

William F Elmquist

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109
papers

6,155
citations

43
h-index

77
g-index

118
ext. papers

6,967
ext. citations

4.9
avg, IF

5.67
L-index

#	Paper	IF	Citations
109	Is the blood-brain barrier really disrupted in all glioblastomas? A critical assessment of existing clinical data. <i>Neuro-Oncology</i> , 2018 , 20, 184-191	1	248
108	Drug efflux transporters in the CNS. <i>Advanced Drug Delivery Reviews</i> , 2003 , 55, 83-105	18.5	246
107	Application of microdialysis in pharmacokinetic studies. <i>Pharmaceutical Research</i> , 1997 , 14, 267-88	4.5	233
106	Distribution of STI-571 to the brain is limited by P-glycoprotein-mediated efflux. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2003 , 304, 1085-92	4.7	226
105	Delivery of molecularly targeted therapy to malignant glioma, a disease of the whole brain. <i>Expert Reviews in Molecular Medicine</i> , 2011 , 13, e17	6.7	214
104	Expression of various multidrug resistance-associated protein (MRP) homologues in brain microvessel endothelial cells. <i>Brain Research</i> , 2000 , 876, 148-53	3.7	209
103	Distribution of gefitinib to the brain is limited by P-glycoprotein (ABCB1) and breast cancer resistance protein (ABCG2)-mediated active efflux. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2010 , 334, 147-55	4.7	191
102	Expression of multidrug resistance-associated protein (MRP) in brain microvessel endothelial cells. <i>Biochemical and Biophysical Research Communications</i> , 1998 , 243, 816-20	3.4	178
101	Breast cancer resistance protein and P-glycoprotein in brain cancer: two gatekeepers team up. <i>Current Pharmaceutical Design</i> , 2011 , 17, 2793-802	3.3	178
100	Plasma membrane localization of multidrug resistance-associated protein homologs in brain capillary endothelial cells. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2004 , 311, 449-55	4.7	155
99	P-glycoprotein and breast cancer resistance protein influence brain distribution of dasatinib. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2009 , 330, 956-63	4.7	152
98	Strategies to improve delivery of anticancer drugs across the blood-brain barrier to treat glioblastoma. <i>Neuro-Oncology</i> , 2016 , 18, 27-36	1	150
97	Impact of P-glycoprotein (ABCB1) and breast cancer resistance protein (ABCG2) on the brain distribution of a novel BRAF inhibitor: vemurafenib (PLX4032). <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2012 , 342, 33-40	4.7	132
96	The role of the breast cancer resistance protein (ABCG2) in the distribution of sorafenib to the brain. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2011 , 336, 223-33	4.7	127
95	Function of the blood-brain barrier and restriction of drug delivery to invasive glioma cells: findings in an orthotopic rat xenograft model of glioma. <i>Drug Metabolism and Disposition</i> , 2013 , 41, 33-9	4	125
94	Mechanisms limiting distribution of the threonine-protein kinase B-RaF(V600E) inhibitor dabrafenib to the brain: implications for the treatment of melanoma brain metastases. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2013 , 344, 655-64	4.7	124
93	Radiogenomics to characterize regional genetic heterogeneity in glioblastoma. <i>Neuro-Oncology</i> , 2017 , 19, 128-137	1	121

