Panos Macheras

List of Publications by Year in descending order

84 papers	4,030 citations	172457 29 h-index	128289 60 g-index
91 all docs	91 docs citations	91 times ranked	3795 citing authors

#	Article	IF	Citations
1	On the use of the Weibull function for the discernment of drug release mechanisms. International Journal of Pharmaceutics, 2006, 309, 44-50.	5.2	593
2	A century of dissolution research: From Noyes and Whitney to the Biopharmaceutics Classification System. International Journal of Pharmaceutics, 2006, 321, 1-11.	5.2	562
3	A reappraisal of drug release laws using Monte Carlo simulations: the prevalence of the Weibull function. Pharmaceutical Research, 2003, 20, 988-995.	3.5	177
4	Quantitative Biopharmaceutics Classification System: The Central Role of Dose/Solubility Ratio. Pharmaceutical Research, 2003, 20, 1917-1925.	3.5	143
5	Fractal kinetics in drug release from finite fractal matrices. Journal of Chemical Physics, 2003, 119, 6373-6377.	3.0	138
6	Fractional kinetics in drug absorption and disposition processes. Journal of Pharmacokinetics and Pharmacodynamics, 2009, 36, 165-178.	1.8	111
7	Unusual solubility behaviour of cyclosporin A in aqueous media. Journal of Pharmacy and Pharmacology, 2011, 43, 287-289.	2.4	108
8	A Parenteral Econazole Formulation Using a Novel Micelle-to-Liposome Transfer Method: In Vitro Characterization and Tumor Growth Delay in a Breast Cancer Xenograft Model. Pharmaceutical Research, 2006, 23, 2575-2585.	3.5	105
9	The Biopharmaceutics Classification System (BCS) and the Biopharmaceutics Drug Disposition Classification System (BDDCS): Beyond guidelines. International Journal of Pharmaceutics, 2019, 566, 264-281.	5.2	95
10	A Report from the Pediatric Formulations Task Force: Perspectives on the State of Child-Friendly Oral Dosage Forms. AAPS Journal, 2013, 15, 1072-1081.	4.4	89
11	Fractional kinetics in multi-compartmental systems. Journal of Pharmacokinetics and Pharmacodynamics, 2010, 37, 507-524.	1.8	86
12	On the heterogeneity of drug dissolution and release. , 2000, 17, 108-112.		84
13	The power law can describe the â€˜entireâ€™ drug release curve from HPMC-based matrix tablets: a hypothesis. International Journal of Pharmaceutics, 2003, 255, 199-207.	5.2	84
14	A commentary on fractionalization of multi-compartmental models. Journal of Pharmacokinetics and Pharmacodynamics, 2010, 37, 203-207.	1.8	76
15	Gastrointestinal drug absorption: is it time to consider heterogeneity as well as homogeneity?. , 1997, 14, 842-847.		71
16	The mean dissolution time depends on the dose/solubility ratio. Pharmaceutical Research, 2003, 20, 406-408.	3.5	70
17	Fractional calculus in pharmacokinetics. Journal of Pharmacokinetics and Pharmacodynamics, 2018, 45, 107-125.	1.8	69
18	Identification of Biowaivers Among Class II Drugs: Theoretical Justification and Practical Examples. Pharmaceutical Research, 2004, 21, 1567-1572.	3.5	68

#	Article	IF	Citations
19	Analysis of Case II drug transport with radial and axial release from cylinders. International Journal of Pharmaceutics, 2003, 254, 183-188.	5.2	67
20	On the ubiquitous presence of fractals and fractal concepts in pharmaceutical sciences: A review. International Journal of Pharmaceutics, 2013, 456, 340-352.	5.2	53
21	Advanced pharmacokinetic models based on organ clearance, circulatory, and fractal concepts. AAPS Journal, 2007, 9, E268-E283.	4.4	51
22	A fractal approach to heterogeneous drug distribution: calcium pharmacokinetics. Pharmaceutical Research, 1996, 13, 663-670.	3.5	47
23	Nonlinear dynamics and chaos theory: concepts and applications relevant to pharmacodynamics. Pharmaceutical Research, 2001, 18, 415-426.	3.5	45
24	Modeling in Biopharmaceutics, Pharmacokinetics and Pharmacodynamics. Interdisciplinary Applied Mathematics, 2016, , .	0.3	45
25	Power law IVIVC: An application of fractional kinetics for drug release and absorption. European Journal of Pharmaceutical Sciences, 2010, 41, 299-304.	4.0	43
26	Monte Carlo simulations for the study of drug release from matrices with high and low diffusivity areas. International Journal of Pharmaceutics, 2007, 343, 166-172.	5.2	39
27	Michaelis-Menten Kinetics under Spatially Constrained Conditions: Application to Mibefradil Pharmacokinetics. Biophysical Journal, 2004, 87, 1498-1506.	0.5	35
28	A heterogeneous tube model of intestinal drug absorption based on probabilistic concepts. Pharmaceutical Research, 1999, 16, 1764-1769.	3.5	34
29	Novel milk-based oral formulations: Proof of concept. International Journal of Pharmaceutics, 2010, 390, 150-159.	5.2	33
30	The Changing Face of the Rate Concept in Biopharmaceutical Sciences: From Classical to Fractal and Finally to Fractional. Pharmaceutical Research, 2011, 28, 1229-1232.	3.5	33
31	A population growth model of dissolution. , 1997, 14, 1122-1126.		32
32	Heterogeneous tube model for the study of small intestinal transit flow. Pharmaceutical Research, 1999, 16, 87-91.	3.5	32
33	On the dilemma of fractal or fractional kinetics in drug release studies: A comparison between Weibull and Mittag-Leffler functions. International Journal of Pharmaceutics, 2018, 543, 269-273.	5.2	32
34	Keeping a Critical Eye on the Science and the Regulation of Oral Drug Absorption: A Review. Journal of Pharmaceutical Sciences, 2013, 102, 3018-3036.	3.3	28
35	The cutoff time point of the partial area method for assessment of rate of absorption in bioequivalence studies. Pharmaceutical Research, 1994, 11, 831-834.	3.5	26
36	The heterogeneous course of drug transit through the body. Trends in Pharmacological Sciences, 2004, 25, 140-146.	8.7	26

