
2006	Platform Modeling	Handorf, T., Ebenhöh , O., Kahn, D. and Heinrich, R.	Syst Biol (Stevenage). Sep;153(5):359-63	Hierarchy of metabolic compounds based on their synthetic capacity
2006	Network Endosys	Wiercinska E, Wickert L, Denecke B, Said HM, Hamzavi J, Gressner AM, Thorikay M, ten Dijke P, Mertens PR, Breitkopf K, Dooley S	Hepatology, 43(5), 1032-1041	Id1 is a critical mediator in TGF-beta-induced transdifferentiation of rat hepatic stellate cells
2006	Network Endosys	Gaitantzi H, Ciucan L, Godoy P, Singer MV, Dooley S and Breitkopf K	Z Gastroenterol, 44: 768, P184	In hepatocytes TGF- β induces epithelial-to-mesenchymal transition (EMT)

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2006	Platform Cell Biology	Carmo H, Bulport M, Hermes M, Oesch F, Silva R, Ferreira LM, Branco PS, Boer DD, Remiao F, Carvalho F, Schon MR, Krebsfaenger N, Doehmer J, Bastos MD, Hengstler JG	Pharmacogenet Genomics. 16(11):789-799, 2006.	Influence of CYP2D6 polymorphism on 3,4-methylenedioxymethamphetamine cytotoxicity	
2006	Platform Modeling	Matthias Stein, Razif R. Gabdoulline, Rebecca C. Wade	NIC Series (2006) 34, 129-132	Integrating Structural and Kinetic Enzymatic Information in Systems Biology.	view
2006	Network Detoxification, Platform Cell Biology	Meier Y, Pauli-Magnus C, Zanger UM, Klein K, Nüssler AK, Nüssler N, Eichelbaum M, Meier PJ, Stieger B	Hepatology 44:62-70	Interindividual Variability of Canalicular ATP-Binding-Cassette (ABC)-Transporter Expression in Human Liver	view
2006	Network Endosys	D. Rocker, F. Hesse, A. Bader , R. Wagner	Cytotechnology 51:119-132	Intracellular Nucleotide Pools and Ratios as Tools for Monitoring Dedifferentiation of Primary Porcine Hepatocytes in Culture	
2006	Network Endosys	Seyhan H, Hamzavi J, Wiercinska E, Gressner AM, Mertens PR, Kopp J, Horch RE, Breitkopf K, Dooley S	J Cell Mol Med, 10(4), 922-932	Liver fibrogenesis due to cholestasis is associated with increased Smad7 expression and Smad3 signaling	
2006	Network Endosys	L. De Bartolo, S. Salerno, S. Morelli, L. Giorno, M. Rende, B. Memoli, A. Procino, V. Andreucci, A. Bader , E. Drioli	Biomaterials, Sep;27(27):4794-803	Long-term maintenance of human hepatocytes in oxygen-permeable membrane bioreactor	
2006	Platform Cell Biology, Network Regeneration	Ehnert S, Böcker U, Siegmund S, Breitkopf K, Singer MV, Nüssler A and Dooley S	Z Gastroenterol, 44: 788, P245	Metabolic characteristics of blood monocyte derived Neo-Hepatocytes from patients with alcoholic liver disease and corresponding controls	

Year	Network(s)	Authors	Reference	Title	
2006	Network Detoxification	A. Seifert, S.Tatzel , R.D. Schmid and J. Pleiss	Proteins, 64(1), 147-155	Multiple Molecular Dynamics Simulations of Human P450 Monooxygenase CYP2C9: The Molecular Basis of Substrate Binding and Regioselectivity	view
2006	Network Endosys	Breitkopf K, Wiercinska E, Hamzavi J, Wickert L, Gressner AM, Kanzler S, Heuchel R, Singer MV and Dooley S	Z Gastroenterol, 44: 77, 1.01	New role for the hepatocyte during TGF- β mediated liver fibrogenesis	
2006	Network Regeneration	Mühlbauer M, Fleck M, Schütz C, Weiss T, Froh M, Blank C, Schölmerich J, Hellerbrand C.	J Hepatol. 45(4):520-8.	PD-L1 is induced in hepatocytes by viral infection and by interferon-alpha and -gamma and mediates T cell apoptosis.	view
2006	Platform Cell Biology	Nussler AK, Koenig S, Ott M, Sokal E, Christ B, Thasler W, Brulport M, Gaebelein G, Schormann W, Schulze M, Ellis E, Kraemer M, Nocken F, Fleig W, Manns M, Strom S, Hengstler J.	Journal of Hepatology. Jul 2006; 45(1):144-59.	Present status and perspectives of cell-based therapies for liver diseases.	