92	Use of rhodamine 123 to examine the functional activity of P-glycoprotein in primary cultured brain microvessel endothelial cell monolayers. <i>Life Sciences</i> , 1996 , 59, 1521-31	6.8	105
91	Distribution kinetics of a micelle-forming block copolymer Pluronic P85. <i>Journal of Controlled Release</i> , 2004 , 100, 389-97	11.7	104
90	Quantitative proteomics of transporter expression in brain capillary endothelial cells isolated from P-glycoprotein (P-gp), breast cancer resistance protein (Bcrp), and P-gp/Bcrp knockout mice. <i>Drug Metabolism and Disposition</i> , 2012 , 40, 1164-9	4	101
89	Sensitization of cells overexpressing multidrug-resistant proteins by pluronic P85. <i>Pharmaceutical Research</i> , 2003 , 20, 1581-90	4.5	101
88	Improving drug delivery to primary and metastatic brain tumors: strategies to overcome the blood-brain barrier. <i>Clinical Pharmacology and Therapeutics</i> , 2015 , 97, 336-46	6.1	82
87	Abcg2/Bcrp1 mediates the polarized transport of antiretroviral nucleosides abacavir and zidovudine. <i>Drug Metabolism and Disposition</i> , 2007 , 35, 1165-73	4	79
86	P-glycoprotein-mediated active efflux of the anti-HIV1 nucleoside abacavir limits cellular accumulation and brain distribution. <i>Drug Metabolism and Disposition</i> , 2007 , 35, 2076-85	4	75
85	Multi-Parametric MRI and Texture Analysis to Visualize Spatial Histologic Heterogeneity and Tumor Extent in Glioblastoma. <i>PLoS ONE</i> , 2015 , 10, e0141506	3.7	73
84	Development of a respirable, sustained release microcarrier for 5-fluorouracil I: In vitro assessment of liposomes, microspheres, and lipid coated nanoparticles. <i>Journal of Pharmaceutical Sciences</i> , 2006 , 95, 1114-26	3.9	72
83	Efflux transporters at the blood-brain barrier limit delivery and efficacy of cyclin-dependent kinase 4/6 inhibitor palbociclib (PD-0332991) in an orthotopic brain tumor model. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2015 , 355, 264-71	4.7	71
82	Pharmacological characterization of LY335979: a potent cyclopropyldibenzosuberane modulator of P-glycoprotein. <i>Advances in Enzyme Regulation</i> , 1997 , 37, 335-47		69
81	The Efficacy of the Wee1 Inhibitor MK-1775 Combined with Temozolomide Is Limited by Heterogeneous Distribution across the Blood-Brain Barrier in Glioblastoma. <i>Clinical Cancer Research</i> , 2015 , 21, 1916-24	12.9	68
80	Factors influencing the CNS distribution of a novel MEK-1/2 inhibitor: implications for combination therapy for melanoma brain metastases. <i>Drug Metabolism and Disposition</i> , 2014 , 42, 1292-300	4	68
79	Substrate-dependent breast cancer resistance protein (Bcrp1/Abcg2)-mediated interactions: consideration of multiple binding sites in in vitro assay design. <i>Drug Metabolism and Disposition</i> , 2009 , 37, 560-70	4	65
78	Active efflux of Dasatinib from the brain limits efficacy against murine glioblastoma: broad implications for the clinical use of molecularly targeted agents. <i>Molecular Cancer Therapeutics</i> , 2012 , 11, 2183-92	6.1	65
77	Transport of fluorescein in MDCKII-MRP1 transfected cells and mrp1-knockout mice. <i>Biochemical and Biophysical Research Communications</i> , 2001 , 284, 863-9	3.4	65
76	Efficacy of PARP Inhibitor Rucaparib in Orthotopic Glioblastoma Xenografts Is Limited by Ineffective Drug Penetration into the Central Nervous System. <i>Molecular Cancer Therapeutics</i> , 2015 , 14, 2735-43	6.1	60
75	Quantitative assessment of HIV-1 protease inhibitor interactions with drug efflux transporters in the blood-brain barrier. <i>Pharmaceutical Research</i> , 2005 , 22, 1259-68	4.5	60