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37	Effect of Cyclodextrin Complexation on the Aqueous Solubility and Solubility/Dose Ratio of Praziquantel. AAPS PharmSciTech, 2009, 10, 1444-51.	3.3	26
38	Carrier-mediated transport can obey fractal kinetics. Pharmaceutical Research, 1995, 12, 541-548.	3.5	24
39	Monte Carlo simulations of drug release from matrices with periodic layers of high and low diffusivity. International Journal of Pharmaceutics, 2008, 354, 111-116.	5.2	24
40	A non-binary biopharmaceutical classification of drugs: The ABÎ“ system. International Journal of Pharmaceutics, 2014, 464, 85-90.	5.2	23
41	Evaluation of different metrics as indirect measures of rate of drug absorption from extended release dosage forms at steady-state. Pharmaceutical Research, 1995, 12, 103-107.	3.5	22
42	An improved intercept method for the assessment of absorption rate in bioequivalence studies. Pharmaceutical Research, 1996, 13, 1755-1758.	3.5	22
43	Biopharmaceutics classification systems for new molecular entities (BCS-NMEs) and marketed drugs (BCS-MD): Theoretical basis and practical examples. International Journal of Pharmaceutics, 2008, 361, 70-77.	5.2	22
44	Elucidating the Role of Dose in the Biopharmaceutics Classification of Drugs: The Concepts of Critical Dose, Effective In Vivo Solubility, and Dose-Dependent BCS. Pharmaceutical Research, 2012, 29, 3188-3198.	3.5	22
45	Stability and physicochemical characterization of novel milk-based oral formulations. International Journal of Pharmaceutics, 2013, 444, 128-138.	5.2	21
46	Population pharmacokinetics of fluticasone propionate/salmeterol using two different dry powder inhalers. European Journal of Pharmaceutical Sciences, 2015, 80, 33-42.	4.0	20
47	Fractal volume of drug distribution: it scales proportionally to body mass. Pharmaceutical Research, 2001, 18, 1056-1060.	3.5	19
48	Revising Pharmacokinetics of Oral Drug Absorption: II Bioavailability-Bioequivalence Considerations. Pharmaceutical Research, 2021, 38, 1345-1356.	3.5	19
49	Supersaturated dissolution data and their interpretation: the TPGSâ€“carbamazepine model case. Journal of Pharmacy and Pharmacology, 2011, 63, 352-361.	2.4	18
50	Revising Pharmacokinetics of Oral Drug Absorption: I Models Based on Biopharmaceutical/Physiological and Finite Absorption Time Concepts. Pharmaceutical Research, 2020, 37, 187.	3.5	18
51	Modeling and Monte Carlo Simulations in Oral Drug Absorption. Basic and Clinical Pharmacology and Toxicology, 2005, 96, 200-205.	2.5	17
52	Bioavailability study of a freeze-dried sodium phenytoin-milk formulation. Biopharmaceutics and Drug Disposition, 1991, 12, 687-695.	1.9	16
53	Fractal geometry, fractal kinetics and chaos en route to biopharmaceutical sciences. European Journal of Drug Metabolism and Pharmacokinetics, 1996, 21, 77-86.	1.6	16
54	On an Unphysical Hypothesis of Bateman Equation and its Implications for Pharmacokinetics. Pharmaceutical Research, 2019, 36, 94.	3.5	16