Year	Network(s)	Authors	Reference	Title	
2006	Platform Cell Biology, Network Regeneration, Network Detoxification, Network Iron Regulation, Platform Modeling	Klingmüller, U., A. Bauer, S. Bohl, K. Breitkopf, S. Dooley, S. Zellmer, C. Kern, I. Merfort, T. Sparna, J. Donauer, G. Walz, M. Geyer, C. Kreutz, M. Hermes, D. Walter, L. Egger, K. Neubert, C. Borner, M. Brulport, W. Schormann, C. Sauer, F. Baumann, R. Preiss, P. Illes, P.J. Nickel, S. MacNelly, P. Godoy, E. Wiercinska, L. Ciucian, K. Zeilinger, M. Heinrich, U.M Zanger, M. Reuss, A. Bader, R. Gebhardt, T. Maiwald, J. Timmer, F. von Weizsäcker, J.G. Hengstler	Syst Biol (Stevenage) 153(6):433-447.	Primary mouse hepatocytes for systems biology approaches: a standardized in vitro system for modeling of signal transduction pathways	view
2006	Network Detoxification	M. Reitz, A. von Homeyer, J. Gasteiger	J. Chem. Inf. Model., Nov-Dec;46(6):2333-41	Query generation to search for inhibitors of enzymatic reactions	view
2006	Network Endosys	Godoy P, Breitkopf K, Ciucian L, Wiercinska E, Brusch L and Dooley S	Z Gastroenterol, 44: 82, 1.16	Regulation of TGF- β effects in hepatocytes by endocytosis	
2006	Network Regeneration	Thakar, J., K. Schleinkofer, C. Borner . and T. Dandekar	Proteins, Structure, Function and Bioinformatics 63, 413-423	RIP death domain structural interactions implicated in TNF-mediated proliferation and survival	view
2006	Network Endosys	Ciucian L, Breitkopf K, Godoy P, Wiercinska E, Singer Mv and Dooley S	Z Gastroenterol, 44: 80, 1.10	Ski/SnoN as negative regulators of certain TGF- β signaling pathways in liver cells	

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2006	Platform Modeling	Ebenhöh , O., and Liebermeister, W.	Genome Informatics, 17(1):163-72	Structural Analysis of Expressed Metabolic Subnetworks
2006	Network Endosys	Breitkopf K, Godoy P, Ciucan L, Singer MV, Dooley S	Z Gastroenterol, 44(1), 57-66	TGF-beta/Smad signaling in the injured liver
2006	Network Endosys	Godoy P, Ehnert S, Seine B, Breitkopf K and Dooley S.	Alcoholism: Clinical and Experimental Research, 30 (9), 770	TGF-beta-induced Akt signal transduction in primary hepatocytes protects from apoptosis induction
2006	Network Endosys	Gaitantzi H, Ciucan L, Godoy P, Singer MV, S Dooley and Breitkopf K	Alcoholism: Clinical and Experimental Research, 30 (9), 767	TGF-beta-mediated epithelial-to-mesenchymal transition (EMT) in hepatocytes: an important step of alcohol-induced liver damage and hepatocyte transdifferentiation in liver fibrogenesis
2006	Network Endosys	Dooley D, Hamzavi J, Ciucan L, Gaitantzi H, Kanzler S, Heuchel R and Breitkopf K	Alcoholism: Clinical and Experimental Research, 30 (9), 447	TGF- β and hepatocyte transdifferentiation in liver fibrogenesis
2006	Network Endosys	Ciucan L, Godoy P, Ehnert S, Singer MV, Dooley S and Breitkopf K	Signal Transduction 2006, Supplement, S86	TGF- β interference with ethanol metabolising systems may promote alcohol dependent liver damage
2006	Network Endosys	Ciucan L, Gaitantzi H, Godoy P, Singer MV, Dooley S and Breitkopf K	Signal Transduction 2006, Supplement, S13	TGF- β mediated epithelial-to-mesenchymal transition (EMT) may represent a new profibrogenic feature of hepatocytes
2006	Network Endosys	Ciucan L, Godoy P, Breitkopf K, Ehnert S, Bauch C, Singer MV and Dooley S	Alcoholism: Clinical and Experimental Research, 30 (9), 769.	TGF- β promotes alcohol-dependent liver damage by favoring its oxidative stress producing metabolism

