Lars Kuepfer

List of Publications by Citations

58 papers	2,532 citations	26 h-index	50 g-index
64 ext. papers	3,075 ext. citations	5.9 avg, IF	4.9 L-index

#	Paper	IF	Citations
58	Systematic evaluation of objective functions for predicting intracellular fluxes in Escherichia coli. *Molecular Systems Biology*, **2007**, 3, 119	12.2	526
57	Large-scale 13C-flux analysis reveals mechanistic principles of metabolic network robustness to null mutations in yeast. *Genome Biology*, **2005**, 6, R49	18.3	249
56	Metabolic functions of duplicate genes in Saccharomyces cerevisiae. *Genome Research*, **2005**, 15, 1421-30	9.7	184
55	Ensemble modeling for analysis of cell signaling dynamics. *Nature Biotechnology*, **2007**, 25, 1001-6	44.5	171
54	Applied Concepts in PBPK Modeling: How to Build a PBPK/PD Model. *CPT: Pharmacometrics and Systems Pharmacology*, **2016**, 5, 516-531	4.5	139
53	A computational systems biology software platform for multiscale modeling and simulation: integrating whole-body physiology, disease biology, and molecular reaction networks. *Frontiers in Physiology*, **2011**, 2, 4	4.6	136
52	Integrating cellular metabolism into a multiscale whole-body model. *PLoS Computational Biology*, **2012**, 8, e1002750	5	88
51	A systematic evaluation of the use of physiologically based pharmacokinetic modeling for cross-species extrapolation. *Journal of Pharmaceutical Sciences*, **2015**, 104, 191-206	3.9	63
50	Using expression data for quantification of active processes in physiologically based pharmacokinetic modeling. *Drug Metabolism and Disposition*, **2012**, 40, 892-901	4	63
49	Enabling multiscale modeling in systems medicine. *Genome Medicine*, **2014**, 6, 21	14.4	61
48	Model-guided identification of a therapeutic strategy to reduce hyperammonemia in liver diseases. *Journal of Hepatology*, **2016**, 64, 860-71	13.4	58
47	Prediction of human drug-induced liver injury (DILI) in relation to oral doses and blood concentrations. *Archives of Toxicology*, **2019**, 93, 1609-1637	5.8	53
46	Bile Microinfarcts in Cholestasis Are Initiated by Rupture of the Apical Hepatocyte Membrane and Cause Shunting of Bile to Sinusoidal Blood. *Hepatology*, **2019**, 69, 666-683	11.2	46
45	A generic whole body physiologically based pharmacokinetic model for therapeutic proteins in PK-Sim. *Journal of Pharmacokinetics and Pharmacodynamics*, **2018**, 45, 235-257	2.7	39
44	Whither systems medicine?. *Experimental and Molecular Medicine*, **2018**, 50, e453	12.8	37
43	Efficient classification of complete parameter regions based on semidefinite programming. *BMC Bioinformatics*, **2007**, 8, 12	3.6	36
42	Spatio-temporal simulation of first pass drug perfusion in the liver. *PLoS Computational Biology*, **2014**, 10, e1003499	5	35

41	Using Bayesian-PBPK modeling for assessment of inter-individual variability and subgroup stratification. *In Silico Pharmacology*, **2013**, 1, 6	4.3	33
40	A mechanistic, model-based approach to safety assessment in clinical development. *CPT: Pharmacometrics and Systems Pharmacology*, **2012**, 1, e13	4.5	32
39	Representative Sinusoids for Hepatic Four-Scale Pharmacokinetics Simulations. *PLoS ONE*, **2015**, 10, e0133653	3.7	31
38	A Physiologically Based Pharmacokinetic Model of Isoniazid and Its Application in Individualizing Tuberculosis Chemotherapy. *Antimicrobial Agents and Chemotherapy*, **2016**, 60, 6134-45	5.9	31
37	Bayesian Population Physiologically-Based Pharmacokinetic (PBPK) Approach for a Physiologically Realistic Characterization of Interindividual Variability in Clinically Relevant Populations. *PLoS ONE*, **2015**, 10, e0139423	3.7	30
36	Evaluation of the efficacy and safety of rivaroxaban using a computer model for blood coagulation. *PLoS ONE*, **2011**, 6, e17626	3.7	29
35	Spatio-temporal visualization of the distribution of acetaminophen as well as its metabolites and adducts in mouse livers by MALDI MSI. *Archives of Toxicology*, **2018**, 92, 2963-2977	5.8	28
34	Metabolic flux distributions: genetic information, computational predictions, and experimental validation. *Applied Microbiology and Biotechnology*, **2010**, 86, 1243-55	5.7	27
33	Zonated quantification of steatosis in an entire mouse liver. *Computers in Biology and Medicine*, **2016**, 73, 108-18	7	26
32	In vivo imaging of systemic transport and elimination of xenobiotics and endogenous molecules in mice. *Archives of Toxicology*, **2017**, 91, 1335-1352	5.8	24
31	Physiologically-based modelling in mice suggests an aggravated loss of clearance capacity after toxic liver damage. *Scientific Reports*, **2017**, 7, 6224	4.9	23
30	Bringing in vitro analysis closer to in vivo: Studying doxorubicin toxicity and associated mechanisms in 3D human microtissues with PBPK-based dose modelling. *Toxicology Letters*, **2018**, 294, 184-192	4.4	20
29	Integration of genome-scale metabolic networks into whole-body PBPK models shows phenotype-specific cases of drug-induced metabolic perturbation. *Npj Systems Biology and Applications*, **2018**, 4, 10	5	17
28	A model-based assay design to reproduce in vivo patterns of acute drug-induced toxicity. *Archives of Toxicology*, **2018**, 92, 553-555	5.8	17
27	Model-based contextualization of in vitro toxicity data quantitatively predicts in vivo drug response in patients. *Archives of Toxicology*, **2017**, 91, 865-883	5.8	14
26	Multiscale mechanistic modeling in pharmaceutical research and development. *Advances in Experimental Medicine and Biology*, **2012**, 736, 543-61	3.6	14
25	Using quantitative systems pharmacology to evaluate the drug efficacy of COX-2 and 5-LOX inhibitors in therapeutic situations. *Npj Systems Biology and Applications*, **2018**, 4, 28	5	11
24	Clinical translation in the virtual liver network. *CPT: Pharmacometrics and Systems Pharmacology*, **2014**, 3, e127	4.5	10