74	Pharmacokinetic assessment of efflux transport in sunitinib distribution to the brain. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2013 , 347, 755-64	4.7	59
73	Investigation of the role of breast cancer resistance protein (Bcrp/Abcg2) on pharmacokinetics and central nervous system penetration of abacavir and zidovudine in the mouse. <i>Drug Metabolism and Disposition</i> , 2008 , 36, 1476-84	4	59
72	Novel delivery system enhances efficacy of antiretroviral therapy in animal model for HIV-1 encephalitis. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2007 , 27, 1033-42	7.3	58
71	Microdialysis in the study of drug transporters in the CNS. <i>Advanced Drug Delivery Reviews</i> , 2000 , 45, 295-307	18.5	51
70	Probenecid inhibits the metabolic and renal clearances of zidovudine (AZT) in human volunteers. <i>Pharmaceutical Research</i> , 1990 , 7, 411-7	4.5	51
69	Insight into the cooperation of P-glycoprotein (ABCB1) and breast cancer resistance protein (ABCG2) at the blood-brain barrier: a case study examining sorafenib efflux clearance. <i>Molecular Pharmaceutics</i> , 2012 , 9, 678-84	5.6	50
68	Effect of probenecid on fluorescein transport in the central nervous system using in vitro and in vivo models. <i>Pharmaceutical Research</i> , 2001 , 18, 1542-9	4.5	43
67	OCT2 and MATE1 provide bidirectional agmatine transport. <i>Molecular Pharmaceutics</i> , 2011 , 8, 133-42	5.6	42
66	Interactions of pluronic block copolymers on P-gp efflux activity: experience with HIV-1 protease inhibitors. <i>Journal of Pharmaceutical Sciences</i> , 2008 , 97, 5421-33	3.9	41
65	Unsanctifying the sanctuary: challenges and opportunities with brain metastases. <i>Neuro-Oncology</i> , 2015 , 17, 639-51	1	40
64	Brain distribution and bioavailability of elacridar after different routes of administration in the mouse. <i>Drug Metabolism and Disposition</i> , 2012 , 40, 1612-9	4	40
63	Pharmacokinetics of propylene glycol in humans during multiple dosing regimens. <i>Journal of Pharmaceutical Sciences</i> , 1985 , 74, 876-9	3.9	39
62	Integrated mapping of pharmacokinetics and pharmacodynamics in a patient-derived xenograft model of glioblastoma. <i>Nature Communications</i> , 2018 , 9, 4904	17.4	39
61	Development and evaluation of a novel microemulsion formulation of elacridar to improve its bioavailability. <i>Journal of Pharmaceutical Sciences</i> , 2013 , 102, 1343-54	3.9	38
60	Restricted Delivery of Talazoparib Across the Blood-Brain Barrier Limits the Sensitizing Effects of PARP Inhibition on Temozolomide Therapy in Glioblastoma. <i>Molecular Cancer Therapeutics</i> , 2017 , 16, 2735-2746	6.1	37
59	Distribution of the novel antifolate pemetrexed to the brain. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2005 , 315, 222-9	4.7	37
58	ABCG2 and ABCB1 Limit the Efficacy of Dasatinib in a PDGF-B-Driven Brainstem Glioma Model. <i>Molecular Cancer Therapeutics</i> , 2016 , 15, 819-29	6.1	35
57	Barriers to Effective Drug Treatment for Brain Metastases: A Multifactorial Problem in the Delivery of Precision Medicine. <i>Pharmaceutical Research</i> , 2018 , 35, 177	4.5	35

56	Brain metastases from renal cell carcinoma in the era of tyrosine kinase inhibitors. <i>Clinical Genitourinary Cancer</i> , 2013 , 11, 155-60	3-3	35
55	Brain distribution of cediranib is limited by active efflux at the blood-brain barrier. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2012 , 341, 386-95	4-7	34
54	Saturable active efflux by p-glycoprotein and breast cancer resistance protein at the blood-brain barrier leads to nonlinear distribution of elacridar to the central nervous system. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2013 , 345, 111-24	4-7	31
53	Development of a respirable, sustained release microcarrier for 5-fluorouracil II: In vitro and in vivo optimization of lipid coated nanoparticles. <i>Journal of Pharmaceutical Sciences</i> , 2006 , 95, 1127-43	3-9	31
52	The binding of cyclosporin A to human plasma: an in vitro microdialysis study. <i>Pharmaceutical Research</i> , 1996 , 13, 622-7	4-5	31
51	Brain efflux index to investigate the influence of active efflux on brain distribution of pemetrexed and methotrexate. <i>Drug Metabolism and Disposition</i> , 2013 , 41, 659-67	4	29
50	Localized Metabolomic Gradients in Patient-Derived Xenograft Models of Glioblastoma. <i>Cancer Research</i> , 2020 , 80, 1258-1267	10.1	26
49	Separation methods that are capable of revealing blood-brain barrier permeability. <i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> , 2003 , 797, 241-54	3-2	26
48	pH-Dependent transport of pemetrexed by breast cancer resistance protein. <i>Drug Metabolism and Disposition</i> , 2011 , 39, 1478-85	4	25
47	Measurement of drug release from microcarriers by microdialysis. <i>Journal of Pharmaceutical Sciences</i> , 2005 , 94, 1456-66	3-9	24
46	Sunitinib LC-MS/MS Assay in Mouse Plasma and Brain Tissue: Application in CNS Distribution Studies. <i>Chromatographia</i> , 2013 , 76, 1657	2.1	23
45	Impact of BRAF mutation and BRAF inhibition on melanoma brain metastases. <i>Melanoma Research</i> , 2015 , 25, 75-9	3-3	23
44	Transsynovial drug distribution: synovial mean transit time of diclofenac and other nonsteroidal antiinflammatory drugs. <i>Pharmaceutical Research</i> , 1994 , 11, 1689-97	4-5	23
43	Brain Distribution of a Panel of Epidermal Growth Factor Receptor Inhibitors Using Cassette Dosing in Wild-Type and -Deficient Mice. <i>Drug Metabolism and Disposition</i> , 2019 , 47, 393-404	4	21
42	Decreased affinity for efflux transporters increases brain penetrance and molecular targeting of a PI3K/mTOR inhibitor in a mouse model of glioblastoma. <i>Neuro-Oncology</i> , 2015 , 17, 1210-9	1	21
41	Investigation of the micellar effect of pluronic P85 on P-glycoprotein inhibition: cell accumulation and equilibrium dialysis studies. <i>Journal of Pharmaceutical Sciences</i> , 2009 , 98, 4170-90	3-9	21
40	Comparison of the transport characteristics of D- and L-methionine in a human intestinal epithelial model (Caco-2) and in a perfused rat intestinal model. <i>Pharmaceutical Research</i> , 1994 , 11, 1771-6	4-5	21
39	Drug delivery to melanoma brain metastases: Can current challenges lead to new opportunities?. <i>Pharmacological Research</i> , 2017 , 123, 10-25	10.2	20