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2006	Platform Modeling	Holzhütter HG	Biosystems. 2006 Feb-Mar;83(2-3):98-107.	The generalized flux-minimization method and its application to metabolic networks affected by enzyme deficiencies	view
2006	Network Endosys	I. Jasmund, S. Schwientek, A. Acikgöz, A. Langsch, H.G. Machens, A. Bader	Biomol. Eng. 24:59-69	The Influence of Medium Composition and Matrix on Long-term Cultivation of Primary Porcine and Human Hepatocytes	
2006	Platform Modeling	Julio Saez-Rodriguez, Sebastian Mirschel , Rebecca Hemenway, Steffen Klamt , Ernst Dieter Gilles , Martin Ginkel	BMC Bioinformatics, Nov 17;7:506	Visual setup of logical models of signaling and regulatory networks with ProMoT	view
2006	Network Endosys	Dooley S, Said HM, Gressner AM, Floege J, En-nia A, Mertens PR	J Biol Chem, 281(3), 1784-1795	Y-box protein-1 is the crucial mediator of antifibrotic interferon-gamma effects	
2005	Network Endosys	Dooley S	Alcohol and Alcoholism. International Journal of the Medical Council on Alcohol MCA, ESBRA, 40 Supplement 1	Alcohol and nicotine in liver fibrosis and cirrhosis	
2005	Network Detoxification, Platform Cell Biology	Burk O, Arnold KA, Nussler AK, Schaeffeler E, Efimova E, Avery BA, Avery MA, Fromm MF, Eichelbaum M	Mol Pharmacol 67:1954-1965	Antimalarial artemisinin drugs induce cytochrome P450 and MDR1 expression by activation of xenosensors pregnane X receptor and constitutive androstane receptor	
2005	Network Endosys	Breitkopf K, Haas S, Wiercinska E, Singer MV and Dooley S	Alcohol Clin Exp Res, 29(11Suppl), 121S-131S	Anti-TGF-beta strategies for the treatment of chronic liver disease	
2005	Platform Modeling	Gille C, Hoffmann S, Holzhütter HG	Genome Inform. 2005; 16(1):223-32	Combining bioinformatics resources for the structural modelling of eukaryotic metabolic networks	view