23	Development of a physiologically based computational kidney model to describe the renal excretion of hydrophilic agents in rats. *Frontiers in Physiology*, **2012**, 3, 494	4.6	10
22	Translational learning from clinical studies predicts drug pharmacokinetics across patient populations. *Npj Systems Biology and Applications*, **2017**, 3, 11	5	8
21	A Comparative Analysis of Drug-Induced Hepatotoxicity in Clinically Relevant Situations. *PLoS Computational Biology*, **2017**, 13, e1005280	5	8
20	Network integration and modelling of dynamic drug responses at multi-omics levels. *Communications Biology*, **2020**, 3, 573	6.7	7
19	Quantitative systems pharmacology of interferon alpha administration: A multi-scale approach. *PLoS ONE*, **2019**, 14, e0209587	3.7	6
18	A multiscale, model-based analysis of the multi-tissue interplay underlying blood glucose regulation in type I diabetes. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*,	0.9	6
17	Multiscale modeling reveals inhibitory and stimulatory effects of caffeine on acetaminophen-induced toxicity in humans. *CPT: Pharmacometrics and Systems Pharmacology*, **2017**, 6, 136-146	4.5	5
16	Systems Medicine in Pharmaceutical Research and Development. *Methods in Molecular Biology*, **2016**, 1386, 87-104	1.4	5
15	A Physiology-Based Model of Human Bile Acid Metabolism for Predicting Bile Acid Tissue Levels After Drug Administration in Healthy Subjects and BRIC Type 2 Patients. *Frontiers in Physiology*, **2019**, 10, 1192	4.6	4
14	Modeling and Simulation of In Vivo Drug Effects. *Handbook of Experimental Pharmacology*, **2016**, 232, 313-29	3.2	4
13	A workflow to build PBTK models for novel species. *Archives of Toxicology*, **2020**, 94, 3847-3860	5.8	4
12	Modeling approaches for hepatic spatial heterogeneity in pharmacokinetic simulations. *Drug Discovery Today: Disease Models*, **2016**, 22, 35-43	1.3	3
11	Subcellular spatio-temporal intravital kinetics of aflatoxin B and ochratoxin A in liver and kidney. *Archives of Toxicology*, **2021**, 95, 2163-2177	5.8	3
10	Computational Models for Clinical Applications in Personalized Medicine-Guidelines and Recommendations for Data Integration and Model Validation.. *Journal of Personalized Medicine*, **2022**, 12,	3.6	2
9	Data-driven personalization of a physiologically based pharmacokinetic model for caffeine: A systematic assessment. *CPT: Pharmacometrics and Systems Pharmacology*, **2021**, 10, 782-793	4.5	2
8	Towards knowledge-driven cross-species extrapolation. *Drug Discovery Today: Disease Models*, **2016**, 22, 21-26	1.3	2
7	Early prediction of decompensation (EPOD) Score - non-invasive determination of liver cirrhosis decompensation risk.. *Liver International*, **2022**,	7.9	1
6	Stoichiometric modelling of microbial metabolism. *Methods in Molecular Biology*, **2014**, 1191, 3-18	1.4	1

5	PK-Sim for Modeling Oral Drug Delivery of Modified-Release Formulations **2022**, 375-389		1
4	Algorithmic surveillance of ICU patients with acute respiratory distress syndrome (ASIC): protocol for a multicentre stepped-wedge cluster randomised quality improvement strategy. *BMJ Open*, **2021**, 11, e045589	3	0
3	A Model-Based Workflow to Benchmark the Clinical Cholestasis Risk of Drugs. *Clinical Pharmacology and Therapeutics*, **2021**, 110, 1293-1301	6.1	0
2	Modellierung metabolischer Netzwerke im menschlichen K per. *BioSpektrum*, **2014**, 20, 39-41	0.1	
1	PBPK Modelling of Intracellular Drug Delivery Through Active and Passive Transport Processes. *Fundamental Biomedical Technologies*, **2016**, 363-374		