38	The design and validation of a novel intravenous microdialysis probe: application to fluconazole pharmacokinetics in the freely-moving rat model. <i>Pharmaceutical Research</i> , 1997 , 14, 1455-60	4.5	18
37	Efficacy of the MDM2 Inhibitor SAR405838 in Glioblastoma Is Limited by Poor Distribution Across the Blood-Brain Barrier. <i>Molecular Cancer Therapeutics</i> , 2018 , 17, 1893-1901	6.1	18
36	Heterogeneous Binding and Central Nervous System Distribution of the Multitargeted Kinase Inhibitor Ponatinib Restrict Orthotopic Efficacy in a Patient-Derived Xenograft Model of Glioblastoma. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2017 , 363, 136-147	4.7	16
35	Pharmacokinetic Assessment of Cooperative Efflux of the Multitargeted Kinase Inhibitor Ponatinib Across the Blood-Brain Barrier. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2018 , 365, 249-261	4.7	16
34	Brain Distribution of a Novel MEK Inhibitor E6201: Implications in the Treatment of Melanoma Brain Metastases. <i>Drug Metabolism and Disposition</i> , 2018 , 46, 658-666	4	15
33	Factors Influencing the Central Nervous System Distribution of a Novel Phosphoinositide 3-Kinase/Mammalian Target of Rapamycin Inhibitor GSK2126458: Implications for Overcoming Resistance with Combination Therapy for Melanoma Brain Metastases. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2018 , 365, 251-260	4.7	15
32	Utilizing transmembrane convection to enhance solute sampling and delivery by microdialysis: theory and in vitro validation. <i>Journal of Membrane Science</i> , 2010 , 348, 131-149	9.6	14
31	E6201, an intravenous MEK1 inhibitor, achieves an exceptional response in BRAF V600E-mutated metastatic malignant melanoma with brain metastases. <i>Investigational New Drugs</i> , 2019 , 37, 636-645	4.3	14
30	Mitoxantrone permeability in MDCKII cells is influenced by active influx transport. <i>Molecular Pharmaceutics</i> , 2007 , 4, 475-83	5.6	13
29	AAPS-FDA workshop white paper: Microdialysis principles, application, and regulatory perspectives report from the Joint AAPS-FDA Workshop, November 4B, 2005, Nashville, TN. <i>AAPS Journal</i> , 2007 , 9, E48-E59	3.7	13
28	Characterization of an in vitro cell culture bioreactor system to evaluate anti-neoplastic drug regimens. <i>Breast Cancer Research and Treatment</i> , 2006 , 96, 217-25	4.4	13
27	Addressing BBB Heterogeneity: A New Paradigm for Drug Delivery to Brain Tumors. <i>Pharmaceutics</i> , 2020 , 12,	6.4	12
26	Determination of cediranib in mouse plasma and brain tissue using high-performance liquid chromatography-mass spectrometry. <i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> , 2011 , 879, 3812-7	3.2	12
25	Baseline requirements for novel agents being considered for phase II/III brain cancer efficacy trials: conclusions from the Adult Brain Tumor Consortium's first workshop on CNS drug delivery. <i>Neuro-Oncology</i> , 2020 , 22, 1422-1424	1	9
24	Challenges in the delivery of therapies to melanoma brain metastases. <i>Current Pharmacology Reports</i> , 2016 , 2, 309-325	5.5	9
23	Enhancing Brain Retention of a KIF11 Inhibitor Significantly Improves its Efficacy in a Mouse Model of Glioblastoma. <i>Scientific Reports</i> , 2020 , 10, 6524	4.9	8
22	Cardiac responses to the intrapericardial delivery of metoprolol: targeted delivery compared to intravenous administration. <i>Journal of Cardiovascular Translational Research</i> , 2012 , 5, 535-40	3.3	8
21	The use of transgenic mice in pharmacokinetic and pharmacodynamic studies. <i>Journal of Pharmaceutical Sciences</i> , 2001 , 90, 422-35	3.9	8