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2005	Network Regeneration	Schilling , M., T. Maiwald , S. Bohl , M. Kollmann, C. Kreutz , J. Timmer , U. Klingmüller	FEBS Journal, 272, 6400-6411, 2005.	Computational Processing and Error Reduction Strategies for Standardized Quantitative Data in Biological Networks	view
2005	Platform Modeling	Handorf, T., Ebenhöh , O., and Heinrich , R.	Journal of Molecular Evolution, Oct;61(4):498-512. Epub 2005 Sep 12	Expanding Metabolic Networks: Scopes of Compounds, Robustness, and Evolution.	
2005	Platform Modeling	Pohl, A., Devaux, P. F. & Herrmann , A.	Biochim Biophys Acta. 1733, 29-52.	Function of prokaryotic and eukaryotic ABC proteins in lipid transport	
2005	Network Detoxification	Hengstler JG, Brulport M, Schormann W, Bauer A, Hermes M, Nussler AK, Fandrich F, Ruhnke M, Ungefroren H, Griffin L, Bockamp E, Oesch F, von Mach M.-A.	Expert Opin Drug Metab Toxicol. June 2005; 1(1):61-74.	Generation of human hepatocytes by stem cell technology: definition of the hepatocyte	
2005	Network Endosys	Pelkmans L, Fava E, Grabner H, Hannus M, Habermann B, Krausz E, Zerial M.	Nature. 2005b Jul 7;436(7047):78-86. Epub 2005 May 11.	Genome-wide analysis of human kinases in clathrin- and caveolae/raft-mediated endocytosis	
2005	Platform Modeling	Alder-Baerens, N., Muller, P., Pohl, A., Korte, T., Hamon, Y., Chimini, G., Pomorski, T. & Herrmann , A.	J Biol Chem. 280, 26321-9.	Headgroup-specific exposure of phospholipids in ABCA1-expressing cells	
2005	Network Endosys	Dooley S, Wang BE, Jia JD, Wu WF, Xian JZ, Gressner AM, Mertens PR, Cai WM and Weng HL	Z Gastroenterol, 43: 755-1000, P289.	Hepatic fibrosis in patients with chronic hepatitis B virus infection can be partially reversed by IFN-gamma	

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2005	Platform Cell Biology	Ringel M, von Mach MA, Santos R, Feilen PJ, Brulport M, Hermes M, Bauer AW, Schormann W, Tanner B, Schon MR, Oesch F, Hengstler JG	Toxicology, 206:153-67, 2005.	Hepatocytes cultured in alginate microspheres: an optimized technique to study enzyme induction
2005	Network Regeneration	Kopplow K, Letschert K, König J, Walter B, Kepler D	Mol Pharmacol 2005; 68: 1031-1038.	Human Hepatobiliary Transport of Organic Anions Analyzed by Quadruple-transfected Cells
2005	Platform Cell Biology	Ruhnke M, Nussler AK, Ungefroren H, Hengstler JG, Kremer B, Hoeckh W, Gottwald T, Heeckt P, Fandrich F.	Transplantation. 79:1097-103, 2005.	Human monocyte-derived neohepatocytes: a promising alternative to primary human hepatocytes for autologous cell therapy
2005	Network Endosys	Wiercinska E, Wickert L, Gressner AM, Dooley S and Breitkopf K	Journal of Hepatology, Supplement No. 2, 42 (310), 116	Id1, a novel downstream mediator of TGF- β represents an important transducer of pro-fibrogenic signals in hepatic stellate cells
2005	Network Regeneration	Mijalski, T, Harder, A, Halder , T, Kersten, M, Horsch, M, Storm, TM, Lietbsche, HV, Lottspeich , F, Hrabe de Angelis, MH, Beckers, J	PNAS, Jun 14;102(24):8621-6	Identification of coexpressed gene clusters in a comparative analysis of transcriptome and proteome in mouse tissues.
2005	Network Endosys	Weng H, Mertens PR, Breitkopf K, Gressner AM and Dooley S	Z Gastroenterol, 43: 111	IFN-gamma abrogates profibrogenic TGF- β signaling in the liver by targeting the expression of pathway-restricted and inhibitory Smads
2005	Platform Modeling	Mijalski, T, Harder, A, Halder, T, Kersten, M, Horsch, M, Storm, TM, Lietbsche, HV, Lottspeich, F, Hrabe de Angelis, MH, Beckers, J	Proteins, 58, 367-375, 2005	Issues in High-Throughput Comparative Modeling: A Case Study Using the Ubiquitin E2 Conjugating Enzymes