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55	A fractal kinetics SI model can explain the dynamics of COVID-19 epidemics. PLoS ONE, 2020, 15, e0237304.	2.5	16
56	Re-writing Oral Pharmacokinetics Using Physiologically Based Finite Time Pharmacokinetic (PBFTPK) Models. Pharmaceutical Research, 2022, 39, 691-701.	3.5	16
57	Ursodeoxycholic acid modulates cyclosporin A oral absorption in liver transplant recipients*. Fundamental and Clinical Pharmacology, 2000, 14, 601-609.	1.9	15
58	Scientific considerations concerning the EMA change in the definition of â€œdoseâ€•of the BCS-based biowaiver guideline and implications for bioequivalence. International Journal of Pharmaceutics, 2015, 478, 606-609.	5.2	14
59	Monte Carlo simulations and fractional kinetics considerations for the Higuchi equation. International Journal of Pharmaceutics, 2011, 418, 100-103.	5.2	13
60	A reaction limited in vivo dissolution model for the study of drug absorption: Towards a new paradigm for the biopharmaceutic classification of drugs. European Journal of Pharmaceutical Sciences, 2018, 117, 98-106.	4.0	13
61	A stochastic model describes the heterogeneous pharmacokinetics of cyclosporin. Journal of Pharmacokinetics and Pharmacodynamics, 2001, 28, 445-463.	1.8	12
62	Pharmacokinetic analysis of inhaled salmeterol in asthma patients: Evidence from two dry powder inhalers. Biopharmaceutics and Drug Disposition, 2017, 38, 407-419.	1.9	11
63	Milk as a medium for pediatric formulations: Experimental findings and regulatory aspects. International Journal of Pharmaceutics, 2015, 492, 344-345.	5.2	10
64	On the pharmacokinetics of two inhaled budesonide/formoterol combinations in asthma patients using modeling approaches. Pulmonary Pharmacology and Therapeutics, 2018, 48, 168-178.	2.6	10
65	Biopharmaceutical Classification Based on Solubility and Dissolution: A Reappraisal of Criteria for Hypothesis Models in the Light of the Experimental Observations. Basic and Clinical Pharmacology and Toxicology, 2010, 106, 168-172.	2.5	9
66	Re-examining digoxin bioavailability after half a century: Time for changes in the bioavailability concepts. Pharmaceutical Research, 2021, 38, 1635-1638.	3.5	9
67	Estimate of volume/flow ratio of gastrointestinal (GI) fluids in humans using pharmacokinetic data. Pharmaceutical Research, 1990, 07, 518-522.	3.5	8
68	Non-linear regression analysis with errors in both variables: estimation of co-operative binding parameters. Biopharmaceutics and Drug Disposition, 2000, 21, 7-14.	1.9	8
69	On the use of partial AUC as an early exposure metric. European Journal of Pharmaceutical Sciences, 2000, 10, 91-95.	4.0	8
70	Biopharmaceutic classification of drugs revisited. European Journal of Pharmaceutical Sciences, 2016, 95, 82-87.	4.0	8
71	Columbus' egg: Oral drugs are absorbed in finite time. European Journal of Pharmaceutical Sciences, 2022, 176, 106265.	4.0	6
72	Pharmacokinetics of acetaminophen after intramuscular administration. Biopharmaceutics and Drug Disposition, 1989, 10, 101-105.	1.9	4

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73	Investigation of absorption kinetics by the phase plane method. , 1998, 15, 1262-1269.		4
74	An alternative method for the estimation of the terminal slope when a few data points are available. Journal of Pharmaceutical Sciences, 1999, 88, 557-560.	3.3	4
75	On the unphysical hypotheses in pharmacokinetics and oral drug absorption: Time to utilize instantaneous rate coefficients instead of rate constants. European Journal of Pharmaceutical Sciences, 2019, 130, 137-146.	4.0	4
76	Comment and reply on: A randomized crossover trial investigating the ease of use and preference of two dry powder inhalers in patients with asthma of chronic obstructive pulmonary disease. Expert Opinion on Drug Delivery, 2014, 11, 823-825.	5.0	3
77	Enhancement of Docetaxel Absorption Using Ritonavir in an Oral Milk-Based Formulation. Pharmaceutical Research, 2021, 38, 1419-1428.	3.5	2
78	Evaluation of controlled release formulations: Estimation of the duration of the zero-order absorption and ascertainment of absorption kinetics. Biopharmaceutics and Drug Disposition, 1991, 12, 173-187.	1.9	1
79	Equations for the fraction of bioavailable dose remaining in the body in the one-compartment model. Biopharmaceutics and Drug Disposition, 1992, 13, 229-232.	1.9	1
80	Computationalâ€Regulatory Developments in the Prediction of Oral Drug Absorption. Molecular Informatics, 2011, 30, 112-121.	2.5	1
81	Drug Release. Interdisciplinary Applied Mathematics, 2016, , 53-82.	0.3	0
82	Oral Drug Absorption. Interdisciplinary Applied Mathematics, 2016, , 109-158.	0.3	0
83	From Camille NÎ¿ïï, to Apollonian and the Dionysian scientists. Diagnosis, 2021, .	1.9	0
84	Interpreting airborne pandemics spreading using fractal kineticsâ€™Âprinciples. F1000Research, 2021, 10, 609.	1.6	0