20	Organic cation uptake is enhanced in bcrp1-transfected MDCKII cells. <i>Molecular Pharmaceutics</i> , 2010 , 7, 138-45	5.6	7
19	Cyclosporin A has low potency as a calcineurin inhibitor in cells expressing high levels of P-glycoprotein. <i>Life Sciences</i> , 1998 , 62, 2441-8	6.8	7
18	Heterogeneous delivery across the blood-brain barrier limits the efficacy of an EGFR-targeting antibody drug conjugate in glioblastoma. <i>Neuro-Oncology</i> , 2021 , 23, 2042-2053	1	7
17	Brain Distribution and Active Efflux of Three panRAF Inhibitors: Considerations in the Treatment of Melanoma Brain Metastases. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2019 , 368, 446-461	4.7	6
16	The relationship between urine and plasma concentrations of carbamazepine: implications for therapeutic drug monitoring. <i>Pharmaceutical Research</i> , 1991 , 8, 282-4	4.5	5
15	Brain Distributional Kinetics of a Novel MDM2 Inhibitor SAR405838: Implications for Use in Brain Tumor Therapy. <i>Drug Metabolism and Disposition</i> , 2019 , 47, 1403-1414	4	4
14	Bayesian approach to estimate AUC, partition coefficient and drug targeting index for studies with serial sacrifice design. <i>Pharmaceutical Research</i> , 2014 , 31, 649-59	4.5	4
13	Preclinical Risk Evaluation of Normal Tissue Injury With Novel Radiosensitizers. <i>International Journal of Radiation Oncology Biology Physics</i> , 2021 , 111, e54-e62	4	3
12	Liquid chromatographic analysis of di(2-ethylhexyl) phthalate: application to pharmacokinetic studies in the mongrel dog. <i>Pharmaceutical Research</i> , 1988 , 5, 10-5	4.5	2
11	Efflux Limits Tumor Drug Delivery Despite Disrupted BBB. <i>Trends in Pharmacological Sciences</i> , 2021 , 42, 426-428	13.2	2
10	Efficacy of Tesevatinib in -Amplified Patient-Derived Xenograft Glioblastoma Models May Be Limited by Tissue Binding and Compensatory Signaling. <i>Molecular Cancer Therapeutics</i> , 2021 , 20, 1009-1018	6.1	2
9	Influence of transporters in treating cancers in the CNS 2020 , 277-301		1
8	Preclinical modeling in GBM PDX xenografts to guide clinical development of lisavanbulin - a novel tumor checkpoint controller targeting microtubules. <i>Neuro-Oncology</i> , 2021 ,	1	1
7	Lisdexamfetamine Pharmacokinetic Comparison Between Patients Who Underwent Roux-en-Y Gastric Bypass and Nonsurgical Controls. <i>Obesity Surgery</i> , 2021 , 31, 4289-4294	3.7	1
6	Brain Distribution of Berzosertib: An Ataxia Telangiectasia and Rad3-Related Protein Inhibitor for the Treatment of Glioblastoma. <i>Journal of Pharmacology and Experimental Therapeutics</i> , 2021 , 379, 343-357	4.7	0
5	Methods for intratumoral microdialysis probe targeting and validation in murine brain tumor models. <i>Journal of Neuroscience Methods</i> , 2021 , 363, 109321	3	0
4	To Measure is to Know: A Perspective on the Work of Dr. Margareta Hammarlund-Udenaes.. <i>Pharmaceutical Research</i> , 2022 , 1	4.5	0
3	Drug Delivery to Primary and Metastatic Brain Tumors: Challenges and Opportunities. <i>AAPS Advances in the Pharmaceutical Sciences Series</i> , 2022 , 723-762	0.5	0

- 2 Comments on: "Synergistic activity of mTORC1/2 kinase and MEK inhibitors suppresses pediatric low-grade glioma tumorigenicity and vascularity". *Neuro-Oncology*, **2020**, 22, 1404-1405 1
- 1 Brain barriers virtual: an interim solution or future opportunity?. *Fluids and Barriers of the CNS*, **2022**, 19, 19 7