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2005	Network Endosys	Pelkmans, L., and Zerial , M.	Nature 436, 128-33.	Kinase-regulated quantal assemblies and kiss-and-run recycling of caveolae.
2005	Platform Modeling	Zeilinger K, Roth S, Witaschek T, Pfaff M, Toepfer S, Driesch D, Schmidt-Heck W, Guthke R, Gerlach JC	Biomed Tech 50 (suppl Vol 1 part 2):951-952	Kinetic analysis of the electrolyte distribution in a perfused 3D bioreactor for high-density liver cell culture
2005	Platform Modeling	Pfaff M, Driesch D, Toepfer S, Zeilinger K, Roth S, Schmidt-Heck W, Guthke R, Gerlach JC	Biomed Eng 50 (Suppl. 1), 1617-1618. Proceedings 22nd Annual Meeting GASL January 2006.	Kinetic modeling of the input/output dynamics of a perfused 3D multi-compartment capillary membrane bioreactor for extracorporeal liver support
2005	Platform Cell Biology	Carmo H, Hengstler JG, Boer D, Ringel M, Remiao F, Carvalho F, Fernandes E, Reys LA, Oesch F, Bastos Mde L.	Toxicology, 206:75-89, 2005.	Metabolic pathways of 4-bromo-2,5-dimethoxyphenethylamine (2C-B): analysis of phase I metabolism with hepatocytes of six species including human
2005	Platform Cell Biology	Spannbauer MM, Oleszczuk A, Tannapfel A, Bluher M, Pietsch UC, Hengstler J, Donaubaue B, Madaj-Sterba P, Furl M, Schuhmacher A, Thiery J, Hauss JP, Schon MR	Transplant Proc. 37:210-211, 2005	Micro- and macrovesicular steatotic liver model for transplantation induced by ethanol and protein-deficient diet
2005	Network Endosys	Hoepfner, S., Severin, F., Cabezas, A., Habermann , B., Runge, A., Gillooly, D., Stenmark, H., and Zerial , M.	Cell 121, 437-50.	Modulation of receptor recycling and degradation by the endosomal kinesin KIF16B
2005	Network Endosys	Siegmund SV, Dooley S, Brenner DA	Dig Dis, 23(3-4), 264-274	Molecular mechanisms of alcohol-induced hepatic fibrosis

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2005	Platform Modeling	Vishwakarma, R. A., Vehring, S., Mehta, A., Sinha, A., Pomorski, T., Herrmann, A. & Menon, A. K.	Org Biomol Chem. 3, 1275-83	New fluorescent probes reveal that flippase-mediated flip-flop of phosphatidylinositol across the endoplasmic reticulum membrane does not depend on the stereochemistry of the lipid
2005	Platform Modeling	Schmidt-Heck W , Zeilinger K, Pless G, Gerlach JC, Pfaff M, Guthke R	Lect Notes Comput Sc 3745; 109-119	Prediction of the performance of human liver cell bioreactors by donor organ data
2005	Network Endosys	Rink J, Ghigo E, Kalaidzidis Y, Zerial M	Cell. 2005 Sep 9;122(5):735-49.	Rab conversion as a mechanism of progression from early to late endosomes view
2005	Network Detoxification	Dietrich, M., L. Grundmann, K. Kurr, L. Valinotto, T. Richter, R. D. Schmid, S. Lange	ChemBioChem 6(11), 2005.	Recombinant production of human microsomal cytochrome P450 2D6 in the methylotrophic yeast <i>Pichia pastoris</i> view
2005	Platform Cell Biology	Ruhnke M, Ungefroren H, Nussler A, Martin F, Brulport M , Schormann W , Hengstler JG , Klapper W, Ulrichs K, Hutchinson JA, Soria B, Parwaresch RM, Heeckt P, Kremer B, Fändrich F	Gastroenterology, 128:1774-86, 2005.	Reprogramming of Human Peripheral Blood Monocytes into Functional Hepatocyte and Pancreatic Islet-like Cells
2005	Network Endosys	Breitkopf K, Ciucan L, Godoy P , Wiercinska E and Dooley S	Z Gastroenterol, 43: 70	Role of TGF-beta in alcohol-induced liver damage
2005	Network Endosys	Apte MV, Zima T, Dooley S , Siegmund SV, Pandol SJ and Singer MV	Alcoholism: Clinical and Experimental Research, 29(7), 1299-1309	Signal transduction in alcohol-related diseases

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2005	Platform Cell Biology	Guido, I, K Affeld , J Hengstler , A Bauer , U Kertzscher, L Goubergrits, P Scharfschwerdt, T Timmel	European Society for Artificial Organs (Congress 2005), Bologna, 5.-10. October	Standardized Bioreactor for Hepatocytes with 3D Capillary Membrane Structure
2005	Network Endosys	K. Prank, M. Waring, U. Ahlvers, A. Bader , E. Penner, M. Möller, G. Brabant, C. Schofl	IEE Proceedings-Systems Biology 2:31-34	The precision of intracellular calcium spike timing in primary rat hepatocytes
2005	Network Detoxification	Haberl M, Anwald B, Klein K, Weil R, Fuss C, Gepdiremen A, Zanger UM, Meyer UA, Wojnowski L.	Pharmacogenet Genomics 2005;15(9):609-24.	Three haplotypes associated with CYP2A6 phenotypes in Caucasians
2005	Network Endosys	Breitkopf K, Sawitza I, Westhoff JH, Wickert L, Dooley S and Gressner AM	Gut, 54(5), 673-681	Thrombospondin 1 acts as a strong promotor of transforming growth factor beta effects via two distinct mechanisms in hepatic stellate cells
2005	Network Endosys	Lindert S, Wickert L, Sawitza I, Wiercinska E, Gressner AM, Dooley S and Breitkopf K	Matrix Biol, 24(3), 198-207	Transdifferentiation-dependent expression of alpha-SMA in hepatic stellate cells does not involve TGF- β pathways leading to coinduction of collagen type I and thrombospondin-2
2005	Network Regeneration	Keppler D	Methods Enzymol 400:531-542	Uptake and efflux transporters for conjugates in human hepatocytes
2005	Network Regeneration	Letschert K, Komatsu M, Hummel-Eisenbeiss J, Keppler D	J Pharmacol Exp Ther 2005; 313: 549-556.	Vectorial transport of the peptide CCK-8 by double-transfected MDCKII cells stably expressing the organic anion transporter OATP1B3 (OATP8) and the export pump ABCC2
2005	Platform Cell Biology, Network Detoxification	Zukunft J, Lang T, Richter T, Hirsch-Ernst KI, Nussler AK, Klein K, Schwab M, Eichelbaum M, Zanger UM	Mol Pharmacol. 2005; 67(5):1772-82.	A natural CYP2B6 TATA box polymorphism (-82T--> C) leading to enhanced transcription and relocation of the transcriptional start site

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2004	Network Endosys	Bolkenius U, Hahn D, Gressner AM, Breitkopf K, Dooley S , Wickert L	Biochem Biophys Res Commun, 325(4), 1264-1270	Glucocorticoids decrease the bioavailability of TGF-beta which leads to a reduced TGF-beta signaling in hepatic stellate cells
2004	Network Endosys	Breitkopf K and Dooley S	Alcoholism: Clinical and Experimental Research, 28(8), 2.b.11	Role of TGF- β activated pathways in hepatic fibrogenesis
2004	Platform Cell Biology	Carmo H, Hengstler JG , de Boer D, Ringel M, Carvalho F, Fernandes E, Remiao F, dos Reys LA, Oesch F, de Lourdes Bastos M	Naunyn Schmiedebergs Arch Pharmacol 369, 198-205, 2004.	Comparative metabolism of the designer drug 4-methylthioamphetamine by hepatocytes from man, monkey, dog, rabbit, rat and mouse
2004	Network Endosys	Dooley S , Wang BE, Jia JD, Wu WF, Xian JZ, Mertens PR, Cai WM and Weng HL	Alcoholism Clinical and Experimental Research, 28 (8) 11.4	IFN-gamma ameliorates hepatic fibrosis in chronic hepatitis B virus infection
2004	Platform Modeling	Ebenhöh , O., Handorf, T., and Heinrich R.	Genome Informatics, 15(1):35-45	Structural Analysis of Expanding Metabolic Networks
2004	ne, Platform Cell Biology	Godoy , P., K. Breitkopf, D. Ciucian, E. Wiercinska, A. Bauer, M. Brulport , W. Schormann , J.G. Hengstler , A. Nüssler , F. Baumann, R. Preiss, R. Gebhardt , A. Bader , M. Heinrich, K. Zeilinger, U. Klingmüller , J. Timmer , S. Difiore , N. Emans , S. Dooley	FEBS advanced Course on Systems Biology: From Molecules & Modeling to Cells	In vitro systems for modeling of signal transduction in hepatocytes.
2004	Network Endosys	Habermann B.	EMBO Rep. 5(3), 250-5	The BAR-domain family of proteins: a case of bending and binding? view

Year	Network(s)	Authors	Reference	Title
2004	Platform Modeling	Holzhütter S, Holzhütter HG	Chembiochem. 4;5(10):1401-22	Computational design of reduced metabolic networks.
2004	Platform Modeling	Klamt , S. and Gilles , E.D	Bioinformatics 20: 226-234	Minimal cut sets in biochemical reaction networks
2004	Network Detoxification	Lang T, Hitzl M, Burk O, Mornhinweg E, Keil A, Kerb R, Klein K, Zanger UM, Eichelbaum M, Fromm MF	Pharmacogenet Genomics. 2004;14(3):155-64.	Genetic polymorphisms in the multidrug resistance-associated protein 3 (ABCC3, MRP3) gene and relationship to its mRNA and protein expression in human liver
2004	Network Detoxification	Lang T, Klein K, Richter T, Zibat A, Kerb R, Eichelbaum M, Schwab M, Zanger UM	J Pharmacol Exp Ther. 2004;311(1):34-43.	Multiple novel nonsynonymous CYP2B6 gene polymorphisms in Caucasians: demonstration of phenotypic null alleles
2004	Platform Cell Biology	Mach von, MA, Hengstler JG, Brulport M, Eberhardt M, Schormann W, Hermes M, Prawitt D, Zabel B, Grosche J, Reichenbach A, Muller B, Weilemann LS, Zulewski H	Stem Cells 22, 1134-41, 2004.	In vitro cultured islet-derived progenitor cells of human origin express human albumin in severe combined immunodeficiency mouse liver in vivo.
2004	Platform Cell Biology	Reder-Hilz B, Ullrich M, Ringel M, Hewitt N, Utesch D, Oesch F, Hengstler JG	Naunyn Schmiedebergs Arch Pharmacol 369, 408-17, 2004	Metabolism of propafenone and verapamil by cryopreserved human, rat mouse and dog hepatocytes: comparison with metabolism in vivo
2004	Network Endosys	S. Wilkening, A. Bader	Basic Clin. Pharmacol. Toxicol. 95:92-93	Differential regulation of CYP3A4 and CYP3A7 by dimethylsulfoxide

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2004	Network Endosys	S. Wilkening, A. Bader	J. Biomol. Tech. 15:107-111	Quantitative real-time polymerase chain reaction: methodical analysis and mathematical model
2004	Platform Modeling	Saez-Rodriguez, J., Kremling , A., Conzelmann , H. K. Bettenbrock and E.D. Gilles	IEEE CSM, 24:35-52	Modular Analysis of Signal Transduction Networks view
2004	Platform Modeling	Schmidt-Heck W, Zeilinger K, Pfaff M, Toepfer S, Driesch D, Pless G, Neuhaus P, Gerlach JC, Guthke R	Lect Notes Comp Sc 3337:427-438	Network analysis of the kinetics of amino acid metabolism in a liver cell bioreactor
2004	Platform Modeling	Swat, M., A. Kel, and H. Herzel	Bioinformatics 20:1506-1511.	Bifurcation analysis of the regulatory modules of the mammalian G1/S transition
2004	Network Detoxification	T. Richter, T. E. Muerdter, G.Heinkele, J.Pleiss , S.Tatzel , M.Schwab, M. Eichelbaum , U.M. Zanger	J Pharmacol Exp Ther.; 308(1):189-97	Potent mechanism-based inhibition of human CYP2B6 by clopidogrel and ticlopidine view
2004	Platform Modeling	T. Wilhelm, J. Behre , S. Schuster	IEE Proc. Syst. Biol., Jun;1(1):114-20	Analysis of structural robustness of metabolic networks
2004	Network Regeneration	Tronche, F.; Opherk, C.; Moriggl, R.; Kellendonk, C.; Reimann, A.; Schwake, L.; Reichardt, H. M.; Stangl, K.; Gau, D.; Hoeflich, A.; Beug, H.; Schmid, W.; Schütz, G.	Genes Dev 18, 492-497.	Glucocorticoid receptor function in hepatocytes is essential to promote postnatal body growth.

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2004	Network Endosys	Weng H, Mertens PR, Gressner AM, Wiercinska E and Dooley S	Signal Transduction, SGTR 4, 69-164 (3-4), 121	IFN-gamma abrogates profibrogenic TGF-beta in the liver by targeting the expression of pathway-restricted and inhibitory Smads
2004	Network Endosys	Wiercinska E, Wickert L, Gressner AM and Dooley S	Alcoholism Clinical and Experimental Research, 28 (8) 2.b.8	Id1 as target gene of TGF- β involved in transdifferentiation of hepatic stellate cells
2004	Network Endosys	Wiercinska E, Hamzavi J, Gressner AM and Dooley S	Clinical Chemistry and Laboratory Medicine, 42(10), A154.	Smad7 and TGF- β signaling in liver fibrogenesis
2004	Network Endosys	Wiercinska E, Wickert L, Breitkopf K, Gressner AM and Dooley S	Signal Transduction, SGTR 4, 69, 164 (3-4), 121.	Id1 as a target gene of TGF-beta involved in transdifferentiation of hepatic stellate cells

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Public Relation Work				
2009	Network Regeneration	J. Bausch und U. Heisner	self-published Brochure	'Who is Who' - documentation of the HepatoSys working groups
2008	Network Regeneration	U. Heisner	Brochure of the PTJ/BMBF, self-published	HepatoSys - Systems Biology in liver cells. In: Systems Biology - Results, Progress and Innovations from BMBF Funding, p. 10-11
2008	Network Regeneration	U. Heisner	Press release newsticker Alpha Galileo & IDW	Systems Biology - Guide to future
2008	Network Regeneration	U. Heisner	Press release newsticker Alpha Galileo & IDW	Gelinspector: a new Friend of Systems Biologists
2008	Network Regeneration	U. Heisner	Press release newsticker Alpha Galileo & IDW	'Technology meets Science' – Representatives of research and industry get together
2008	Network Regeneration	U. Heisner	Press release newsticker Alpha Galileo & IDW	From a set of formulas to visible changes in liver cancer
2008	Network Regeneration	U. Heisner	Press release newsticker Alpha Galileo & IDW	An award for young scientists in a young discipline

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2008	Network Regeneration	U. Heisner	Press release newsticker Alpha Galileo & IDW	In the liver cirrhosis network
2007	Network Regeneration	U. Heisner	Press release newsticker Alpha Galileo & IDW	22 million Euro funding for the German Competence Network in Systems Biology view
2007	Network Regeneration	U. Heisner and T. Freemann	Press release newsticker Alpha Galileo & IDW	Genedata expands collaboration with HepatoSys Systems Biology Network view
2007	Network Regeneration	U. Heisner et al.	GenomXPress	Zukunft mit System - Entwicklung der Systembiologie in Deutschland
2006	Network Regeneration	U. Heisner and S. Trunz	Press release newsticker Alpha Galileo & IDW	In vivo, in vitro, in silico - rule of three for Systems Biology
2006	Network Regeneration	U. Heisner and T. Freemann	Press release newsticker Alpha Galileo & IDW	HepatoSys collaborates with Genedata